

ANNUAL REPORT – YEAR ONE

Market Development (MADE) for Northern Ghana Programme



SUBMITTED TO
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SUBMITTED BY
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Table of Contents

Introduction	1
Part A. Review of Year 1.....	2
Section 1. Review of MADE markets.....	2
1.1 Onion market	2
1.1.1 Overview of progress	2
1.1.2 Lessons learned.....	3
1.2 Rice market.....	4
1.2.1 Overview of progress	4
1.2.2 Lessons learned.....	5
1.3 Groundnuts market	6
1.3.1 Overview of progress	6
1.3.2 Lessons learned.....	7
1.4 Other vegetables market	8
1.4.1 Overview of progress	8
1.4.2 Lessons learned.....	9
1.5 Chilli market	10
1.5.1 Overview of progress	10
1.5.2 Lessons learned.....	11
1.6 Livestock market	11
1.6.1 Overview of progress	11
1.6.2 Lessons learned.....	13
Section 2. Review of cross cutting themes	15
2.1 Gender.....	15
2.1.1 Overview of progress	15
2.1.2 Lessons learned.....	16
2.2 Climate Change	16
2.3 Communications	17
2.3.1 Overview of progress in year 1	18
2.3.2 Lessons learned.....	19
Part B. Strategic implications for year 2.....	20
Part C. Looking ahead - Year 2.....	23
Section 1. MADE markets.....	23
1.1 Onion market	23
1.1.1 Reviewing the theory of change.....	23
1.1.2 Interventions for year 2.....	24
1.1.3 Budget for year 2 interventions	27

2 | Table of contents

1.1.4	Logframe contributions for year 2 interventions.....	27
1.2	Rice market.....	28
1.2.1	Reviewing the theory of change.....	28
1.2.2	Interventions for year 2.....	29
1.2.3	Budget for year 2 interventions.....	30
1.2.4	Logframe contributions for year 2 interventions.....	31
1.3	Groundnut market	32
1.3.1	Reviewing the theory of change.....	32
1.3.2	Interventions for year 2.....	33
1.3.3	Budget for year 2 interventions.....	35
1.3.4	Logframe contributions for year 2 interventions.....	35
1.4	Other vegetables (incl. chilli) market	36
1.4.1	Reviewing the theory of change.....	36
1.4.2	Interventions for year 2.....	37
1.4.3	Budget for year 2 interventions.....	38
1.4.4	Logframe contributions for year 2 interventions.....	38
1.5	Livestock market	39
1.5.1	Reviewing the theory of change.....	39
1.5.2	Interventions for year 2.....	40
1.5.3	Budget for year 2 interventions.....	42
1.5.4	Logframe contributions for year 2 interventions.....	43
Section 2.	Cross cutting themes in year 2	44
2.1	Gender.....	44
2.2	Climate change	44
2.3	Communications	45
 Annex 1: Detailed market review tables		46
Annex 2: Detailed work plans for year 2.....		46
Annex 3: Action research progress report and assessment of scalability.....		46
Annex 4: Business plan and revised budget.....		46

Introduction

During first year of implementation of the MADE programme, the team has acquired an in-depth understanding on how the selected markets work in the North as well as the challenges faced to bring out the desired change in these markets. The team still believes that the overall approach set out in the Intervention Plan for MADE remains valid, although there is a need to adjust and adapt interventions and activities to incorporate the learned lessons and circumvent the existing challenges. Doing this will ensure that MADE is on the right path in year 2 to bring about the outcomes that DFID has set for the programme. As a result, most interventions identified in year 1 will continue in year 2, either as a continuation of the pilot phase, the beginning of the adaptation phase, or the start of the scaling up/replication phase. However, the first year has also allowed the team to identify which are the required skills and organisation structure required within the programme to make this happen, so the proposed changes to the composition of the team are also part of this report.

In summary, this Annual Report presents the progress achieved by MADE in its first year of implementation, the main lessons learned, how these lessons inform our work plans for year 2, the strategic implications these have, and, finally, the interventions and activities that we will be undertaking in year 2 to achieve the outputs and outcomes set out for the MADE programme.

More specifically, the report is set out as follows:

- In Part A we present the progress achieved during year 1 of the programme for each market as well as the main lessons learned.
- In Part B, we synthesise the wider lessons learned, assess which are the strategic implications for the programme, and present how these strategic considerations should be operationalised for the remaining of the programme.
- In Part C we present the reviewed theories of change for each market (informed by what occurred in year 1), the interventions that we will be undertaking in each market, the cost of these interventions for year 2 and their expected contribution to the MADE log frame.

Finally, there are four annexes that form part of this report (included as separate files):

- Annex 1: Market Review Tables. This annex presents, in tabular form, a more detailed analysis of the progress of each intervention in every market.
- Annex 2: Overall and Market-Specific Work Plans. This annex presents the overall MADE work plan for year 2 as well as the detailed work plans for each market.
- Annex 3: Action Research Progress Report and Assessment of Scalability. This annex presents a detailed review of all the action research interventions undertaken during year 1 and assesses their scalability.
- Annex 4: Business plan and proposed budget for year 2. This annex presents the financial summary for year 1 of implementation of the programme, an explanation (and justification) of the proposed changes within the team for year 2 onwards, a proposed revised budget for the remaining four years of the programme, and a monthly financial plan for year 2.

Part A. Review of Year 1

SECTION 1. REVIEW OF MADE MARKETS

In this section we present the progress achieved for each of the interventions in the six MADE markets and we identify the main lessons learned.

In addition, Annex 1 presents, in tabular form, an in-depth analysis of each intervention in each market. It presents the activities that were initially identified as part of MADE's Intervention Plan, the underlying assumptions behind them, what we achieved in year 1, the main challenges and constraints faced in their implementation, the rationale for diversion with regards to the original design, and the lessons learned.

1.1 ONION MARKET

1.1.1 OVERVIEW OF PROGRESS

MADE has made steady progress in three interventions in this market (O1, O2, and O3) as well as in the two Action Research Interventions (AR-O1 and AR-O2). They will all continue in year 2 as detailed in Part C of this report. Interventions O4 and O5 have had a slow start but the conditions are now in place to move forward in their implementation.

The table below provides an overview of progress made on each of the onion interventions in the first year (see Annex 1 for further details).

Intervention	Key results obtained in year 1
Intervention O1. Improve farmers' access to & use of improved varieties of onions.	MADE partnered with Agriseed to help them develop a market for their high-yielding rainy and dry season onion seed in the North. MADE used [REDACTED] as a sub-facilitator. The intervention started with the organisation of adaptation trials (see Action Research O1 below) to test the suitability of new seed varieties for both dry and rainy season onions. We then supported [REDACTED] to build up their network with local input dealers and agricultural extension agents (AEAs) to ensure that local farmers had access to the seed and the know-how to increase productivity. We used demonstration farms to showcase how using improved seeds (evidence demonstration) and the appropriate agricultural practices, farmers could maximise yields (adoption demonstrations). As part of these demonstrations, 25 agricultural extension agents (AEAs) were trained on how to apply good agricultural practices for improved dry season onion varieties. At the same time, they trained around 1,500 smallholder farmers on good agricultural practices for these improved onion varieties. Both adaptation trials and adoption demonstrations attracted the participation (on a limited scale) of [REDACTED], that provided plant nutrients. Discussions with other major seed and input dealers such as [REDACTED] and [REDACTED] were initiated.
Intervention O2. Improve farmers' adoption of good agricultural practices (GAP)	This intervention was implemented in coordination with Intervention O1 (where 25 agricultural extension agents and 1,500 farmers were trained in GAP). In addition, MADE contracted an independent audio visual media consultant to film GAP practices on the demonstration farms using the protocol developed by [REDACTED]. At the same time, we also implemented a series of radio panel discussions on onion production in English and local languages led by lead farmers and experts drawn from [REDACTED].
Intervention O3. Improve the onion supply chain in Northern Ghana	MADE took an incremental approach for the implementation of this intervention. We first profiled local aggregators and linked them to smallholder farmers, which allowed us to assess the appetite of farmers for more structured market relationships. When the appetite became evident, we helped establish linkages between the local aggregators in the North and the large wholesalers and importers based in the South. More specifically, we gauged the interest, capability

	and willingness to source from Northern Ghana of 30 medium size buyers trading in three major onion buying centres (Techiman, Kumasi and Accra) once the supply base is developed and production in the North increases. In addition, MADE has brokered a partnership between [REDACTED] (a major off-taker) and [REDACTED] (a large agribusiness that supplies inputs) to develop a commercially viable and sustainable supply chain from Northern Ghana covering onions and other vegetables. An MoU is about to be signed.
Intervention O4. Improve access to finance by farmers	The terms of reference for selecting the service provider responsible for the initial feasibility study of this intervention have been drafted. The scope of work includes the identification of products, services, and delivery models which can be used by rural banks and/or MFIs to lend profitably to onion farmers to improve their storage facilities (building on Trias' pilots for community storage facilities). The study will also outline the assistance required to develop and roll out these products and services; and develop a business plan to introduce a warehouse receipts scheme.
Intervention O5. Establish PPPs for irrigation	The terms of reference to assess, design and establish several commercially viable and sustainable PPPs that will help to ensure the rehabilitation and effective use of three micro dams have been drafted. The intervention did not move forward as DFID suggested to exhaust all alternatives before entering into any collaborative arrangement with [REDACTED].
Action research	Key results obtained in year 1
AR-O1. Onion rainy season adaptation trials	Adaptation trials were undertaken through a partnership between MADE, Trias (sub-facilitator), [REDACTED] input dealers, AEAs and lead farmers. [REDACTED] selected three sites for the varietal trials: Kpalwega in the Bawku Municipality, Yalegu in the Binduri District and Sapeliga in Bawku West District. Three lead farmers in each location were selected to host and manage the trial plots. [REDACTED] provided three seed varieties to be tested - the Julio, Alize and Ares varieties - providing 600g of seed of each variety. The results for the Ares variety were very positive in terms of yields obtained, easiness of protocols for growing, and market acceptance, in particular with respect to the predominant Bawku Red variety.
AR-O2. Onion dry season adaptation trials	The dry season onion varietal trials were organised and rolled-out in the same manner as the rainy season trials. In this case, [REDACTED] provided three dry season varieties (Ares, Safari and Belami) to be trialled in five districts across the Upper East region. Harvesting of the final crop was completed by the end of April 2015. Pending the final evaluation, trial participants indicated that all three varieties performed well in the field. [REDACTED] will complete the final evaluation by the end of May 2015.

1.1.2 LESSONS LEARNED

The main lessons learned in year 1 in the onions market are the following:

- Farmers have demonstrated their appetite for the adoption of improved varieties that allow for increased yields and are well received by the market. The demonstration plots have proved to be very effective but their reach has been limited so far. There is need to continue providing evidence on how these improved varieties positively affect yields of farmers to ensure that more farmers adopt these new varieties.
- Farmers have demonstrated their interest in becoming part of more structured market relationships and their willingness to engage with aggregators to ensure access. Further work is required to consolidate these relationships.
- Communications seem to be a useful tool to promote information and knowledge, although we are still awaiting the final evaluation results of these activities.
- It is possible to attract large wholesalers and importers to the North, but the experience with [REDACTED] proves that to achieve this, the MADE team needs to devote more time than originally anticipated. In addition, such firms are not ready, as anticipated, to engage directly with

aggregators/farmers in a sustainable way. [REDACTED] for example, requires support from MADE to improve their business models and access to finance before they engage with the farmers.

- MADE anticipated that partners such as [REDACTED] and [REDACTED] would play a much more prominent role during year 1, but this has not been the case. IFDC's participation is constrained by its commitments to USAID's Agricultural Technology Transfer Programme (ATTP) and the GhanaVeg Programme of the Netherlands Embassy. [REDACTED] role in MADE has also been limited by institutional challenges, although the perspective of commercialising some of the research that they have undertaken could enable MADE to strengthen links in year 2. If this is the case, MADE will need to be very clear on the terms of the engagement.

1.2 RICE MARKET

1.2.1 OVERVIEW OF PROGRESS

Steady progress has been made in implementing two of the interventions (R1 and R3) in the rice market. Intervention R2 has not progressed as fast, whilst intervention R4 is at its early stages. The results of AR-R1 were not conclusive.

The table below provides an overview of progress made on each of the rice interventions in the first year (see Annex 1 for further details).

Intervention	Key results obtained
Intervention R1. Launch media campaign to inform farmers of market trends and GAP and LEISA for new, high yielding varieties in demand	MADE developed content for the media campaign in coordination with market stakeholders including [REDACTED] the extension service and some nucleus farmers and aggregators. Subsequently, three radio programmes were broadcasted targeting farmers at key points during the season. The first programme was aired in May 2014 and focused on market trends and opportunities, pre-planting activities and planting techniques. The second programme was aired in July 2014 covering three key areas - weed control, fertilizer application and water management. The third programme was aired in November 2014 and focused on good harvest and post-harvest practices. The programmes were aired in English and two local languages: Dagbani and Gonja. Judging by immediate feedback in the form of phone call-ins, the indications are that the programmes were well received by farmers who listened in. We are currently awaiting the findings from the evaluation undertaken by the University for Development Studies, Nyankpala Campus, that will also issue recommendations on how to make the campaigns more effective.
Intervention R2. Support multiplication of certified seeds for market varieties of rice	<p>Progress in the implementation of the seed multiplication intervention has also been very slow. The original plan centred around brokering partnerships between public research agencies ([REDACTED] etc.) and the private sector aimed at increasing the supply of certified seed. However this approach did not work, due to a combination of limited interest and unwillingness on both sides to commit scarce resources to such partnerships, particularly where outcomes were uncertain.</p> <p>As a result, different approaches for seed multiplication had to be explored during year 1. These included:</p> <ul style="list-style-type: none"> Engaging smallholder farmers as community-based seed growers, so they would be able to produce certified seed to sell to other farmers within their communities and, when sizeable, sell to aggregators. To pilot this approach, MADE partnered with [REDACTED] to train selected groups of farmers. The most promising of these was a group of smallholder farmers in Navrongo, which was expected to use the irrigation facilities of Tono Dam to produce seed in the dry season of the 2014/2015 crop year. However, due to erratic rainfall, the water in the Tono Dam was not sufficient to support regular irrigated production. Support the aggregators to source seed from seed producers that had received support from [REDACTED]. However, the available seed stocks that these companies had of the aromatic rice varieties MADE was promoting were very limited and were insufficient to meet the needs of the aggregators, particularly [REDACTED].

	<ul style="list-style-type: none"> As a stop-gap measure, encourage the aggregators with nucleus farms (i.e. [REDACTED]) to produce their own seed to ensure availability of seed for the 2015/2016 crop year. The company has since harvested produce from the seed fields but is yet to process the harvest into seed and ordinary grain.
Intervention R3. Develop paddy rice supply chain with Avnash and other buyers through the use of aggregators	<p>This intervention originally aimed to facilitate a contract growing arrangement between [REDACTED] and the aggregators in the North, where [REDACTED] would provide seed and other inputs to the aggregators and farmers. MADE would then support the aggregators to organise and run demonstrations promoting good agricultural practices and train extension officers to ensure they could roll out these demonstrations going forward. However, when [REDACTED] failed to commit to the process (and the absence of another large processor/end-buyer in the North), the approach of this intervention shifted. MADE then decided to pilot a new system whereby the aggregators would be the ones providing seeds and inputs to farmers.</p> <p>To test this approach, MADE worked with two aggregators [REDACTED] and [REDACTED] providing them with grants to support farmer mobilisation and train farmers on GAP and good post-harvest practices. Together they mobilised and organised more than 5,000 smallholder farmers into 252 groups ([REDACTED] - 180 groups and [REDACTED] - 72 groups), and organised 20 GAP demonstration fields to train them. Public extension officers were trained to roll-out and run these GAP demonstrations.</p> <p>MADE has also worked with the aggregators to improve the quality of the services (seed, input and mechanisation services) they deliver to farmers and improve their overall business models. For example both aggregators have been provided with assistance to access finance from [REDACTED] and [REDACTED] has been introduced to the Africa Fertilizer and Agribusiness Partnership (AFAP) programme that runs a guarantee scheme on fertiliser distribution to smallholder farmers. Both aggregators will also receive assistance under the Business Growth Accelerator programme in the coming year.</p>
Intervention R4. Provide BDS to support women parboiled rice processors	<p>The launch of the BDS support was constrained by a number of factors including long search time and high cost involved in securing service providers with the right complement of expertise and competence and willingness to innovate for the development of more commercially viable and sustainable business models. Guided by lessons learnt in the attempt to launch a similar intervention in the vegetables market, the BDS initiative will be modified and re-launched in the 2015/2016 crop year.</p>
Action research	Key results obtained
AR-R1. Urea Deep Placement Trials	<p>This piece of action research tested the effectiveness of IFDC's recommended deep placement method for urea application on rice, with the intention of developing a UDP method suitable for smallholder rice farmers in Ghana. The results of the trials were inconclusive, primarily due to delays in commissioning the research which meant that the crop was planted too late in the rainy season and so it didn't receive sufficient water, resulting in far lower yields than would have been expected.</p>

1.2.2 LESSONS LEARNED

The key lessons learned in year 1 in the rice market include the following:

- Providing farmers with the right support package (i.e. the use of demonstration farms together with the proof of an assured market for their produce) seems to effectively reduce farmers' risk aversion and enhance their willingness and capability of adopting GAP and improved rice seed varieties.
- The delays in operationalising [REDACTED] mill (and there are doubts whether they will ever happen) means that a potentially game-changing player located in the North is not there anymore. As a result, it is key to further develop the links with the major mills in the South to guarantee a market for the aggregators located in the North.

- Tackling the seed problem may require attracting private investment from larger private seed producers as the existing local seed companies are too small and have limited financial capacity and infrastructure (e.g. processing equipment to achieve scale) capabilities.
- Private seed companies do not have the appetite to work with public organisations [REDACTED] to develop the seed market. Similarly, these same public organisations show limited willingness to commercialise their research and lack the required capabilities to develop such models.
- A key success element from the engagement with the rice aggregators, especially [REDACTED] is their openness to learning and eagerness to try new ideas and adopt innovation including their willingness to develop more robust business models. Finding such businesses is essential for the success of the interventions.
- The aggregator model seems to be working effectively. However, it has become clear that for the success of the model it is essential to work with the aggregators in strengthening their businesses, particularly in organisational assessment/strengthening (including services provided to farmers) and financial management.

1.3 GROUNDNUTS MARKET

1.3.1 OVERVIEW OF PROGRESS

In the groundnut market steady progress has been made in implementing three of the four pilot interventions (G1, G2 and G3) as well as in one Action Research Intervention (AR-G1). They will all continue in year 2 as detailed in Part C of this report.

The table below provides an overview of progress made on each of the groundnuts interventions in the first year (see Annex 1 for further details).

Intervention	Key results obtained
Intervention G1. Promote increased usage of improved seeds and good agronomic practices by groundnut farmers.	<p>This intervention has two key complementary components or objectives, firstly to foster the development and release of more breeder and foundation seed of improved varieties and secondly to ensure that farmers have access to the improved seed and the knowledge (i.e. on GAP) to maximise the yields from growing it. Progress has been made on both fronts during the first year.</p> <p>In terms of fostering the release of more breeder and foundation seed of new varieties, MADE signed an MoU with [REDACTED] to help commercialise their research by developing the market for their foundation seed. As a result, MADE supported [REDACTED] to launch an action research initiative to test three new groundnut varieties (see AR-G1 below); and brokered a relationship between [REDACTED] and [REDACTED] whereby [REDACTED] has produced foundation seed (sumnut22 variety) for [REDACTED] to multiply in 2015/2016 and then produce certified seed for its farmers in 2016/2017.</p> <p>In terms of ensuring access to the improved seed and disseminating knowledge on GAP, MADE has engaged with [REDACTED] a nucleus farmer/aggregator (primarily for soya, maize and groundnuts), and supported them to deliver GAP training to over 1,500 groundnut farmers. Working closely with MADE they were able to identify, orientate and register groundnut out-growers and provide technical training on GAP, post-harvest and aflatoxin management (see intervention G4 below) to enhance productivity and sales.</p> <p>MADE is also working with [REDACTED] to ensure they have access to improved seed. As mentioned above a relationship has been brokered with [REDACTED] whereby they will be supplied with foundation seed to multiply into certified seed. MADE is also exploring the possibility of importing foundation seed with [REDACTED]</p>
Intervention G2. Aflatoxin control and crowding-in end buyers	<p>MADE has contracted [REDACTED] to provide support to [REDACTED] farmers to produce and market export-grade aflatoxin-free groundnuts. FMS assessed the measures required by [REDACTED] farmers to control for aflatoxin; trained [REDACTED] technical staff on aflatoxin management and control, including the use of aflatoxin test kits; and organised field days and media campaigns to raise farmer awareness of aflatoxin and its effects on health and access to market. Preliminary</p>

	<p>testing of aflatoxin levels of [REDACTED] farmers stocks at harvest time using the test kits indicate that aflatoxin-levels were below 4ppb, within EU thresholds for direct consumption and for use as an ingredient in foodstuffs.</p> <p>[REDACTED] has also linked [REDACTED] to [REDACTED] a major international snack company, which is keen on buying aflatoxin free groundnuts from Ghana in order to diversify its sourcing origins. With Intersnack's advice, [REDACTED] has started working with [REDACTED] to set up the required systems to produce groundnuts that meet export quality standards and other groundnut import requirements. The [REDACTED] experience has set the basis for crowding-in other end users in the 2015/2016 and subsequent crop years.</p> <p>In addition, MADE has brokered a relationship between the end-buyer [REDACTED] and the input supplier [REDACTED] to partner and work together to source groundnut from the North.</p>
Intervention G3. Develop lease and rental market for the provision of mechanisation services for groundnut production and processing	<ul style="list-style-type: none"> The intervention is still in its early stages of development. The approach remains to develop a pilot leasing scheme in six districts in the Upper West Region. An agricultural equipment leasing expert was contracted to assess the viability of developing a rental market for groundnut production and processing equipment. The consultant's ToR was expanded to include equipment leasing for the other MADE markets. The consultant has engaged extensively with equipment suppliers, nucleus farmers and aggregators and financial institutions, especially [REDACTED] which initially expressed strong interest in financing agricultural equipment leasing. The consultant will present his findings in May 2015. MADE will then recruit a sub facilitator to implement the recommended leasing model.
Intervention G4. BDS for small scale/artisanal and SME groundnut processors	The detailed ToR for this assignment has been prepared. However, given the lack of BDS providers capable of implementing this intervention, its implementation has been delayed.
Action research	Key results obtained
AR-G1. Improved groundnut seed varietal trials	MADE supported [REDACTED] to test and evaluate the performance (suitability and adaptability to Northern Ghana, yield potentials, etc.) of seeds of three new groundnut varieties from INERA (a research institute in Burkina Faso) against three local varieties. [REDACTED] will repeat the evaluation in the 2015/16 crop year in multiple locations under different environments before conclusive recommendations can be made to farmers for adoption.

1.3.2 LESSONS LEARNED

Some of the key lessons learned in year 1 in the groundnut market include the following:

- Farmers have demonstrated a strong appetite to adopt improved practices if there is a market for their produce. [REDACTED] for example, estimates that 80 percent of farmers who attended field days for the demonstrations are prepared to adopt GAP.
- There is a need to develop a unified GAP protocol to minimise farmer's confusion and enhance their use of appropriate technologies and practices. For example, a long held assumption among groundnut farmers in Northern Ghana is that the crop does not need fertiliser, but anecdotal evidence points to soil degradation to the extent that they are depleted of organic matter and rhizobium (the organism that helps legumes such as groundnuts to fix nitrogen thus reducing the need for chemical fertilizers). The need for a common approach to GAP is further emphasised by the contradicting messages that farmers receive from extension practitioners and researchers in areas such as use of fertilisers, plant population, or use of plant protection.

- With the right support and systems smallholder farmers can produce aflatoxin free groundnuts that meet export standards. Early harvest season aflatoxin levels from [REDACTED] farmers were within expected limits set for export.
- Public sector ([REDACTED]) response to the offer of commercialising their research and partnering with private seed companies is slow and requires heavy facilitation. There is a need to find mechanisms to incentivise their participation (e.g. highlighting the quantities of seed demanded by the market).
- Major buyers and exporters are interested in entering into structured supply relationships with aggregators. Aggregators have to however develop better business models to be able to manage and meet the requirements of such formal buyer-seller relationships, including better internal financial controls and quality assurance mechanisms to ensure that groundnuts are delivered on time to the supplier.
- Despite the slow pace of the intervention on leasing, there is an appetite for leasing of agricultural equipment on the part of financial institutions, equipment suppliers and agribusinesses such as aggregators.
- The launch of the BDS support was constrained by a number of factors including long search time and high cost involved in securing service providers with the right expertise and competence.

1.4 OTHER VEGETABLES MARKET

1.4.1 OVERVIEW OF PROGRESS

While some significant steps have been taken in Year 1 to initiate some activities in this market, particularly the introduction of new varieties of tomatoes and training farmers on GAP, overall the implementation of the other vegetables market interventions have generally lagged. They will all continue in year 2 as detailed in Part C of this report.

The table below provides an overview of progress made on each of the other vegetable interventions in the first year (see Annex 1 for further details).

Intervention	Key results obtained
Intervention OV1. Encourage the use of high yielding varieties of seeds and other inputs suited to the domestic and export markets	A partnership brokered between the [REDACTED] (the local distributor of the French firm Technisem's seeds) has shown some very promising results, similar to the onion market results, in increasing the demand for and use of improved seeds. [REDACTED] has acted effectively as a sub-facilitator to oversee GAP demonstrations to promote the adoption of improved seeds mainly in the dry season and action research (see below) initiatives to test the suitability of new rainy and dry season tomato varieties. [REDACTED] has worked alongside [REDACTED] providing seed of assorted varieties of tomatoes and expertise for both the GAP demonstrations and action research. In total 25 demonstrations were held in five districts (5 per district) involving 25 lead farmers, 25 AEAs and 5 inputs dealers to promote the adoption of the known varieties. Over 1,000 farmers attended the training across the five districts.
Intervention OV2. Provide matching grants to major buyer exporters to establish supply chains in the North	MADE's efforts to use matching grants to attract Southern buyers and exporters to the North has met with limited success. The initial focus was on members of the [REDACTED] the majority of whom have shown limited interest. MADE has sought out other exporters and held discussions with members of the [REDACTED] as their membership includes several firms that export to the UK ethnic market. Three of its members have formed a consortium called Freshpro and have expressed interest in partnering with MADE to grow vegetables in Kintampo (Brong Ahafo Region). Discussions with [REDACTED] are currently on-going. MADE has also been actively identifying and engaging with suppliers to the domestic market. The most positive response to date has been from [REDACTED]

	<p>and the partnership brokered with [REDACTED] (as highlighted in the review of the onion market) is showing a lot of potential. Discussions are also ongoing with [REDACTED]</p> <p>MADE has, also, initiated discussions with [REDACTED] the largest supplier of refrigeration services in Ghana, to help them invest in a pay per use cold store in the North. This will facilitate the establishment of the cold chain for vegetables produced in the North including refrigerated transport thereby increasing the shelf life of the vegetables and their attractiveness to wholesalers and supermarkets.</p>
Intervention OV3. Develop BDS for women traders in fruit and vegetables	A call for proposals to provide BDS to support selected women traders with transformative business prospects strengthen their businesses and prepare bankable proposals to access bank loans and other financing was launched in February, 2015. However, the quality of the proposals received was very poor and we have not been able to select any service provider. This has led to a rethinking of our approach to working with service providers, as detailed in Part B of this report.
Action research	Key results obtained
AR-OV1. Rainy season adaptation trials of tomato varieties	MADE worked with [REDACTED], local input dealers and lead farmers to test four rainy season tomato varieties: Buffalo, Cobra, Jaguar and Savannah. Trials took place in three locations: Pusi Namong in Talensi-Nabdam District, Dorongo in Bolga District and Guoweri in Bongo District. The process was overseen by [REDACTED] who provided advice on preparation of nursery beds, sterilization of seedbeds and nursing of the seeds. The Cobra variety was the most preferred by farmers surveyed, citing their yield potential and drought resistance.
AR-OV2. Dry season adaption trials of tomato varieties	MADE worked with [REDACTED] to roll out the adaptation trials for dry season tomato varieties. [REDACTED] provided four dry season varieties: Buffalo, Jaguar, Tropimich+, and Nadira). Trials took place in five locations: Bawku Municipal, Bawku West, Binduri, Pusiga, and Garu Tempani. The harvesting of the crop is on-going therefore a preferred variety has not been identified.

1.4.2 LESSONS LEARNED

Some of the key lessons learned in year 1 in the vegetable market include the following:

- Early indications are that farmers are willing to change and adapt their practices and use new improved seed. For example a significant number of farmers have placed orders and/or expressed interest for new tomato seeds tested (particularly the Cobra and Tropimech+ tomato varieties) in the varietal trials
- In the early stages of year 1, MADE had limited success in attracting investment from Southern buyers and exporters into the North. This initial approach focused on the cold solicitation of proposals. However, it soon became clear that there was a need to leverage the businesses' own investment and expansion strategies, which meant that the team had to devote more resources than expected to identify and engage with these businesses in the South. In the cases where we have managed to attract interest successfully, the MADE team has had to establish a more permanent engagement with the business and undertake several visits to the headquarter offices in the South.
- The development of investment profiles (mini feasibilities) of opportunities in the value chains could potentially speed up this process and help address information failures, whilst also enabling the MADE team speak from more informed positions thereby enhancing our credibility with investors. On top of this providing the opportunity to potential investors to physically visit and observe opportunities on the ground in the North seems to have helped to address these information failures.
- Competent BDS providers are in very short supply. BDS providers themselves need technical assistance to enable them respond to and provide BDS in line with MADE's results based, cost recovery and sustainability approach.

1.5 CHILLI MARKET

1.5.1 OVERVIEW OF PROGRESS

Progress with the interventions in the chilli market has been limited. This has been due primarily to difficulties and delays in identifying and establishing relationships with market players (in particular a sub-facilitator, input supplier and major end-buyer/exporters) to drive and coordinate the three pilot interventions in the chilli market. They will all continue in year 2 as detailed in Part C of this report.

The table below provides an overview of progress made on each of the chilli interventions in the first year (see Annex 1 for further details).

Intervention	Key results obtained
Intervention C1. Develop the supply and encourage the use of high yielding varieties of seeds and other inputs suited to the domestic and export markets	<p>This intervention did not progress as desired because of the difficulties of engaging a seed producer and a sub-facilitator. Although [REDACTED] was originally identified as a potential sub-facilitator, it soon became obvious that they did not have enough capacity to act as a sub-facilitator for this intervention as well as for an intervention in the other vegetable market. Other potential sub-facilitators were therefore sought out, the most promising of which was [REDACTED] of the [REDACTED] based in [REDACTED]. Negotiations with the NGO, however, took longer than expected and were only concluded in the last quarter of Year 1.</p> <p>In last quarter of Year 1 an agreement was also reached with [REDACTED], a seed producer, to promote three of their chilli varieties for the coming rainy season in Year 2. Given that the three varieties proposed by [REDACTED] had already been tested successfully in Northern Ghana, it is not necessary to start with small scale adaption trials and we will move straight to support field demonstrations to promote widespread adoption and use of the varieties. [REDACTED] is, also, interested in promoting seeds of a range of other vegetables it supplies.</p>
Intervention C2. Incentivise major buyer exporters to establish supply chains in the North	<p>As in the case with the other vegetable market major buyers and exporters have shown little interest in investing in a supply chain in the North. The original approach of holding a limited tender and/or mini competition to attract exporters was abandoned when initial engagements (e.g. meetings held with leadership and members of [REDACTED] and [REDACTED] as well as with individual exporter such as, [REDACTED]) to explain MADE's objectives and approach and to solicit proposals revealed a lack of appetite or inability to invest in developing supply chains from the North. As mentioned in the chilli market above the principal "game stopper" has been the lack of the cold chain infrastructure. The exporters expect MADE to build the infrastructure for their use which is completely at variance with any sustainable market development approach especially M4P.</p> <p>In the last quarter of Year 1 discussions were held with a number of major buyers using a one-to-one almost head hunting approach to interest them in investing in a supply chain in the North. As reported in the onion and other vegetables markets reviews, discussions are most advanced with [REDACTED] which, in partnership with [REDACTED], is interested not only in sourcing chilli but, also, a range of other vegetables from the North. [REDACTED] made a couple of exploration visits to the North during the quarter. Preliminary assessment of the sites and discussions with the land owners is positive. Preparations are now on-going to pilot the partnership in a couple of locations in the Upper East in the coming rainy season. Discussions are, also, in an early stage for the brokering of a similar partnership between [REDACTED], a Takoradi based food processor that processes chilli peppers into chilli mash and paste for export and [REDACTED], another major Ghanaian agricultural inputs distributor.</p>
Intervention C3. BDS for women traders and chilli processors	<p>A call for expression of interest (EOI) was launched in the last quarter of Year 1 but the response from BDS providers was poor.</p>

1.5.2 LESSONS LEARNED

Some of the key lessons learned in year 1 in the groundnut market include the following:

- The main lesson learned is that buyers (including exporters) and end-users are interested in sourcing baskets of vegetables including chillis, not just chillis alone. This suggests that it does not make sense to treat chillis as a stand-alone market. In addition, the similarities between the chilli and other vegetable market interventions points towards the need to consolidate the interventions in both markets.
- Our experience with [REDACTED] in this market has highlighted the fact that recruiting NGOs to work as sub-facilitators is a lengthy and costly exercise that does not always deliver VfM, primarily due to the fact that most of the NGOs operating in the North have limited scope and scale and operate with principles that are not always in line with market development. The lengthy and costly recruitment process is partly due to the efforts and negotiations that have to be made to re-orient their thinking and approach.
- The same lesson regarding the need to promote investment in the vegetable market in the North through a more pro-active approach (involving more resources from the team, the use of investment profiles, and organise field visits) has been identified through our work in this market.

1.6 LIVESTOCK MARKET

1.6.1 OVERVIEW OF PROGRESS

Interventions in the livestock market have not progressed as quickly as we would have hoped in the first year. This has been due to a couple of factors. First, reaching agreements with implementing partners and service providers has been a long, protracted process. Good progress has been made on this front in the last quarter of the year, particularly with the appointment of a sub-facilitator - [REDACTED] - to support the implementation of the livestock interventions and finalisation of the MoU with one of our key strategic partners, [REDACTED] (see the table below for further details). Second, the market development specialist struggled to appreciate and apply the M4P approach despite the training, coaching and mentoring (including on how to engage with the private sector). The livestock market development specialist has been therefore relieved of his duties and we are actively looking to recruit a replacement.

The table below provides an overview of progress made on each of the livestock interventions in the first year (see Annex 1 for further details).

Intervention	Key results obtained
Intervention L1. Run a media campaign to change the attitudes of smallholder traditional farmers	<p>A three part radio campaign was completed during the year and was very positively received. The programmes covered topics on good husbandry practices, including feeding, breeding and vaccination of livestock against diseases and outbreaks during the early dry season and was ran on a number of public service FM and community radio stations across the three northern regions. As with the other markets the programmes were presented as panel discussions between different market actors (farmers, veterinarians, feed and drugs suppliers, processors etc.).</p> <p>Apart from the radio programmes the other major activity planned under this intervention was the production of DVDs to reinforce the message delivered by the radio programmes. The production of these DVDs was to be based on field level demonstrations by emergent farmers and paravets, these demonstration did not however take place in the first year and will instead take place in the coming year.</p>
Intervention L2. Establish a pilot scheme of para-veterinary practitioners as suppliers of inputs	<p>The aim of this intervention is to establish a new viable scheme (i.e. business model) which would enable para-vets to establish commercially sustainable businesses based on the sale of drugs and feed supplements as well as the provision of veterinary and breed improvement services to livestock farmers.</p> <p>A service provider was contracted at the end of the last quarter to design the proposed para-vet business model. To initiate the work the service provider undertook a mini-survey of existing para-vet operators in Northern Ghana, this</p>

	involved sampling three paravets from the Upper East, West and Northern regions and developing profiles of their businesses to better understand their business structures, operational capacities and constraints. The findings of this mini-survey will inform the detailed design of the paravet business model which will be undertaken during the first quarter of the coming year.
Intervention L3. Support emergent and large farmers to develop a more commercial approach to their businesses	As with the other crop markets the launch of BDS to commercial and emergent farmers has been delayed due to difficulties in identifying quality BDS providers. As with these other markets the approach will now involve <i>partnering</i> with a number of BDS providers and guiding them through the process of developing and rolling out commercially sustainable BDS services to livestock farmers. To inform this new approach a preliminary assessment of the BDS requirements of small and emergent livestock farmers was undertaken in the final quarter of year 1. This involved surveying a small sample of livestock farmers (9 in total) to better understand the capacities and weaknesses of their business models, with the intention of then tailoring a package of BDS services to meet these needs. The consultants commissioned to carry out the scoping exercise are currently in the process of finalising their report.
Intervention L4. Assess the feasibility of monetising livestock in northern Ghana to increase access to finance for livestock farmers	<p>This intervention aims to assess the feasibility of a number of options for monetising livestock (i.e. using them as collateral or insuring them). One of the key objectives of this intervention in year 1 was to pilot a micro-insurance product for livestock. In quarter 3 a service provider [REDACTED] was contracted in to undertake an assessment of the feasibility of developing this livestock micro-insurance product, this involved the following:</p> <ul style="list-style-type: none"> • Assessing the interest of the commercial insurance sector in Ghana in developing livestock insurance products or programmes as well as the expected demand for livestock insurance by livestock farmers in Northern Ghana; • Identification of the main (insurable) risks for the insurance sector with regard to small ruminants in Northern Ghana; • Assessing the quality of the actuarial and other data available in Northern Ghana and the identification of the data requirements for developing the pilot intervention vs. scaling-up the pilot at the regional/national level; • Recommending the micro insurance products most appropriate to Northern Ghana including assessing the potential to bundle livestock insurance solutions with other products and services currently offered to rural households and their delivery channels (e.g. crop-weather insurance-livestock, or life-health-crop-livestock). • Identification of a suitable partner for the implementation of the pilot micro insurance scheme. <p>Feedback from the consultant has been positive indicating that it will be feasible to introduce a livestock insurance product in Northern Ghana. The consultant is expected to deliver his final report this month (May 2015) at which point plans will be put in place to launch the pilot and test the recommended micro insurance product.</p>
Intervention L5. Provide advocacy support to Livestock Associations	<p>This intervention aims to generate for more effective government policy support for the livestock sector in Ghana. A couple of activities have been undertaken this year which will help to bring about the required policy reforms. Firstly, a livestock stakeholders' platform (similar to the groundnuts alliance) has been established and the first meeting took place in MADE's office in October 2014. The livestock policy platform will act as a forum to identify and prioritise key policy issues and decide on the most effective means to be adopted to influence policy makers and bring about the required reforms.</p> <p>The second major step was the appointment of the Institute for Development Studies (IDS) in February to produce evidence on the policy and institutional support and public investment needed by the livestock sector in Ghana. The research will be used as an evidence base to empower stakeholders in the industry to advocate for more effective public policy framework promoting and supporting</p>

	the development of the livestock sector in Ghana, particularly in the North.
Intervention L6. Promote private sector investment in fattening stations and a modern abattoir in the North	<p>This intervention aims to attract a large private investor (██████████ was the most promising potential investor identified during the inception phase) to invest in the establishment of a network of fattening stations and small abattoirs and processing facilities across the North.</p> <p>Progress with this intervention has been extremely slow this year, due primarily to long delays in agreeing a scope of collaboration with ██████████. Although there was a clear willingness on ██████████ part to work with MADE they were unable to commit to a schedule of activities with us due to uncertainties regarding the financing of its planned investment (two fattening stations and three abattoirs) in the North. Over the past couple of months though ██████████ has secured finance from a number of sources, giving renewed impetus to the partnership, this resulted agreement being reached on a final scope of collaboration with ██████████ and the signing of an MoU with them in April 2015. The partnership with ██████████ will now focus on helping them to build a supply chain involving 3,000 smallholder farmers to feed the two fattening stations and abattoirs it plans to establish. The pilot farmer outreach programme to be initiated with ██████████ next year is discussed in Part C of this report, which outlines our plans for next year in the livestock market.</p> <p>During the year MADE has also engaged other potential investors. Discussions have been held with a second abattoir operator ██████████, also based in Accra. A draft MoU was shared with the company in March 2015 and will soon be finalised for signature. The company has also expressed a strong interest in setting up an abattoir in the North but lacks the funds to do so because all its resources are currently committed to running the abattoir in Accra. MADE intends to support ██████████ to secure financing to invest in the North and also introduced them ██████████, however after preliminary discussions it seems that the cost and structure of funding being offered by ██████████ is not in line with ██████████'s expectations. Whilst assisting them to identify alternative sources of finance MADE will also encourage ██████████ to source more livestock from the North and in the coming year plan to pilot a similar farmer outreach programme as that which we intend to undertake with ██████████. This will be done by working through ██████████ principal supply agent, ██████████ (a livestock trader based in Tema), whom we have also held discussions with during the year. ██████████ currently procures most of its traded animals from ██████████. It is interested in MADE's assistance to strengthen the network of agents it uses for its procurement operations in Northern Ghana, facilitating access to finance and linking it to a network of progressive farmers in the north who will serve as end buyers for improved small ruminant breeds. In return for MADE's assistance ██████████ will support MADE achieve its livestock smallholder farmers outreach targets and outcomes.</p>

1.6.2 LESSONS LEARNED

The following are some of the key lessons learned in the first year:

- In spite of its commercial potential, the livestock sector, unlike most crop sectors, has received very little attention from both government and donors. The few government and donor sponsored livestock development programmes that have been implemented have focused either on direct state intervention (e.g., the state sponsored Livestock Development Programme) and/or targeted the poorest of the poor (e.g., Heifer International's small ruminant loan programme). While this makes it difficult to find any actors with sufficient appetite and capability for business partnerships for market development, it is also an opportunity for the MADE programme to add unique value.
- The assumption that there would be proactive radio stations and ICT based information providers to partner to develop commercially oriented and sustainable programmes did not hold.
- There are existing para-vets practicing (albeit very few) whose needs may be addressed by BDS to enable them grow and play some of the roles anticipated for the selected and prepared para-vets.

- The distortion of the BDS market due to heavy donor subsidies and grants seems to have negatively affected the appetite and capability of potential service providers to develop commercially oriented and sustainable products and services. It is therefore important to modify the approach to BDS providers and give them support so that they can deliver the services required by MADE.
- The process of engaging sub-facilitators is long and it is difficult to find those with the right capabilities and financial strength, including good appreciation of MADE's market development approach. For example, MADE's engagement with [REDACTED] has been challenged by its inability to mobilise resources on time and its own internal organisational and business weaknesses.

SECTION 2. REVIEW OF CROSS CUTTING THEMES

2.1 GENDER

The MADE Gender Strategy developed during the inception phase examined the role women play in each of MADE's six focus markets, emphasising the constraints which prevent them from maximising the benefits of participating in these markets. The strategy highlighted the fact that although women are active participants in these markets, primarily as labourers, small processors and traders, their activities and income opportunities are constrained by limited access to key inputs such as land and seed and support services such as finance and training on good agricultural practice and modern business management practices. The strategy included a set of measures or actions to address these constraints, these focused on the following:

- Facilitation of women's access to agricultural production inputs, information and good agronomic practices (GAP)
- Facilitation of women producers' linkages to networks
- Facilitation of women producers' access to markets
- Facilitation of access to BDS and finance for women traders and processors

Progress under each of these areas is discussed in the following section. It is important to emphasise that the strategy did not include standalone gender actions, rather it acted as a guide to ensure gender is mainstreamed in all markets, interventions and activities. All six markets and related interventions have been gender-screened to ensure that women are not unduly disadvantaged and that measures are in place to mitigate negative effects on women.

2.1.1 OVERVIEW OF PROGRESS

The table below highlights the main activities initiated this year under each of the gender focus areas outlined above. Overall significant progress has been made in facilitating women's access to inputs and information on GAP. Progress has been limited on the other focus areas, and more emphasis will be placed on these in the coming year.

Gender Activity	Key results obtained
Activity 1. Facilitation of women's access to agricultural production inputs (incl. land), information and good agronomic practices (GAP)	<p>Trials and demonstrations to showcase new seed varieties and GAP were mounted and training provided to farmers in the rice, groundnut, onion and other vegetable markets this year. Women (as lead farmers, input dealers and extension agents) were active participants in these demonstrations:</p> <ul style="list-style-type: none"> • In the onion market rainy season adaptation trials one of the nine lead farmers selected to lead the trials was female. Also one of the five input dealers supporting the trials was female. GAP demonstrations on rainy and dry season production were also mounted, providing training to 629 female farmer; four of the 15 agricultural extension agents who were trained to roll-out the demonstrations were female. • In tomatoes 244 of the 1026 farmers trained on GAP were female. • In the groundnut market 111 female farmers (out of 363 farmers in total) attended the field days where GAP was demonstrated. Over half of these female farmers (59) later adopted GAP in their own fields. • Similarly in the rice market 708 of the 1,649 famers who benefitted from GAP training were female. <p>To improve women's access to and tenure of land, MADE liaised with the PSDS II Secretariat to monitor the rolling out of land titling in SADA. However due to delays in rolling out the PSDS II BEE Reform, the initiative hasn't progress as expected this year. This will be pursued further in the coming year.</p>

Activity 2. Facilitation of women producers’ linkages to networks	In the first year women producers (in each of the crop markets) were provided with assistance to organise themselves into groups in order to facilitate easier access to inputs and support services and to facilitate inter and intra-group information exchange. For example in the groundnut market the aggregator [REDACTED] was supported to provide training and orientation on group dynamics; a total of 1,522 farmers, 592 of whom were women. This has facilitated women’s timely access to seeds and other agro-inputs support such as ploughing, fertilizer and other chemical services.
Activity 3. Facilitation of women producers’ access to markets	As emphasised in the market review section limited progress has been made this year in improving access to markets for producers in the North, including female producers. Several promising discussions have however been initiated with a number of large off-takers in the South which we will take forward in the coming year. One of the most promising is with [REDACTED], a large supplier of fresh vegetables to the Accra market. [REDACTED] was established and is being managed by a high profile woman entrepreneur who is particularly interested in linking up with and sourcing vegetables from women producers in the North. [REDACTED] plan also includes establishing a series of pack houses for vegetables in strategic locations around the North, the packing and sorting of vegetables in these pack houses have the potential to create significant employment and income opportunities for women.
Activity 4. Facilitation of access to BDS and Finance for women traders and processors	The BDS interventions in each of the six markets are all focused on supporting women processors and traders. None of these BDS interventions were however launched in the first year primarily due to difficulties in identifying capable BDS providers. MADE will modify its approach to contracting BDS providers and we expect to be able to launch these interventions in year 2.

2.1.2 LESSONS LEARNED

Some lessons learned during the first year of implementing MADE include:

- Aggregators, input dealers and extension agents can provide effective platforms for integrating female farmers and increasing their access to extension services if they receive the adequate support from MADE.
- While the use of the “role model” farmers is important for engaging other farmers, particularly in the case of short-cycle crops such as vegetables, it may actually be counterproductive with respect to strengthening the role of female farmers. This is because these “role model” farmers tend to be very traditional and perceive being more inclusive on the gender aspect as a “threat” to the status quo.
- The role of value chain coordinator has been played more effectively by aggregators acting as MADE’s partners and to some extent NGOs serving as sub-facilitators. It is important, however, that MADE ensures that they also adopt a gender focus in their interventions.
- There may be other equally (if not more) effective approaches and stakeholder appetite to address the irrigation challenge including the development of the irrigated land rental market which may provide the opportunity to address women’s access to land.

2.2 CLIMATE CHANGE

As set out in the Climate Change Strategy, each market had to undergo a screening process, in which climate sensitivity and environmental risks were assessed, and where appropriate, mitigation measures were suggested. MADE undertook an environmental and climate change screening at the market rather than intervention level. The reason was that interventions within one market shared similar risks from climate change, and to the environment and to CO₂/GHG risks.

During year 1 of implementation, the Market Development Specialists acted as the Climate Change Champions to ensure that climate resilient varieties were introduced, and that good agricultural

practices included measures to mitigate negative effects from climate change. Climate Change and Environment has been mainstreamed into all interventions and activities through selection of seed varieties and compliance of good agricultural practices. Other adaptation and mitigation measures were related to interventions that will take place in subsequent years.

The table below presents the environment and climate change measures undertaken for each market during year 1 of the programme.

Market	Adaptations/Mitigations Measures	How measures have worked in Year 1
Onions	<ul style="list-style-type: none"> •Plant early maturing varieties •Use drought resistant varieties •Efficient water management •Research into early maturing and drought resistant varieties 	Adaptation measures were used in intervention O1. In intervention O2, farmers were trained in GAP. There are regulations against cultivating within a certain distance of the riverbank, therefore the risk of riverbank erosion due to land clearing has not been encountered, as the interventions have focused on adaptation trials and training. In the future, when the interventions are scaled up, more attention will need to be paid to promote sustainable river bank cultivation techniques and efficient use of water.
Rice	<ul style="list-style-type: none"> •Research into early maturing varieties, flood and drought resistant varieties, salinity and disease tolerance varieties •Efficient water management •Provide good extension services and GAP 	The GAP training (R2) addressed the sensitivity of rice to drought, for example intermittent irrigation to reduce over-use of water during dry season. Intervention R3 (multiplication of certified seeds) was stalled because of an inadequate supply of water at the Tono dam.
Groundnuts	<ul style="list-style-type: none"> •Improve agricultural practices – crop rotation, time planting and harvesting •Improve soil fertility by direct fixation of nitrogen and provision of organic matters to the soil •Reduce the incidence of parasitic weed 	Groundnuts are vulnerable to both flood and drought but adaptive to infertile soil. The GAP training in intervention G1 highlights crop rotation which helps mitigate groundnuts' sensitivity to climate change. The GAP training also demonstrated to farmers appropriate use of agrochemicals for groundnuts. Interventions G2 and G3 focused on developing aflatoxin free groundnuts using technologies and good agricultural practices.
Other Vegetables	<ul style="list-style-type: none"> •Plant early maturing varieties •Use drought resistant varieties •Efficient water management •Research into improved technology, early maturing and drought resistant varieties 	Adaptation measures were used in intervention OV1. Intervention OV1 is working towards introducing drought resilient varieties for dry season. Farmers were trained in GAP. The adaptation trials have researched into rainy season varieties and selected two varieties to scale up. Dry season variety crops have not finished so we have not been able to test their resilience.
Livestock		Most interventions so far have focused on media, research and advocacy. None of the suggested measures were used. Intervention L3 will be complemented by the Action Research focused on formulation of livestock feed from crop residue. Results from this action research will help mitigate overgrazing pressure.

2.3 COMMUNICATIONS

MADE's communications activities have been designed to support and complement the programme's core interventions across the six MADE markets. The three key focus areas or objectives of MADE communications activities have included:

- Promoting the commercialisation of the MADE's six markets by demonstrating how agriculture can work as a business for northern Ghana: The key activity here is the production and broadcast of a regular evening radio programme (flagship radio programme) focusing on the opportunities and challenges of agriculture as a business in the region. The intention is that the production of this programme, and buying of airtime, would be put out to tender and the successful bidder would include a plan on how to make the programme commercially viable in the long-term. In the first year a number of pilot radio programmes were run across MADE's six core sectors to test whether this would work, in particular whether there was sufficient audience and commercial interest in sponsoring and sustaining such a broadcast (see the table below for further details)
- Facilitating better linkages between farmers, input dealers, traders, service providers (incl. financial services), agribusiness and exporters: This involves a mix of activities designed to build confidence in the potential of the agricultural sector in northern Ghana, these include Investment Promotion packs that demonstrate potential in the MADE sectors (backed up by Investment opportunity tours to the north for southern and international business interests); Agriculture as a Business development conference(s) for the North; a MADE e-newsletter that connects business actors together and provides an opportunity for replicating innovative ideas in one market sector in another; a MADE website with readily accessible information on investment opportunities and the assistance which MADE can provide to realise those opportunities.
- Improving the provision of commercially actionable information to farmers and farmers' organisations (i.e. prices, market and investment opportunities etc.): This involves using multiple platforms to disseminate commercially actionable information to farmers including public sector bodies (such as [REDACTED]) and educational colleges, private sector actors who transact directly with farmers (e.g. input dealers and traders) and traditional and new media. The most appropriate platform or method will vary depending on the dynamics of the particular sector, MADE interventions will therefore include a range of options for disseminating information appropriate to how each sector is structured.

2.3.1 OVERVIEW OF PROGRESS IN YEAR 1

The table below highlights the main activities initiated this year under each of the three focus areas outlined above. The major activity completed during the year was the broadcast of a number of pilot radio programmes which focused on disseminating information on market trends and good agricultural practices. The radio programmes were run as pilots to test the listenership (i.e. whether there is an audience for such programmes) and the appetite of agribusinesses and other stakeholders to use radio to enhance their visibility. An evaluation of the radio programmes has been commissioned to inform the broadcasting activities of MADE's flagship programme in Year 2.

Communications Activity	Key results obtained
Activity 1. Promote the commercialisation of sector by demonstrating how agriculture can work as a business for northern Ghana	<p>This year's pilot radio programmes were run between May 2014 and March 2015 for the rice, livestock, groundnuts, onion and other vegetables (tomato) sectors. Each of the campaigns ran for between three and four weeks and were designed to coincide with the cropping cycle and livestock production calendar for each market, thereby allowing farmers to immediately apply what was learned. The programmes were broadcast in English and in eight local languages and were structured as panel discussions between different market actors. Listeners were provided with the opportunity to phone-in to ask questions and make contributions. Based on the volumes of phone calls, the level of interest and audiences listening in was very high.</p> <p>The programmes were broadcast on the regional state-owned FM stations namely [REDACTED] (covering the Northern Region), [REDACTED] (covering the Upper East Region) and [REDACTED] (covering the Upper West Region). During the last quarter, two community radio stations in the Upper East Region, Radio Builsa, Sandema and Quality FM, Garu were used for the broadcast of programmes on the onion and livestock sectors, respectively. Content for the radio programmes was developed in collaboration with crop and livestock specialists from [REDACTED].</p> <p>In the last quarter of the year, a process was initiated to engage these</p>

	specialists to develop standardised content for MADE's media programmes covering the six market sectors. The standardized content will be shared with radio stations, aggregators and other partners interested in adopting it for media education programme in the future.
Activity 2. Facilitation of better linkages between farmers, input dealers, traders, service providers (incl. financial services), agribusiness and exporters	<p>A “<i>What is MADE</i>” booklet - introducing the programme, its objectives, market sectors and how it can support business initiatives - has been produced and is now awaiting publication and dissemination.</p> <p>A service provider has been commissioned (in quarter 3) to develop investment profiles in each of MADE's markets. These investment profiles will provide the content for the investment promotion packs to be produced and disseminated. A first draft of the investment profiles was received at the end of quarter 4 and is currently being reviewed. The investment opportunity tours and market development conference(s) will follow once this material has been finalised, this is expected in quarter 2 of the coming year.</p> <p>The MADE website was formally launched in the last quarter of year. The website provides information on the programme and opportunities in the market sectors, as well as access to relevant reports and other documentation. A section of the site explains how MADE uses the M4P approach to give poor farmers better access to markets.</p>
Activity 3. Improving provision of commercially actionable information to farmers and farmers' organisations	<p>This year a number of methods were explored to understand the most effective way to disseminate commercially actionable information to farmers, these primarily involved the provision of information through the pilot radio programmes (described above) as well as through field level GAP demonstrations (described in the market review sections). The organisation and rolling out of the GAP trials and demonstrations were particularly instructive and provided us with a good insight into who is best placed to disseminate information on good practices to farmers and how this information should be packaged and presented. Further methods (infomercials, SMS communication, call centres) will be tested and assessed in the coming year, this is discussed in further detail in the communications plan for next year in Part C of this report.</p>

2.3.2 LESSONS LEARNED

- Our experience with the broadcasting of the pilot programmes has indicated that the listenership base for such programmes is potentially very large. Effective design and presentation of such programmes is crucial to maintaining listenership and attracting and maintaining sponsorship. The feedback from the first year indicates that presenting these radio programmes as panel discussions may not be the best way to engage and maintain an audience. The on-going evaluation of the radio programmes will assess this in detail and recommend alternative ways of presenting these programmes and getting our message across to the audience.
- Private firms showed limited interest in supporting financially and sponsoring the cost of radio programmes. We recognise that the expectation that agribusinesses would make a financial contribution was unrealistic, particularly with no evidence to show what value they could obtain from such an investment. A large, regular audience is the only way of attracting regular sponsorship for such radio programmes. Looking ahead to next year, it is therefore of crucial importance that production companies bidding for the production of the flagship clearly demonstrate how they plan to ensure sufficient listenership levels to attract and maintain sponsors.
- The consultants preparing profiles have indicated there is muted investor interest that may be further developed using the profiles with good “marketing”
- The communications/media market in the North has been severely distorted by subsidies given by donor programmes. It is therefore extremely difficult to engage radio stations and ICT based information providers to own and develop new business models that would allow for the commercial sustainability of the radio programmes initially sponsored by MADE. The focus, therefore, should be on the sustainability of the results of the interventions rather than the interventions themselves.

Part B. Strategic implications for year 2

As shown in Part A of this report, MADE has progressed to varying degrees in the opening portfolio of markets and interventions. The experience and learning to date has led us to conclude that while we need to make some adjustments to our approach in each of our six markets, we have not yet encountered any fundamental errors in our theories of change. Not all are fully tested as yet and we are making some adjustments, but the general conclusion is that they are sound and that it is definitely worth continuing these interventions in these markets.

However, we have already learned enough to reflect on wider strategic implications for MADE beyond this 'market by market' level. In this section we summarise the wider lessons learned and their strategic implications.

Lower than expected capacity of the private sector in Northern Ghana

The capability of private sector firms in the North is limited and lower than had been envisaged. For example, we had assumed that private seed companies would have the resources and capability to invest in developing the market for seeds, but MADE has had to support them in the development of the new varieties. The team has had to engage much more than expected with these businesses. We have no doubt that we are right to focus on the private sector as the main driver of market development and we need therefore to address this.

STRATEGIC IMPLICATIONS

In Year 2, we will use a combination of approaches to strengthen the private sector in the North and attract more firms from other parts of the country (and at international level) to the North. These include:

- Strengthen the capacity of the existing private sector firms in the North. We propose to do this through the design (and piloting, if approved) of a **Business Growth Accelerator intervention**. This intervention would involve providing business development and support service to private businesses that will help them to eliminate organisational, operational, and strategic bottlenecks that prevent the client firms from growing. This is similar to the services of management consulting firms, but with an adjusted service offering to address the peculiar needs of small and medium sized agribusiness firms based and/or operating in Northern Ghana.
- Focus MADE's resources in attracting large and capable private sector businesses from the South, particularly Accra. In the early stages of year 1, MADE had limited success in attracting investment from Southern buyers and exporters into the North. This initial approach focused on the cold solicitation of proposals. However, it soon became clear that there was a need to leverage the businesses' own investment and expansion strategies, which meant that the team had to devote more resources than expected to identify and engage with these businesses in the South. In the cases where we have managed to attract interest successfully, the MADE team has had to establish a more permanent engagement with the business and undertake several visits to the headquarter offices in the South. As a result, we are proposing to engage a **Business Development Adviser**, who would be someone based in the Accra who would facilitate linkages and partnership with businesses outside of the North, and help attract investments from Southern businesses to markets MADE works in.
- Continue to support capacity development directly through BDS and mentoring, design (and pilot) facilitating the arrangements between them, and actively seek capable partner businesses and investors from outside the programme area.

Poor capacity of sub-facilitators and BDS providers

Our approach as programme implementer is to commission sub-facilitators to undertake the bulk of the activities within MADE interventions to address the lack of public goods. MADE has a small team and we do not have the capacity to, for example, undertake training programmes ourselves. This approach, however, assumes that there are capable service providers to do this for MADE in the North.

Overall, we have found that there are important challenges in finding capable providers in the North to do this. This has resulted in a range of issues: delays in delivery of services, poor quality, and unrealistic offers from providers.

To address cost and local content implications, we have tried in some cases in to address the weak capacity of service providers in the North by partnering small teams from international organisations, e.g., FMS, with local consultants and experts using the international experts to mentor, coach and transfer knowledge to the local teams. However, this approach is costly and is not applicable to all interventions that require such services.

STRATEGIC IMPLICATIONS

In Year 2, we will continue to provide support through partnering experts from international organisations with local teams, but we will also:

- In the case of sub-facilitators such as NGOs, we will learn from experience what partners can and cannot do, so utilise them at their capacity and do not place unrealistic expectations on them. We will also continue to use international providers sparingly but where necessary.
- In the case of BDS providers, we will aim to strengthen the market of BDS providers through a **BDS Provider Mentorship Scheme**. Through this scheme, MADE would engage with all tenders applying to a “call for proposals” to support them in understanding the ToR and assessing their capacity, incentives and relationships to deliver the desired activities. MADE would then engage further with the most promising providers to clearly identify the areas where they would provide their services, assess the level of support and mentoring required, and ensure close monitoring of implementation. This approach would allow for the development of a more capable and competitive market for BDS providers. We will also aim to make BDS providers beneficiaries of the **Business Growth Accelerator intervention**.

Addressing coordination failures is key to success

Coordination challenges are always at the heart of connecting small scale farmers to markets. The solution promoted has for a long time been the formation of farmer based organisations of one form or another to consolidate and sell the farmers’ produce in bulk. While this can work, there is little evidence that it generally works and there are innumerable examples of it failing. Within MADE and in recognition of the lack of effective farmer organisations in the programme area, we have focused on a different solution in which aggregators develop their business model on addressing the coordination challenge.

Studies carried out by the Monitor Group¹ suggest that aggregation models can, especially those with the lowest levels of intermediation provide significant increases in income for smallholder farmers who trade with aggregators. The sources of the increased income are different across models – some originate in savings on transport costs but the larger increases are said to come from the provision of more value added services (e.g. sorting, drying, grading, credit provision, warehousing). The income increases are said to range from 5% to 40%. Crucially, also, the study revealed that the aggregation models can be a profitable business model. While they demonstrated thin and volatile margins, often fluctuating between one year and the next, average margins were 2%-3% overall, comparing favourably with margins obtained by global grain traders such as ADM (3%). This suggests that agribusinesses deploying the aggregation models are potentially, at least, commercially viable and sustainable.

STRATEGIC IMPLICATION

For year 2 and onwards, we see aggregators as key intermediaries between producers and actors further up the value chains in our crop markets. We therefore aim to continue testing and **replicating the “aggregator model”**, recognising that it is central to MADE and innovative so the programme must focus on learning from its experience developing these aggregator businesses.

Agri-finance is important and lacking

The financial services sector is not providing funding to farmers and agribusiness in the North. Although in the initial market assessment we had already identified access to finance as a constraint

¹ **Market Based Solutions to Poverty in Africa**, [REDACTED], Monitor Group, May 2011

and had included a number of interventions to address it, we need to take a deeper look at the systemic constraints in the financial sector. Our progress in year 1 has been limited but a number of feasibility assessments are now ready to go. This will be of strategic importance, as unlocking finance could be a game changer for a number of market constraints.

STRATEGIC IMPLICATIONS

In year 2 we will need to have a more clear understanding of financial sector constraints faced by the agribusiness sector. We will ensure that the feasibility assessments that are about to start include this wider analysis as part of their assignments and, if this is not enough, we will commission a specific study on the existing constraints to agribusiness financing in the North. We will develop a **clear strategy on how to unlock the financial sector in the North**.

Consistently, MADE will remain open to develop new interventions in the area of financial sector and look for opportunities where our intervention fund resources could be used. This could include, for example, areas such as guarantee facilities.

Sequencing and timing of interventions is challenging

In agriculture, testing, piloting and scaling are not as clearly sequential as might be assumed. While an intervention might work well in one year, unexpected issues might occur the next as a result of weather for example. The converse could also apply when initial problems can be overcome in subsequent seasons. This of course complicates the timing of sequential and supporting initiatives. This is further complicated by the operational reality of operating in the North, where doing business is more challenging.

STRATEGIC IMPLICATION

There is a strategic issue around managing this reality, building in flexibility and mechanisms for making decisions that will sometimes necessarily be based on partial information. In year 2, we will ensure that the MADE team continue to develop their intervention management skills, building in flexibility and responding to changes. We will need to strengthen the use of our intervention monitoring plans to ensure that feedback loops are working well and make sure that results measurement and knowledge management at the center of our approach.

In line with these and other needs, we are proposing a **re-organisation of the MADE team** for year 2. Further details on the proposed changes, the rationale, and the new suggested structure can be found in Annex 4 – Business plan and revised budget.

Some supporting markets are severely distorted

A core principle of M4P is the avoidance of market distortion by the programme. We have faced challenges where the markets we are working in are already distorted by the many other donor funded initiatives in the North. A good example is the communications/media market where many radio stations have built a substantial part of their business model on selling air time to donor funded programmes. This makes it extremely difficult to engage radio stations and ICT based information providers to own and develop new business models that would allow for the commercial sustainability of the radio programmes initially sponsored by MADE.

STRATEGIC IMPLICATION

In Year 2, we will have to compromise and assume that, in some cases, it will not be possible to assure the commercial viability of our interventions. Our focus will be rather on ensuring the commercial sustainability of the result of these interventions.

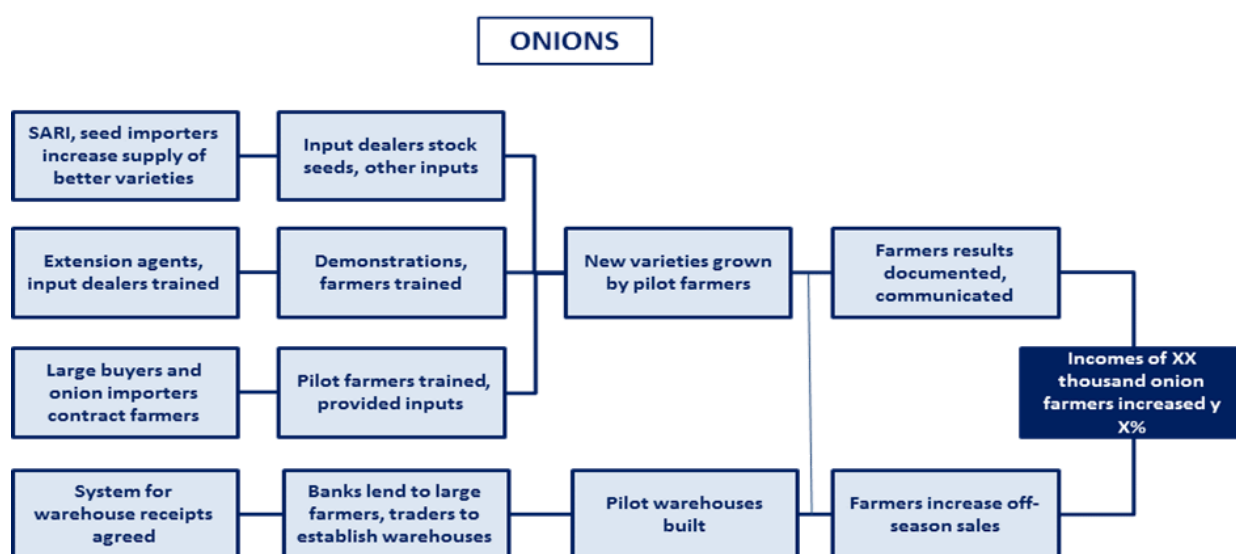
Part C. Looking ahead - Year 2

SECTION 1. MADE MARKETS

1.1 ONION MARKET

1.1.1 REVIEWING THE THEORY OF CHANGE

The interventions designed in Year 1 were intended to test the following theory of change.



After year 1, we have been able to validate a number of assumptions behind the ToC.

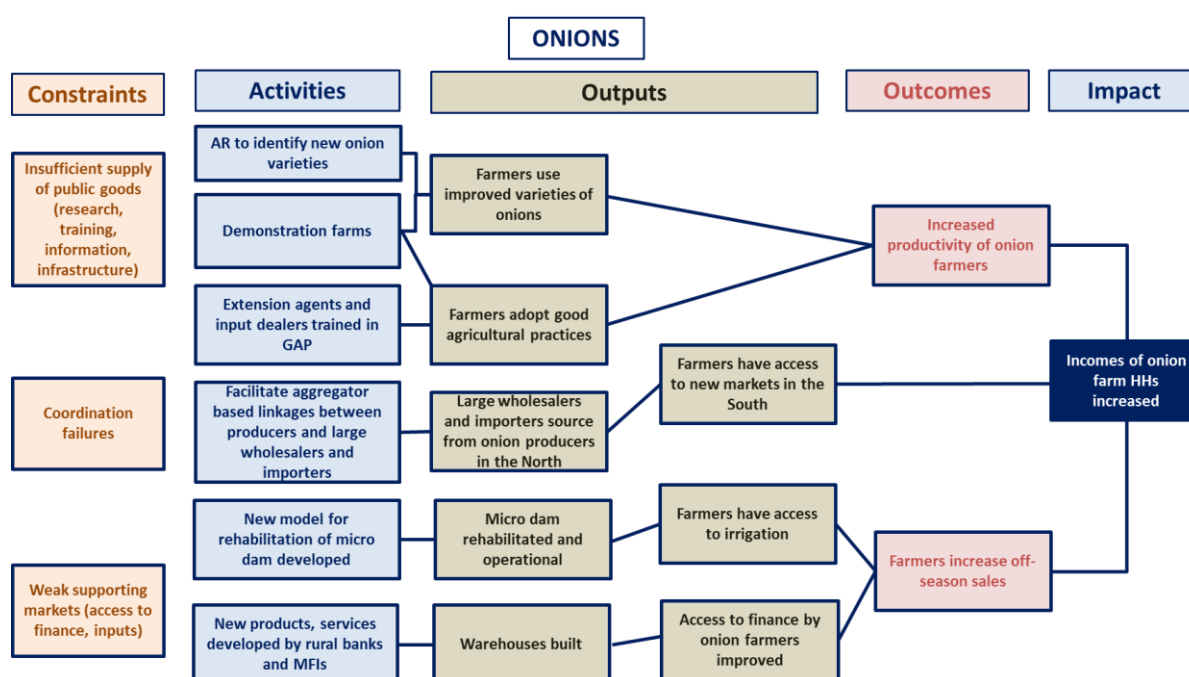
Overall, the approach of using trials and demonstrations has proven to be very effective and feedback from the various partners involved has been positive. The combination of practical field level demonstrations and information on various onion seed varieties has been particularly beneficial in allowing farmers to make informed decisions on varieties suitable for their locality and their target markets. But although initial adoption rates by farmers seem to be positive, we will need to wait until the scale up phase of the intervention in year 2 to see if this will result in the availability of large volumes of onions in northern Ghana, comparable to the volumes in Niger and Burkina Faso.

We will also need to wait for year 2 to assess the assumption that large wholesalers and importers have the appetite to source onions from Northern Ghana. However, the recent partnership with [REDACTED] (see Intervention O3) and talks with other value chain actors indicates that the interest is there. But the fact that we do not yet have a sizeable onion production means that we will need to wait until year 2 to assess if these linkages do indeed emerge.

The most significant challenge to our assumptions is that using sub-facilitators to reduce the transaction cost involved in connecting with thousands of smallholder farmers would serve as a strong incentive for large wholesalers and importers to contract the farmers. The reality on the ground has proven that an additional “level” was required to facilitate the link between smallholders farmers and the large wholesalers and importers. This role has been played by the aggregators.

Insufficient progress has been made with the financial service providers to test the ToC for the warehouse receipts initiative.

The figure below presents an updated theory of change in the onion market.



1.1.2 INTERVENTIONS FOR YEAR 2

This section presents the interventions that MADE will be implementing in year 2 of implementation. The specific activities required to implement each of these interventions are detailed in **Annex 2 – Work plan onion market**.

Intervention O1. Improve farmers' access to and use of improved varieties of onions

In year 2 we will continue to partner with [REDACTED] to scale up the action research interventions and develop them as full pilot interventions, both for the rainy and dry season varieties, in the Upper East Region. Evidence/adoption GAP demonstrations will be mounted to showcase the return on investment of using the improved seeds (increased yields, larger and more consistent bulb sizes, better appeal to the market, etc.) and the practices to be adopted by farmers in order to achieve the desired returns. MADE will, also, continue to broker relationships between [REDACTED] and local input dealers to make improved seed varieties available to smallholder farmers.

We will also replicate and scale up the [REDACTED] model by engaging with other seed companies. [REDACTED] capacity is limited and cannot be used as a scaling up agent for the other regions. MADE is already in advanced discussions with [REDACTED] (a Dutch seed company with a Ghana subsidiary) to replicate the model piloted in year 1 with [REDACTED] in the Upper East and West Regions. [REDACTED] will provide seed samples for the demonstration plots and technical experts to train input dealers, lead farmers and extension agents on the growing of their seed varieties. The lead farmers and the extension agents will subsequently extend the training to the smallholder farmers using demonstrations while the input dealers will serve as the primary source of information on the benefits of the improved seeds when farmers visit their shops for seeds and other inputs. The lead farmers will provide land and (together with some of the smallholder farmers) labour for the demonstrations. The local input dealers will make time to participate in the training programmes with some making their shops available to be used as “case studies” for training of the local input dealers. We expect [REDACTED] select seed varieties that are already adapted to Northern Ghana, but otherwise there might be the need to run some adaptation trials/action research. In year 2 we will also aim to attract other input dealers in the demonstrations (e.g. suppliers of fertilisers and chemicals). Discussions are at an advanced stage with [REDACTED] who, in addition to their interest in providing plant nutrients and protection chemicals, are also keen to promote their own onion seeds, especially in the Northern Region.

To enable this to happen, MADE will appoint a sub-facilitator(s) to work with [REDACTED]. Discussions are already on-going with the [REDACTED] in Garu to engage them as sub-facilitators. In addition, MADE will explore a different approach to that of sub-facilitators: using private

extension agents/teams of extension agents and agribusiness consultants with extension experience to facilitate the interventions.

Intervention O2. Improve farmers' adoption of good agricultural practices (GAP)

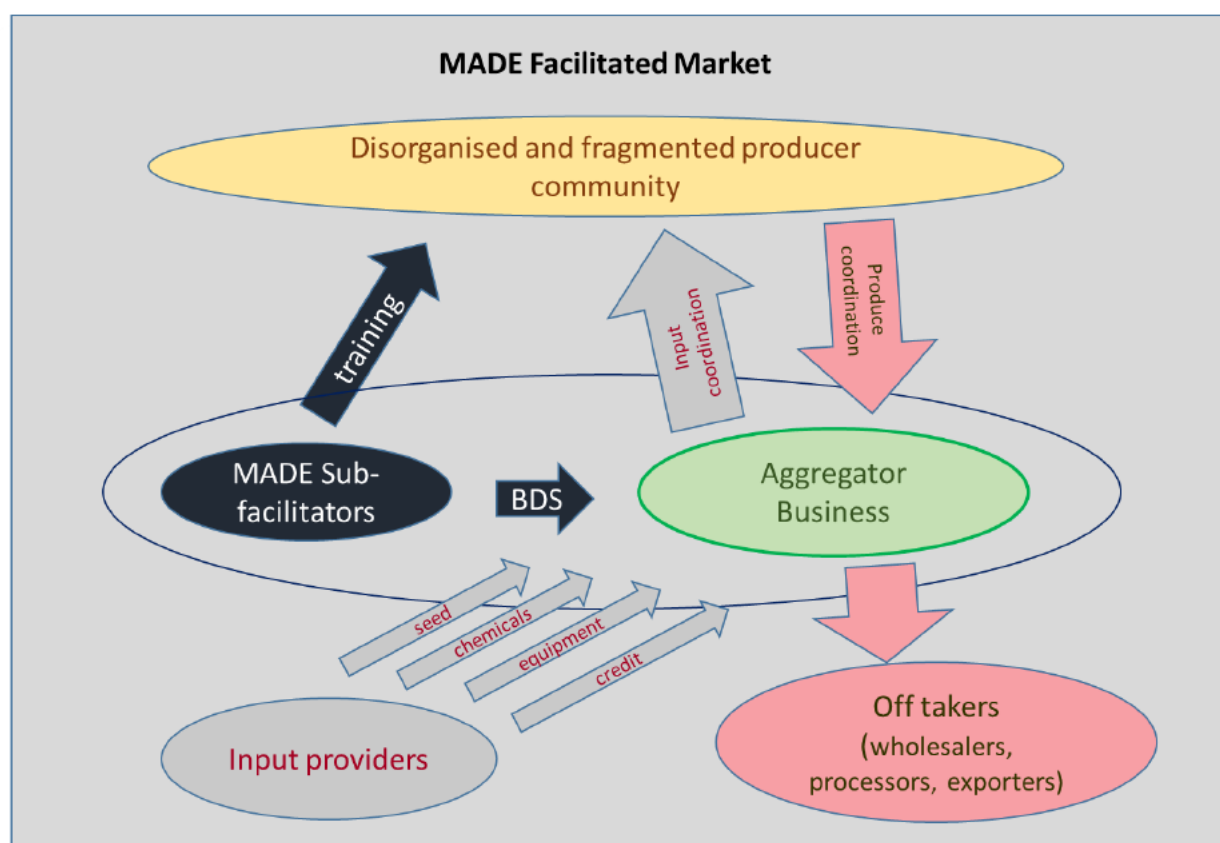
The focus of this intervention will be to continue the pilot started in year 1 and support farmers in adopting good agricultural practices (in particular regarding the use of fertilisers, chemicals, and post-harvest care) and other production technologies. The approach will remain the same – developing a sustainable extension support system by training extension agents and input providers on GAP in the onion market. Training will continue to be provided through demonstration fields and radio programmes (see Communications Section).

In addition, we will test the appropriateness of using DVDs as a training tool for farmers. Therefore, along year 2 we will finalise the production of the DVD GAP training programmes (expected in September 2015); test the model of providing training to farmers through DVDs; and, if successful, scale it up by making it available for use by extension agents and input dealers. If possible (and commercially viable), the dissemination will also involve adaptation of the information contained in the DVDs into other ICT technologies, such as apps for farmers.

Intervention O3. Improve the onion supply chain in Northern Ghana

The partnership consolidated in year 1 between [REDACTED] and [REDACTED] will allow MADE to continue piloting the “aggregator model”. This model is graphically presented in the figure below.

Figure. The “aggregator model”



The model is driven by [REDACTED] interest to procure as much fresh produce as possible to meet the demands of the growing number of supermarkets and grocery outlets in Ghana (e.g., Marina Mall, MaxMart, Koala Shopping Centre). To ensure the produce meets [REDACTED] quality standards, an input supplier (i.e. [REDACTED]) provides the inputs to farmers on a credit basis (as well as the training, on an embedded basis). This credit is guaranteed by the promise of purchase of [REDACTED]. In addition, [REDACTED] repay the input supplier directly after deducting the costs when paying farmers for their produce. This model also provides the opportunity for [REDACTED] to develop the market for its inputs, reduce the risk of non-payment and enhance recovery rates. As an additional risk mitigating measure, [REDACTED] will require insurance to cover its exposure. MADE has already therefore initiated

discussions between the company and the Ghana Agricultural Insurance Pool (GAIP). For smallholder farmers, the model addresses their working capital needs and improves their access to and use of the right inputs to enable them maximise yields. [REDACTED] custom, also, improves the farmers' access to a good segment of the onion market where they can obtain better returns including stable (if not higher prices).

This model, when tested and proved successful, will be used to engage medium size buyers drawn from the Techiman, Kumasi and Accra onion markets, as it would allow the aggregators to supply them sustainably and at good quality.

Intervention O4. Improve access to finance by farmers

The lack of progress in year 1 for this intervention means that in year 2 we will continue to explore the original approach: to provide technical assistance to banks and MFIs in the Upper East to train their staff and improve their systems to lend profitably to onion farmers and to establish a system of warehouse receipts (same bag in, same bag out) to be operated by large farmers and/or buyers. As a result, activities will include:

- Mobilise agricultural finance expert(s) to assess the capacity of rural banks and MFIs in the Upper East to develop innovative products and systems to increase credit to the agribusiness sector, including to improve household storage facilities. If feasible, then the intervention would involve supporting them in adopting the new systems to lend profitably to farmers.
- Prepare a feasibility study to determine the viability (operational and commercial) of establishing a warehouse receipt system in Northern Ghana. If feasible, MADE would then support selected financial institutions to set up a warehouse receipts system (same bag in, same bag out) in partnership with other market actors.

This intervention is, in reality, a cross cutting one across all crop markets, as the issues faced by farmers are the same.

In addition, MADE will also start exploring opportunities to involve international financial institutions (e.g. [REDACTED]) into investing in the agribusiness sector. In this regard, initial contacts have already been made with [REDACTED] which is keen on holding further discussions with MADE to explore how to work together.

Intervention O5. Establish public private partnerships (PPP) for irrigation

The Terms of Reference have been drafted but contracting the service provide to implement them in year 2 remains in stand by pending DFID's assessment.

The original concept of this intervention required MADE to work closely with the [REDACTED] to commission technical assistance to assess the challenges and opportunities for the rehabilitation and maintenance of small water bodies (tanks, small reservoirs). If the recommendations were acceptable to both [REDACTED] and suitable water associations, and with DFID's approval, we would then provide support in the form of technical assistance to two water associations in the Upper East Region to:

- Enable them to contract a private firm to carry out rehabilitation and maintenance.
- Build their capacity in areas such as management, financial and advocacy to improve their governance structure and be able to exercise governance over the use of water and the collection of water charges.

Action Research AR-O1. Develop a rental market for irrigated land

The work undertaken under Intervention O3 revealed opportunities for exploring the development of a rental market for irrigated land as an alternative approach to addressing the irrigation constraint.

This approach will be tested as an Action Research intervention which, if successful, will be further developed as a pilot. It comprises engaging a supplier of irrigation kits (e.g. pumping machines, drip and sprinkler kits) like [REDACTED] with farmers and/or landholders who rent out their land. [REDACTED] would provide the irrigation equipment on a credit basis and farmers/landowners would repay it on a long term basis.

1.1.3 BUDGET FOR YEAR 2 INTERVENTIONS

The indicative budget for implementing the above mentioned interventions/activities is detailed in the table below.

Intervention O1	
Sub-contract TRIAS, other sub-facilitators/TA providers & intervention monitoring	
Intervention O2	
Run limited tender to select new media knowledge and information providers & provide support for adaptation and dissemination of DVDs	
Intervention O3	
Sub-contract TRIAS, other sub-facilitators/TA providers & intervention monitoring	
Intervention O4	
TA to assess the options for increasing agribusiness credit by rural banks and MFIs	
TA to prepare feasibility study on warehouse receipts system	
<i>Subtotal Intervention O4</i>	
Intervention O5	
Contract consultant for feasibility study	
Action Research O1	
Test viability of model to develop an irrigated land rental market	
TOTAL COST OF INTERVENTIONS IN ONION MARKET	

1.1.4 LOGFRAME CONTRIBUTIONS FOR YEAR 2 INTERVENTIONS

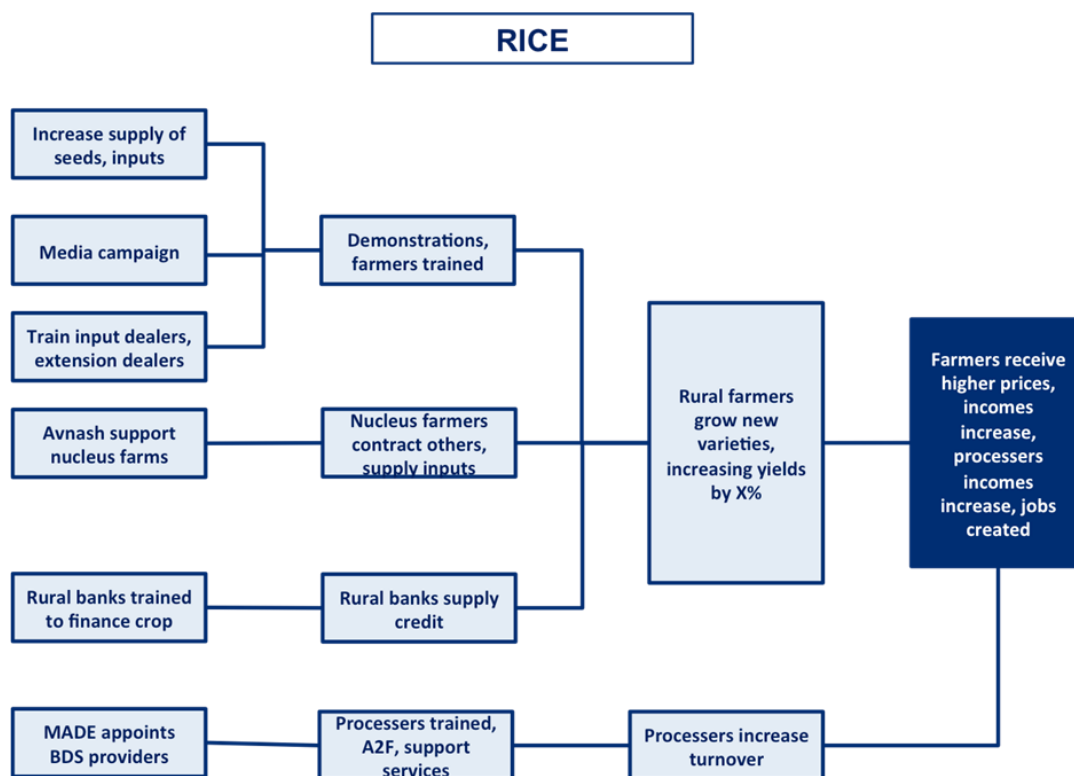
The contribution of each of these interventions to achieving MADE's outputs is presented in the table below.

	Related log frame indicators	Contribution
Intervention O1	OI 1.1: Number of market actors changing business practices or approach	105
	OI 1.2: Number of farmers who use improved inputs	4,000
Intervention O2	OI 1.1: Number of market actors changing business practices or approach	2
	OI 1.2: Number of farmers who use improved inputs	1,000
Intervention O3	OI 1.1: Number of market actors changing business practices or approach	6
	OI 1.2: Number of farmers who use improved inputs	1,000
Intervention O4	OI 1.1: Number of market actors changing business practices or approach	3
	OI 1.2: Number of farmers who use improved inputs	500
Intervention O5	OI 1.1: Number of market actors changing business practices or approach	2
	OI 1.2: Number of farmers who use improved inputs	100

1.2 RICE MARKET

1.2.1 REVIEWING THE THEORY OF CHANGE

The interventions designed in Year 1 were intended to test the following theory of change:

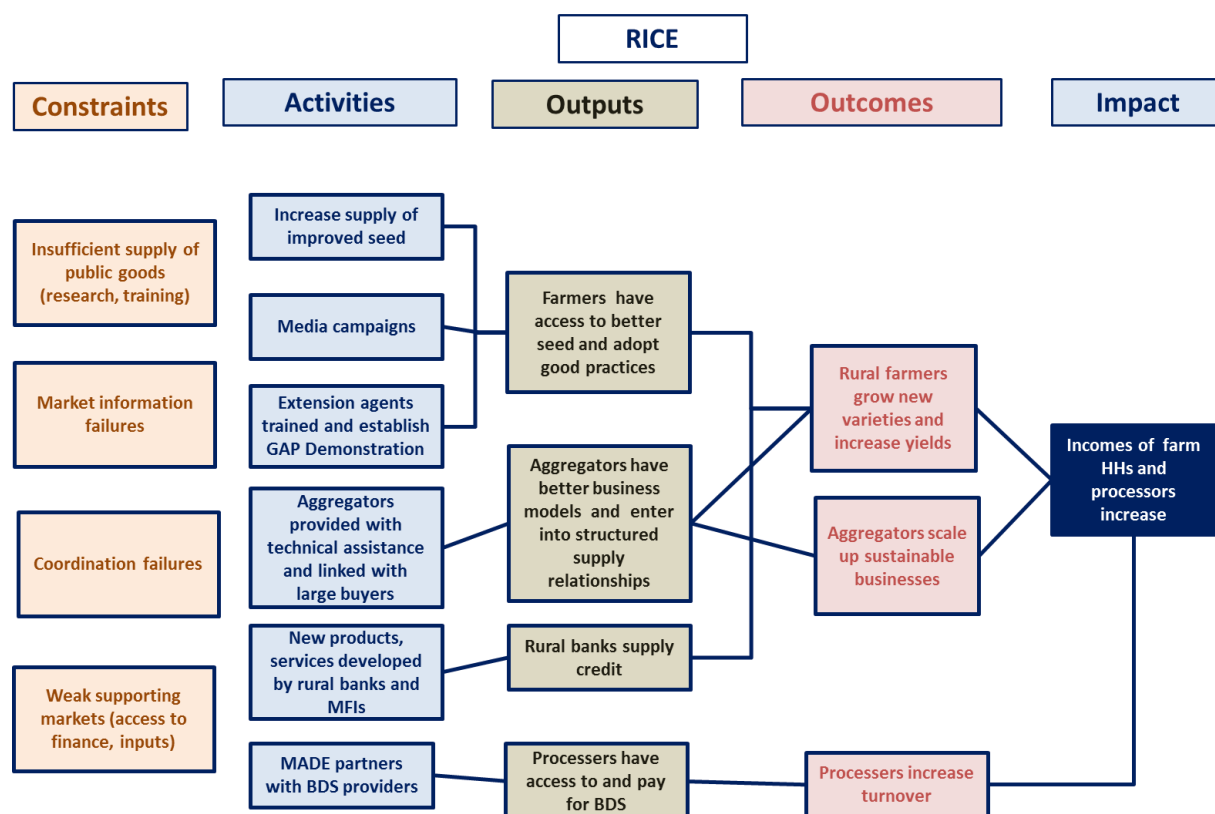


The key **assumptions** underlying the **original ToC** were that working through aggregators would enable Avnash and other processors to build the rice supply chain using a form of contract growing scheme. At the same time, farmers would be willing to grow perfumed rice using GAP because of the increased availability of inputs, effective extension support and the fact that supplying to [REDACTED] and the other processors would offer a secure market for the new varieties. Lastly, that good quality BDS and access to finance would be sufficient for women parboilers and processors to grow their businesses.

After year 1, we have been able to reassess a number of assumptions behind the ToC and adjust and update it accordingly. The major change is due to the fact that the contract growing arrangement between aggregators and [REDACTED] not materialise in the first year. The intention was to test the model of using large processor/end-buyer [REDACTED] to control and coordinate the supply of inputs to farmers, with aggregators being used as intermediaries in this process. However, given the uncertainty about when [REDACTED] mill will become operational, the focus in year 2 (informed by the positive experience working with other aggregators) will be modified to allow and encourage aggregators to take more control of the process. This will include delivery of services and inputs to farmers and identifying and dealing with processors and other end buyers.

Progress with BDS support to the women involved in parboiling and processing was limited due to difficulty in identifying quality BDS providers. This means that this part of the ToC remains untested.

The figure below presents an updated ToC in the rice market.



1.2.2 INTERVENTIONS FOR YEAR 2

As emphasised above, MADE has made some very positive steps in initiating its activities in the rice market in year 1. In particular the working relationships with both aggregators [REDACTED] has worked well and as we are now in a position where we can scale this up in the coming year and initiate relationships with more aggregators.

In year 2, we will focus on the following interventions². The specific activities required to implement them are detailed in **Annex 2 – Work plan rice market**.

Intervention R2. Support multiplication of certified seeds for market varieties of rice

In year 2 we will continue to support the approaches to seed multiplication that started being piloted in year 1 and are still ongoing. These will include:

- Continue to engage with community based seed growers (smallholder farmers) to support them (through [REDACTED]) in producing certified seed for other farmers and, if successful, on contract for aggregators. It is expected that the rain pattern in the 2015 rainy season will be good enough to enhance the availability of water in the Tono Irrigation Dam and allow the most promising of the community seed production groups (i.e. the Navrongo group) to use the irrigation facilities to produce seed in the dry season of the 2015/16 crop year (i.e. from November 2015 to March 2016) for the planting in the subsequent crop year.
- Continue the efforts to link aggregators with sources of certified seeds, including the development of investment profiles to highlight the investment potential in seed production and attract larger seed producers to the North.
- Continue to support those aggregators that are capable of producing their own seed (e.g. [REDACTED]) to sustain or expand production of their own certified seeds.

² Note that Intervention R1 is now presented in Part A/Section 2/2.3 - Communications.

Intervention R3. Develop paddy rice supply chain with [REDACTED] and other buyers through the use of aggregators

In year 2, this intervention will focus on building on the success of the aggregation model tested with [REDACTED] so it can be scaled up (i.e. increase outreach of current aggregators) and replicated (involve new aggregators).

First, we will continue to support [REDACTED] to expand their outreach. The target is to reach 500 additional farmers, making the total cumulative outreach of 2,000 smallholder farmers. To achieve this, MADE will provide technical assistance (on a cost-share basis) to build its organisational capacity to effectively manage the increased number of farmers. We will follow a similar approach with [REDACTED], although our outreach target will be more conservative (around 1,000 smallholder farmers in year 2) as its organisational capabilities and structures are weaker than Excel Bit's.

Second, we will engage five other aggregators and five nucleus farmers with an average outreach target of 800 and 200 farmers respectively. Fifteen potential candidates have been screened (based on a simple screening tool developed by the MADE team) and we are currently in the process of selecting five of them. The long list of candidates include, for example, [REDACTED]

In addition, we will place a strong emphasis in facilitating the linkages between aggregators and top-of-supply-chain (TOSC) buyers and processors to cover for the gap left by [REDACTED]. Exploratory discussions have already been initiated with [REDACTED]s, a general grains processor in Kumasi and a number of relatively larger rice processors including [REDACTED] in the Volta Region. MADE will also start exploring opportunities to link aggregators to major rice importers such as [REDACTED] to smaller mills in the North such as [REDACTED]

Intervention R4. Provide business development services to support women parboiled rice processors

We will commission this intervention in year 2 taking into account MADE's new approach to working with BDS providers.

Action Research AR-R1. Urea deep placement trials

We will repeat this action research intervention in year 2 due to the inconclusive results of the trials undertaken in year 1 (detailed in Part A/Section 1.2).

1.2.3 BUDGET FOR YEAR 2 INTERVENTIONS

The indicative budget for implementing the above mentioned interventions/activities is detailed in the table below.

Intervention R2	
Sub-contract consultants to prepare investment profile	[REDACTED]
Provide performance grant to SARI to support Navrongo MSP	[REDACTED]
Provide performance grant to SARI, sub-contract independent consultant to support aggregators' seed production	[REDACTED]
Subtotal Intervention R2	[REDACTED]
Intervention R3	
Grant support to cover cost of training of farmers and other public goods (5 aggregators)	[REDACTED]
TA to broker/facilitate relationships and forward contracts with TOSC buyers and processors (5 aggregators)	[REDACTED]
Provision of TA (cost share) to aggregators	[REDACTED]
Subtotal Intervention R3	[REDACTED]
Intervention R4	
TA to support implementation of the activities detailed in the ToR	[REDACTED]
Action Research RAR1	
Repetition of urea deep placement trials	[REDACTED]
TOTAL COST OF INTERVENTIONS IN RICE MARKET	[REDACTED]

1.2.4 LOGFRAME CONTRIBUTIONS FOR YEAR 2 INTERVENTIONS

The contribution of each of these interventions to achieving MADE's outputs is presented in the table below.

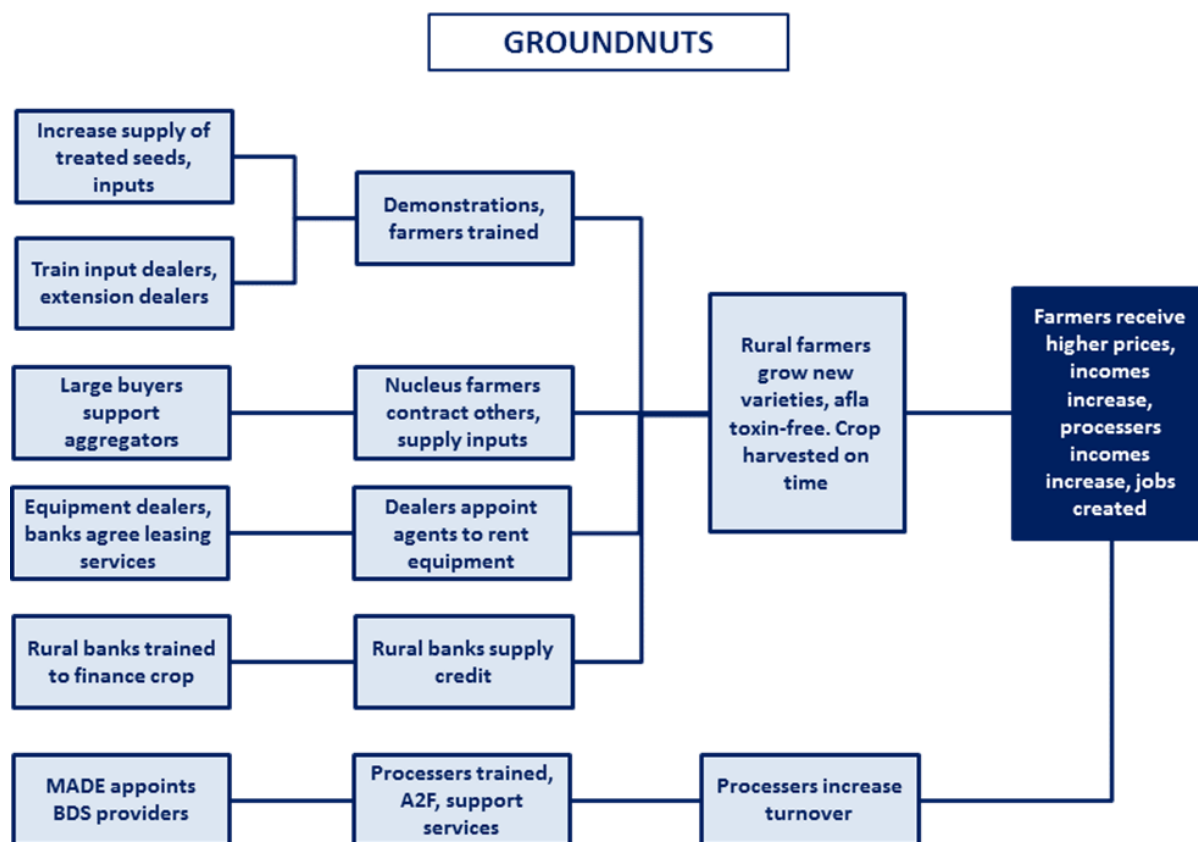
	Related log frame indicators	Contribution
Intervention R2	OI 1.1: Number of market actors changing business practices or approach	5
	OI 1.2: Number of farmers who use improved inputs	7,000*
Intervention R3	OI 1.1: Number of market actors changing business practices or approach	36
	OI 1.2: Number of farmers who use improved inputs	7,000 *
Intervention R4	OI 1.1: Number of market actors changing business practices or approach	5
	OI 1.2: Number of small entrepreneurs and women processors who use improved services	250

*They are the same beneficiaries.

1.3 GROUNDNUT MARKET

1.3.1 REVIEWING THE THEORY OF CHANGE

The interventions designed in Year 1 were intended to test the following theory of change:

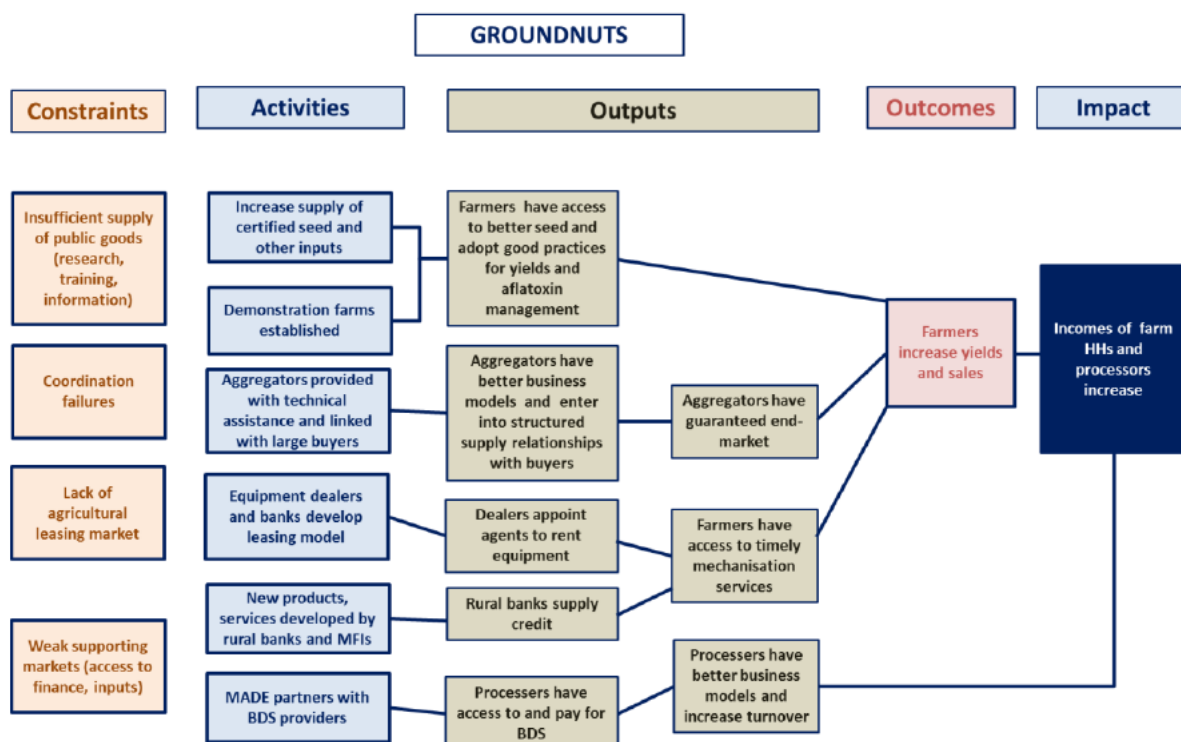


The key **assumptions** underlying the **original ToC** were that: the increased availability of inputs and effective extension, including on the management of all production processes to control aflatoxin (provided through aggregators) will be sufficient to get farmers to grow new varieties of groundnuts using GAP for production and aflatoxin minimisation, aware that there are processors and end-users willing to buy them; appetite exists in public research agencies (██████████) to partner with the private sector to commercialise research findings and that these research institutes have codified research findings (e.g., GAP protocols) that can be transferred to farmers using extension methods; aggregators, processors and end-buyers will be able to better coordinate their activities and build a supply chain linking producers in the North to major markets in the South and overseas; and good quality BDS and access to finance will be sufficient for women groundnut processors to grow their businesses.

After the first year we have been able to make a preliminary assessment of the validity of some of these assumptions. We have found that working through aggregators to expose smallholder farmers to recommended GAP using demonstrations has proven to be effective, this will be further tested in the coming year as we work with more aggregators. In addition, and as mentioned above, farmers have demonstrated a willingness and capability to adapt the recommended GAP practices promoted in these demonstrations. Input dealers and extension agents have been active participants in the demonstrations mounted in the first year and have shown a strong desire to learn and to continue to engage with the farmers to build their capacity (obviously recognising the commercial potential of the services and products they are providing to the farmers). These are all important in sustaining these measures. Improving the business models of aggregators and linking them with off-takers is also crucial in terms of ensuring sustainability. It has become apparent in the first year that the business models of aggregators across all markets are weak and supporting them to improve their business

practices will allow them to both provide more effective services to their farmers and enter into more structured contractual relationships with end-buyers.

The figure below presents an updated ToC in the groundnuts market.



1.3.2 INTERVENTIONS FOR YEAR 2

In year 2, we will focus on the following interventions. The specific activities required to implement them are detailed in **Annex 2 – Work plan groundnuts market**.

Intervention G1. Promote increased usage of improved seeds and good agricultural practices

This intervention has two main areas of focus, firstly on increasing the supply of better seed and secondly on ensuring that farmers have access to this seed and are using recommended practices to grow the seed effectively.

In terms of seed, MADE will continue to strengthen the links between seed companies/seed growers and seed developers [REDACTED] providing them with the assurance that there will be an end-buyer for their basic breeder and foundation seed. We will build on the current relationship between [REDACTED] to leverage on [REDACTED] commercial opportunities. As possible of [REDACTED] foundation seed needs for multiplication into certified seed. In addition to leveraging the local seed production system, the possibility of importing seed (foundation and certified) through seed growers such as [REDACTED] and larger agribusinesses such as [REDACTED] will be explored further.

We will also support the piloting of a community based model for addressing the seed problem. This model is being promoted by [REDACTED] and involves providing support to seed outgrowers to produce, process – clean, sort (and maybe grade) and store their seed at the community level, which can then be sold to farmers at the community level at cheaper prices. MADE would provide support to organise seed production demonstrations for seed outgrowers using the concept of a “demo park” to showcase GAP and other technologies for growing groundnut seeds to farmers organised on a community basis.

In terms of building farmers’ agronomic practices, in year 2 we will scale up and replicate the aggregation model tested with [REDACTED] to reach an additional 3,500 farmers. First, we will continue to work with [REDACTED] and expand the outreach of its services (additional 500 farmers in the Upper West region). Second, we will identify and engage more aggregators. As was the case with [REDACTED] this will primarily involve convincing appropriate market actors to enter the groundnut aggregation business. Discussions are on course with a number of new potential aggregators.

Intervention G2. Aflatoxin control and crowding-in end buyers

MADE will continue to support the [REDACTED] in year 2, providing extra grant funding to [REDACTED] to continue to work with [REDACTED] to strengthen its aflatoxin management systems and develop a pathway to the export market leveraging the links with Intersnack. The experience in year 1 suggests that using technical assistance to provide both production and technology support and market linkages can be effective in lowering aggregators' risk aversion and increasing their appetite for innovating to meet market demands such as aflatoxin free groundnuts and other quality and quantity requirements. This will be supplemented by introducing the British NGO [REDACTED] to some of the aggregators to be engaged in 2015/2016 crop year for them to develop models similar to the [REDACTED] model.

This intervention will also explore other market outlets for aggregators, in particularly the partnership between [REDACTED] and [REDACTED]. The anchor of the model is [REDACTED] driven by its interest to procure as much aflatoxin free groundnut as possible to enable it supply its customers including [REDACTED] (groundnut paste for blending with chocolate to produce chocolate spread and whole nuts for embedding in the company's chocolate pebbles). [REDACTED] also, exports groundnuts paste itself to customers in the European Union. With the assured market to be provided by [REDACTED] will provide input credit to farmers through aggregators and recover the cost at harvest when the aggregators sell the harvested crop to [REDACTED]s. The input credit (with or without a complement of agricultural equipment and implements) from [REDACTED] will enable the aggregators to, in turn, offer enhanced crop production support service packages to their out-growers (smallholder farmers) thus enabling the farmers achieve improved yields with the aggregators obtaining sufficient good volumes of good quality groundnuts to meet [REDACTED] needs. If proven successful, this model will be scaled up in subsequent years.

Intervention G3. Institutionalisation of the Groundnuts Alliance

Bringing together [REDACTED], extension services, input suppliers and dealers, farmers' organisations, major merchants and end-users to facilitate better coordination and sharing of information on the groundnut market is important. Based on the quality of discussions at the recently held groundnuts value chain actors' forum, the prospects for an effective alliance appear good. In year 2 we will focus on institutionalising the [REDACTED] and using it as the main platform and mechanism for bringing the different actors in the industry to work together. This requires going back to the original plan of using meetings and other stakeholder platforms to share MADE's vision for the groundnut market to foster and facilitate the formation of the GA.

Intervention G4. Develop lease and rental market for the provision of mechanisation services

The priority for year 2 will be to contract a sub-facilitator to take this intervention forward. It is still envisaged that the intervention will be piloted in six groundnuts growing districts. Based on the initial findings of year 1 activities, the sub-facilitator will work alongside the agricultural leasing expert to roll-out and pilot the leasing scheme. As originally planned this will involve the following steps:

- Identify and support reputable dealers in agricultural equipment to source equipment for groundnut planting, weeding and harvesting.
- Facilitate the development of a partnership between the equipment dealers and [REDACTED] that will finance the leasing of the equipment.
- Facilitate the development of a partnership between aggregators, large farmers, tractor hire firms and other agricultural equipment service providers, large input dealers as lessees on one hand and [REDACTED] as the lessor on the other.
- Support the lessees to establish a network of agents to make the services of the equipment available to farmers.
- Ensure that the bank and lessees develop suitable maintenance arrangements.

Intervention G5: BDS for small scale/artisanal and SME groundnut processors

In year 2 we will identify a BDS provider to implement the ToR drafted during year 1. The approach to identifying the BDS provider is detailed in Part B in this report.

Action Research AR- G1. Assess the effectiveness of rhizobium inoculant

This action research intervention will assess the effectiveness of rhizobium as an inoculant to ameliorate poor nitrogen fixing properties of soil. The research will include identifying the source of the inoculant, assessing its production cost, understanding how and when to apply it, and its effects on yields.

1.3.3 BUDGET FOR YEAR 2 INTERVENTIONS

The indicative budget for implementing the above mentioned interventions/activities is detailed in the table below.

Intervention G1	
Contract sub-facilitator(s) to work with aggregators to facilitate GAP demonstrations	
Provide grant to SARI for foundation seed and rhizobia initiatives	
Grant and TA to support other seed industry initiatives	
Subtotal Intervention G1	
Intervention G2	
Provide performance grants to FMS and TWIN	
Provide TA for troubleshooting	
Use TA to support monitoring of performance of models	
Subtotal Intervention G3	
Intervention G3	
TA to facilitate formation of GA	
Intervention G4	
Contract sub-facilitator	
Intervention G5	
TA to BDS providers	
Action Research AR-G1	
Test effectiveness of inoculant	
TOTAL COST OF INTERVENTIONS IN GROUNDNUTS MARKET	

1.3.4 LOGFRAME CONTRIBUTIONS FOR YEAR 2 INTERVENTIONS

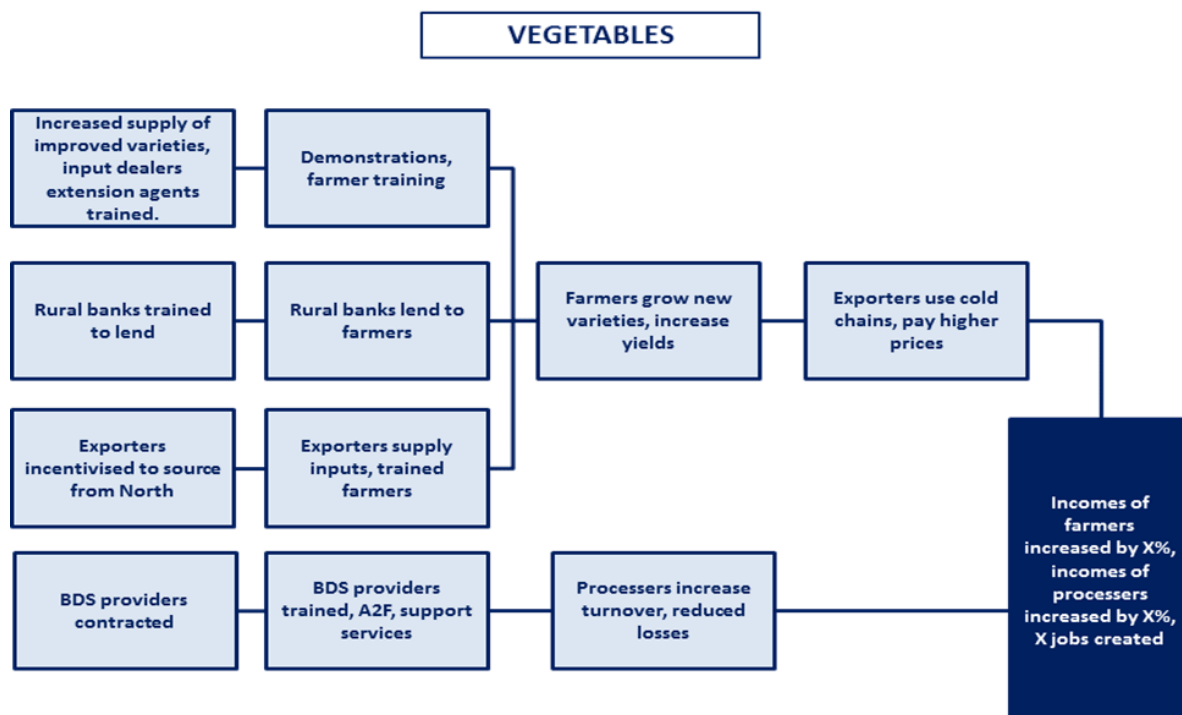
The contribution of each of these interventions to achieving MADE's outputs is presented in the table below.

	Related log frame indicators	Contribution
Intervention G1	OI 1.1: Number of market actors changing business practices or approach	28
	OI 1.2: Number of farmers who use improved inputs	5,019 (1,519 from 2014; 3,500 planned for 2015)
Intervention G2	OI 1.1: Number of market actors changing business practices or approach	5
	OI 1.2: Number of farmers who use improved inputs	Farmers selling to buyers due to improved market access are already benefitting from GAPs
Intervention G3	OI 1.1: Number of market actors changing business practices or approach	20
	OI 1.2: Number of farmers who use improved inputs	1,000
Intervention G4	OI 1.1: Number of market actors changing business practices or approach	1
	OI 1.2: Number of farmers who use improved inputs	Already counted within those benefitting from GAP
Intervention G5	OI 1.1: Number of market actors changing business practices or approach	2
	OI 1.2: Number of farmers who use improved inputs	

1.4 OTHER VEGETABLES (INCL. CHILLI) MARKET

1.4.1 REVIEWING THE THEORY OF CHANGE

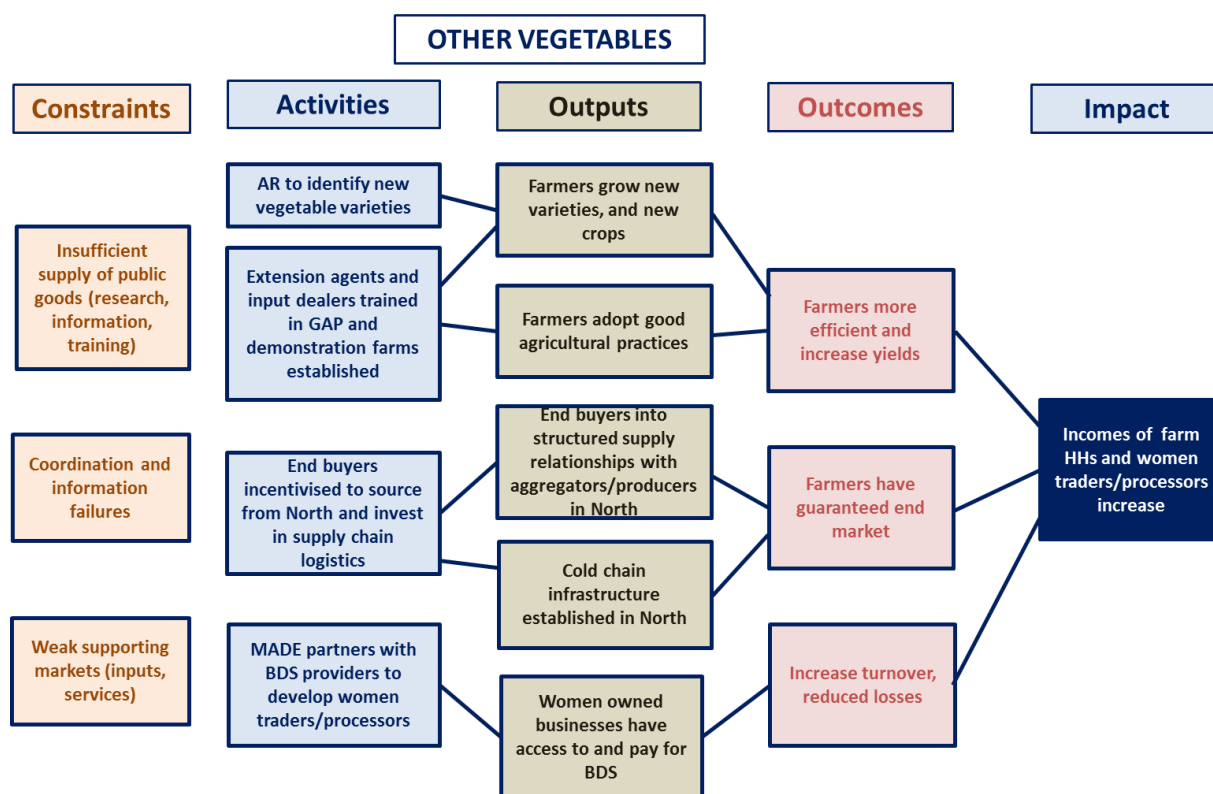
The interventions designed in Year 1 were intended to test the following theory of change:



The key **assumptions** underlying the **original ToC** were that: a combination of demonstrations, farmer training and better access to markets for fresh products will be sufficient to convince farmers, to grow new varieties; exporters and other end buyers in the South had sufficient appetite and interest in investing in a supply chain and sourcing vegetables from the North; BDS and access to finance will be sufficient for women traders to grow their businesses to create jobs.

Our experience and lessons learned in the first year have allowed us to review and reassess some of these assumptions. Overall the assumptions remain valid. For example farmers have demonstrated willingness to change their practices and adopt new varieties, sustaining this is contingent on ensuring that farmers have access to end markets though, ideally a guaranteed off-taker such as [REDACTED]. As mentioned above attracting investment from these end buyers has not been easy. The end buyers we have spoken recognise the potential for large scale commercial production in the North, however a combination of difficult local investment climate, the lack of detailed information on specific investment opportunities and the absence of critical enabling infrastructure (in particular a cold chain connecting the North to the South) is preventing them from committing. We have been unable to test the BDS assumption due to difficulties in engaging competent BDS providers, as mentioned above.

The figure below presents an updated ToC in the other vegetables (including chilli) market.



1.4.2 INTERVENTIONS FOR YEAR 2

As highlighted in the market review section the chilli market interventions will now be treated as part of the other vegetable market. The priorities for the coming crop year include promoting the widespread adoption of the successful varieties from the tomato trials; extend the outreach of the market interventions (i.e. adoption demonstrations) that were successfully piloted in the first year; and to engage new seed companies to promote their varieties (particularly [REDACTED] as discussed in further detail below)

In year 2, we will focus on the following interventions. The specific activities required to implement them are detailed in **Annex 2 – Work plan other vegetables (including chili) market**.

Intervention OV1. Encourage the use of high yielding varieties of seeds and other inputs suited to the domestic and export markets

The focus of this intervention will continue to be on introducing and promoting the use of better vegetable seed varieties to the North. MADE will build on the results of the action research undertaken in year 1 and pilot the introduction of successful tomato seed varieties (e.g. Cobra and Buffalo varieties). To do this, MADE will continue to partner with [REDACTED] to organise evidence/adoption GAP demonstrations in the Upper East Region. MADE will also, continue to broker and strengthen relationships between [REDACTED] and local input dealers to make the improved and market preferred tomato seed varieties available and accessible to smallholder farmers.

MADE will also continue to build relationships with other seed companies. [REDACTED] and [REDACTED] are in advanced discussions with MADE for a partnership similar to what has been developed with [REDACTED] for facilitating the promotion and adoption of a number of the company's vegetables in Northern Ghana. This may require running adaptation trials (action research) for [REDACTED] seed varieties that haven't been tested and/or adapted to Northern Ghana. The vegetable seeds they are particularly interested in promoting include carrot, sweet corn, tomatoes, eggplant, cucumber, cabbage, chill and onions.

In the case of chillis, [REDACTED] have proposed three specific varieties which they want to promote in the North (and have already been tested in the North). This will allow MADE to organise, in year 2, demonstration plots in 10 locations across the Upper East and Northern regions. [REDACTED] will provide the seed and technical expertise, while lead farmers will manage the plots. They will receive technical support from [REDACTED] as well as local agriculture extension agents. [REDACTED] have agreed to

come on board as the sub-facilitator and will oversee the organisation and execution of the demonstrations

Intervention OV2. Provide matching grants to major buyer exporters to establish supply chains in the North

Given the experience and lessons learned in year 1, MADE will focus further efforts in attracting major buyers to the North. In year 2, we will prepare investment profiles (mini feasibilities) on investment opportunities on critical points along the vegetables supply chain (e.g., pack houses with cooling and processing facilities, refrigerated transportation) and use them to engage MADE's Market Development Facilitators and Business Engagement Advisor with more firms in the South.

Intervention OV3. Develop BDS for women traders in fruit and vegetables

In year 2 we will identify a BDS provider to implement the ToR drafted during year 1. The approach to identifying the BDS provider is detailed in Part B in this report.

1.4.3 BUDGET FOR YEAR 2 INTERVENTIONS

The indicative budget for implementing the above mentioned interventions/activities is detailed in the table below.

Intervention OV1	
Sub-contract ADDRO, other sub-facilitators and TA providers	
Short term TA and intervention monitoring	
<i>Subtotal Intervention OV1</i>	
Intervention OV2	
Contract consultants to prepare investment profiles and promote investment opportunities using mini investment forums	
Sponsor one-off trips	
Short term TA and intervention monitoring	
<i>Subtotal Intervention OV2</i>	
Intervention OV3	
Technical assistance to implement ToR	
TOTAL COST OF INTERVENTIONS IN OTHER VEGETABLES MARKET	

1.4.4 LOGFRAME CONTRIBUTIONS FOR YEAR 2 INTERVENTIONS

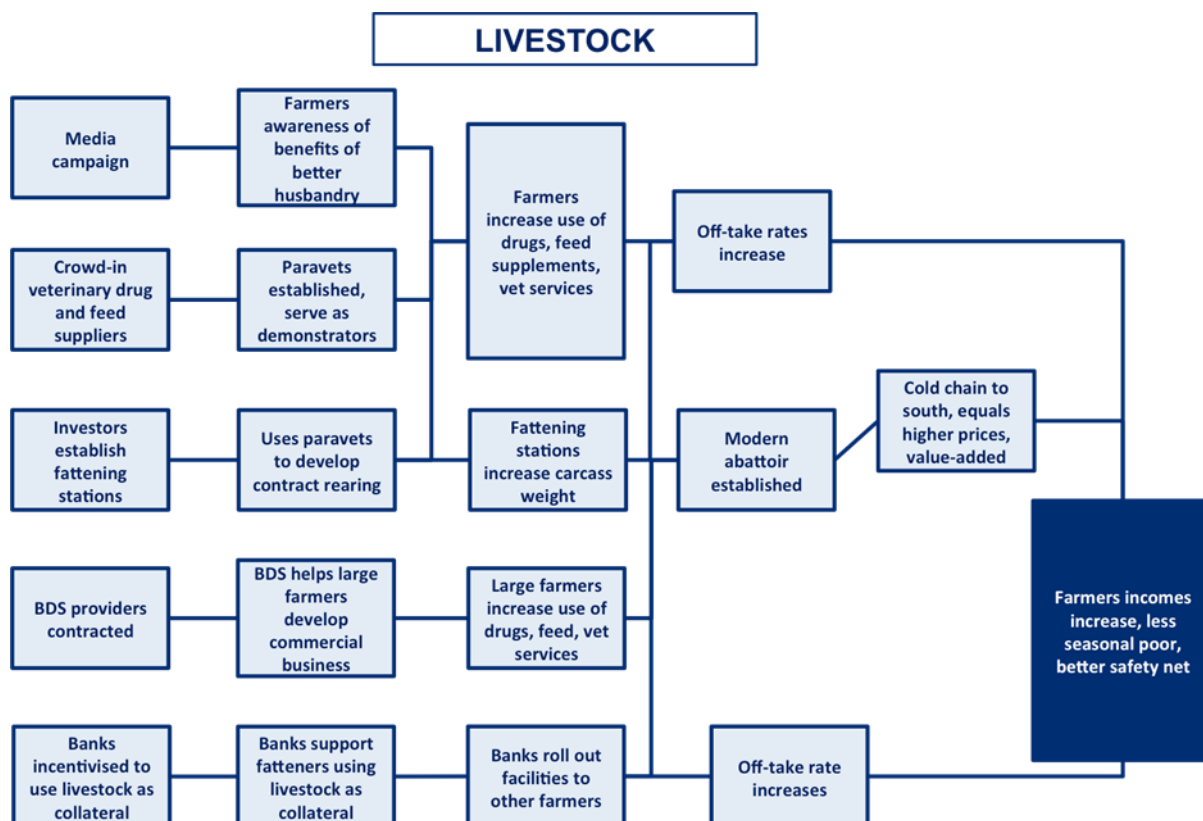
The contribution of each of these interventions to achieving MADE's outputs is presented in the table below.

	Related log frame indicators	Contribution
Intervention O1	OI 1.1: Number of market actors changing business practices or approach	110
	OI 1.2: Number of farmers who use improved inputs	3,500
Intervention O2	OI 1.1: Number of market actors changing business practices or approach	10
	OI 1.2: Number of farmers who use improved inputs	1,000
Intervention O3	OI 1.1: Number of market actors changing business practices or approach	20
	OI 1.2: Number of farmers who use improved inputs	1,000

1.5 LIVESTOCK MARKET

1.5.1 REVIEWING THE THEORY OF CHANGE

The interventions designed in Year 1 were intended to test the following theory of change.



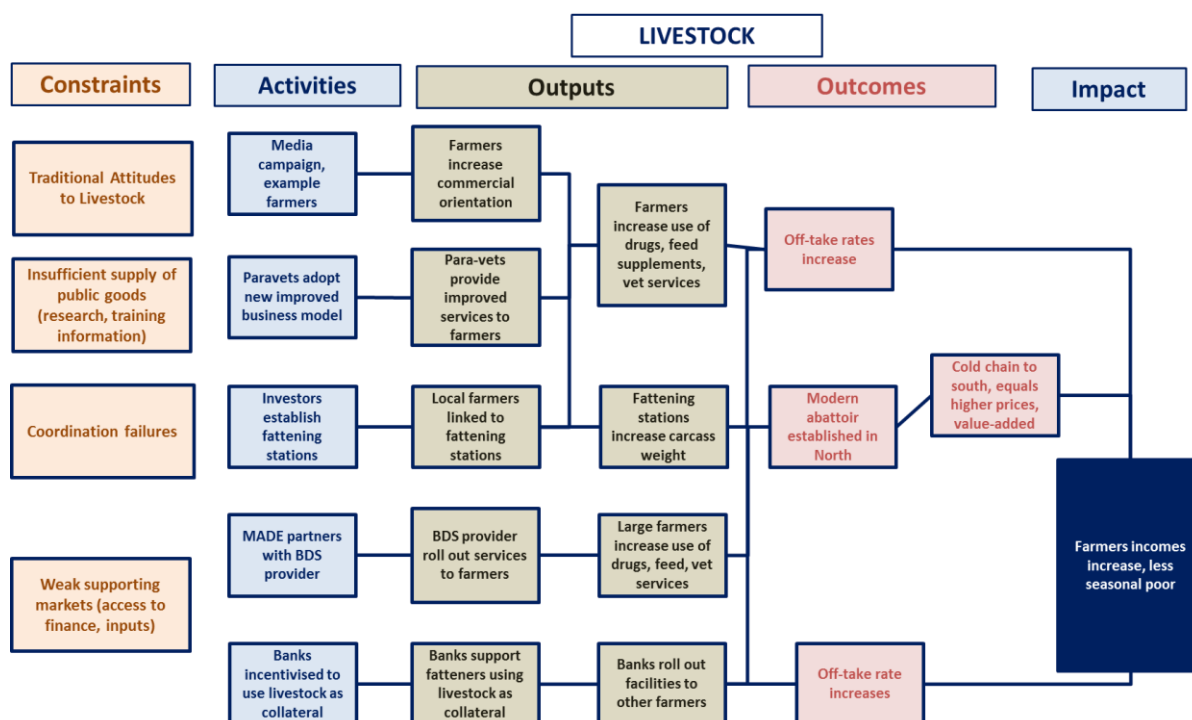
The key **assumptions** underlying the **original ToC** were that a combination of media campaigns, demonstrations using para-vets, emergent and large farmers and establishing modern abattoirs will be sufficient to change farmer's attitudes; it will be possible for para-vets to develop profitable businesses despite the current attitudes of farmers; the opportunity to use livestock as collateral for loans would incentivise smallholder livestock farmers to invest more in their herds and that this in turn would reduce the risks traditionally associated with livestock by banks and therefore make banks and other financial institutions accept animals as collateral; there is sufficient investor interest (particularly from Southern processors and abattoir operators) in sourcing livestock from the North and investing in value added facilities such as abattoirs and fattening stations.

Given the limited progress during the first year a thorough assessment of the validity of these assumptions has not been possible. The following are some of our preliminary observations on these assumptions:

- Judging from the feedback and response to the radio programmes, it is apparent that some smallholder farmers have the appetite to change and adopt a more commercial attitude towards their livestock. The media campaign assessment and evaluation assignment will help to assess the impact of the radio programmes and size and extent of the appetite.
- The feasibility study on the potential to introduce livestock insurance suggests that all key stakeholders (progressive livestock farmers, the insurance industry and regulator, banks and other financial institutions) all have an appetite for and see the benefit of livestock insurance.
- Equally the feedback from the livestock policy stakeholder meeting indicates that both sides of the public private divide appreciate the value of constructive engagement and informed discussion on livestock policy reform.

- There is strong investor interest in establishing fattening stations and abattoirs in the North and to develop formal supply relationships with local livestock farmers.

A slightly revised version of the livestock theory of change is presented below.



1.5.2 INTERVENTIONS FOR YEAR 2

Based on the partnerships established and the progress made towards the final quarter of last year, more substantial results are expected from the livestock interventions this coming year. Our priorities and plans for the livestock interventions are outlined in detail below.³

The specific activities required to implement them are detailed in **Annex 2 – Work plan livestock market**.

Intervention L2. Establish para-veterinary practitioners as suppliers of inputs and services to emerging farmers

The design of the paravet business model was started in the final quarter of last year. The outstanding work to be undertaken to finalise the design and launch of the scheme includes the need to incorporate stakeholder feedback on the selected business model. The model will include: clearly defined core products and services and key tasks to be performed by a para-vet(s) adopting the model for establishing themselves as business entities; clearly identified customer and customer segments (e.g., emergent livestock farmers, fattening stations and abattoirs) and the corresponding needs that the model's core products and services are aimed at addressing; revenue generation, profitability and sustainability models, market demand and profitability models; appropriate pricing structures for the para-vet services based on the selected model; appropriate product and service distribution models that will enable the para-vet to develop the necessary customer base and footprints on the grounds; the resource requirements (including investment and working capital finance) necessary for setting up para vet practitioners to establish, operate and manage their practice as a profitable business entity in line with the selected business model; and a 5-year (notional) business plan for the recommended business model outlining the cash flow projections for the period.

The design of the model is expected to be completed by the end of Quarter 2. This will pave the way for the selection and preparation of proactive para-vet (up to thirty will be selected) who will be

³ Note that Intervention L1 is now presented in Part A/Section 2/2.3 - Communications.

assisted to adopt and adapt the model to launch para-vet start-ups. This will involve MADE working in close collaboration with the sub-facilitator to undertake the following:

- Identification of suppliers of drugs and feed and veterinarians that are willing to appoint para-vets as stockists and distributors of their products and services; and work with these suppliers of drugs and feed and veterinarians to advertise for applicants (para vets) interested in the opportunity.
- Appoint trainers and BDS providers and work with them to provide training in business management and provide BDS to the selected/appointed para-vets to support them to manage their business and access finance and services they need to develop their businesses
- Work with the BDS provider to help the para-vets become emergent livestock farmers demonstrating the commercial return from livestock.
- Link the para-vets to fattening stations and abattoirs who will use them as agents for supply and/or procure animals.
- Mobilise and organise traditional farmers to participate in “learning visits” to the demonstration farms.

Intervention L3. Support emergent and large farmers to develop a more commercial approach through the provision of BDS

The modified approach to BDS which is set out in Part B of this report will be used to guide the launching of BDS to livestock farmers in the coming year. The plan is to identify a short-list of four to five BDS providers who we can partner with and support to design and roll-out appropriate BDS to sixty livestock farmers (twenty from each of the three Northern Regions). The BDS will aim to support them grow and expand their existing operations and holdings into more commercially viable and sustainable businesses, and with more effective and professional business management practices.

The BDS will include, amongst other things, training on: business planning and management principles to improve performance quality and consistency; financial analysis; credit sourcing; and transportation and distribution. Receiving these services will allow the selected emergent and large farmers to become more profitable businesses and to take advantage of emerging market opportunities. This would then enable them to provide backward linkages to traditional and other emergent farmers to improve commercialization in livestock production. Their success will also help to demonstrate the value and pathway to commercialising livestock to other farmers.

Intervention L4. Assess the feasibility of monetising livestock in northern Ghana to increase access to finance for livestock farmers

██████████ was contracted last year to test the feasibility of introducing a micro insurance product for livestock in the Northern region. Although the consultant has yet to deliver his final report (this is expected in June 2015) the feedback from him has been that there is scope to pilot a micro-insurance product for livestock producers. The focus for the coming year will therefore be on testing and rolling out this pilot micro-insurance scheme. The intention is that ██████████ will be contracted to coordinate these activities working in close collaboration with our livestock sub-facilitator. The exact activities involved in this will be agreed with ██████████ after they have submitted the final feasibility study.

Intervention L5. Provide advocacy support to livestock associations

The assignment initiated by the Institute for Development Studies (IDS) in Quarter 4 of Year 1 will be taken forward in Year 2. IDS's programme of work addresses four key areas:

- The nature of the opportunity for livestock production in Northern Ghana (i.e. for the further development of ruminant production and/or processing in the North)
- Relevant experience and lessons from Burkina Faso and Niger
- Strategy and tactics for building a constituency for change
- Programme of specific actions to build a constituency for change

IDS will deliver a report covering the first two areas by June 30th 2015 and based on the findings and recommendations of the report, options will be explored for moving ahead and designing the actual advocacy campaigns with the livestock associations.

Intervention L6. Promote private sector investment in fattening stations and a modern abattoir in the North

In Year 2 the key priority is to reach up to 1,500 smallholder livestock farmers by supporting [REDACTED] and [REDACTED] pilot their farmer outreach programmes in the North. The target is to link [REDACTED] with 500 farmers and [REDACTED] with 1,000 farmers. The two outreach programmes will be run as pilots in year 2 and the results will be used for scaling-up to other livestock traders and meat processors in year 3.

MADE's support to [REDACTED] will involve identifying a small number of progressive livestock farmers (up to 50 for the initial pilot) and providing them with support (training, veterinary and breeding services) to meet [REDACTED] requirements and standards. MADE's support will be coordinated through our recently appointed sub-facilitator, the [REDACTED] will also be provided with TA (on a cost share basis) if required. [REDACTED] will provide parent stock for breed improvement, and financial and technical assistance to the selected farmers to construct appropriate housing for their livestock and provide the right feed supplementation in the lean season. It plans to recover the cost of the financial assistance when it buys back fattened livestock from the smallholder farmers. We expect to use a similar approach with JFamco.

These outreach programmes will be used to help attract abattoir operators to the North which should, in turn, catalyse the development of fattening stations and feedlots with footprints leading backwards to smallholder farmers

1.5.3 BUDGET FOR YEAR 2 INTERVENTIONS

The indicative budget for implementing the above mentioned interventions/activities is detailed in the table below.

Intervention L2	
Commission TA to complete design of para-vet business model and roadmap for launch and implementation of pilot-scheme	[REDACTED]
Appoint trainers and BDS providers to provide training in business management and provide BDS to the selected/appointed para-vets	[REDACTED]
Mobilise and organise traditional farmers to participate in "learning visits" to the demonstration farms	[REDACTED]
<i>Subtotal Intervention L2</i>	[REDACTED]
Intervention L3	
Commission consultants and other experts to develop and provide appropriately tailored suite of BDS to emergent and large livestock farmers	[REDACTED]
Provide TA to consultants to help them develop commercially sustainable suite of BDS	[REDACTED]
<i>Subtotal Intervention L3</i>	[REDACTED]
Intervention L4	
Commission TA to work with sub-facilitator develop work plan and support rolling-out of livestock pilot insurance scheme	[REDACTED]
<i>Subtotal Intervention L4</i>	[REDACTED]
Intervention L5	
Commission TA to prepare communication material for use by and work with livestock associations to advocate for reform and facilitate their interaction with policy makers.	[REDACTED]
<i>Subtotal Intervention L5</i>	[REDACTED]
Intervention L6	
Commission a sub-facilitator to work with investors to develop a competitive supply chain for fattening stations and abattoirs including training farmers and providing para-vet and breeding services.	[REDACTED]
Commission TA on a cost-share basis to conduct feasibility studies, develop marketing strategy, carry out action research, etc.	[REDACTED]
<i>Subtotal Intervention L6</i>	[REDACTED]
TOTAL COST OF INTERVENTIONS IN LIVESTOCK MARKET	[REDACTED]

1.5.4 LOGFRAME CONTRIBUTIONS FOR YEAR 2 INTERVENTIONS

The contribution of each of these interventions to achieving MADE's outputs is presented in the table below.

	Related log frame indicators	Contribution
Intervention L2	OI 1.1: Number of market actors changing business practices or approach	30
	OI 1.2: Number of farmers who use improved inputs	3,000
Intervention L3	OI 1.1: Number of market actors changing business practices or approach	5
	OI 1.2: Number of farmers who use improved inputs	60
Intervention L4	OI 1.1: Number of market actors changing business practices or approach	3
	OI 1.2: Number of farmers who use improved inputs	2,000
Intervention L5	OI 1.1: Number of market actors changing business practices or approach	2
	OI 1.2: Number of farmers who use improved inputs	3,000
Intervention L6	OI 1.1: Number of market actors changing business practices or approach	2
	OI 1.2: Number of farmers who use improved inputs	1,500

SECTION 2. CROSS CUTTING THEMES IN YEAR 2

2.1 GENDER

The following will be the focus of our gender activities in the coming year:

- **Scale-up successful initiatives initiated in Year 1.** In particular the initiatives which have facilitated female farmers access to improved services and inputs in the onion, groundnut, rice and other vegetable markets will be scaled-up in the coming year. The plans for scaling-up our activities in each of these markets is described in detail in section x.
- **Launch the BDS initiatives for women traders and processors.** As mentioned in the review above the BDS initiatives are heavily focused on promoting the activities of women traders and processors were not launched in the first year. One of the key priorities therefore for the coming year is to quickly identify and partner with service provider to design and roll-out the BDS. Again this is described in further detail in section x.
- **Alternative initiatives:** This includes new interventions such as the Business Growth Acceleration. There are, also, worthwhile alternatives to other originally planned initiatives (e.g., the development of irrigated land rental market which may provide the opportunity to address the female related constraint of low access to resources for irrigation and decisions related to these systems) that will be explored.

In addition to the MADE Gender Specialist, MADE will engage the expertise of an international Gender Expert who will conduct a mid-term review of the gender strategy to assess how effectively the gender focus is being applied to on-going initiatives and propose new tools and strategies to further strengthen the gender approach in the programme.

2.2 CLIMATE CHANGE

MADE will continue to work on the principles set out in the Environment and Climate Change Strategy during year 2. These are:

- Preference for market development that is adaptable to different products according to the climate pattern – i.e. a different product using a similar market chain and similar production skills – in this case the production/market system is resilient and adaptable rather than the specific crop.
- Preference for market development of products that are adapted to high temperatures, short growing seasons and periods of drought and/or flooding.
- Investment in infrastructure that reduces exposure to climate induced shock and stress – irrigation, flood prevention, erosion control etc.
- Promotion of techniques that are more resilient to climate stress such as conservation agriculture (with mulch cover reducing soil water loss), improved rangeland management (reducing burning), diversification etc.

Environment and climate change will continue to be mainstreamed in all MADE interventions. The screening tool will stay at the market level. We expect that at mid-term an update on the screening tool will be helpful. This is because:

- Interventions will have been underway for more than one planting reason, and there will be opportunities to assess results from interventions
- A mid-term review will take stock of where MADE has got to and set out plans for the rest of the programme.
- The business accelerator growth programme will have shaped up by this time, and an accompanying assessment on environment and climate change can be developed for the programme.

2.3 COMMUNICATIONS

As explained in the review section, MADE's communication activities for Year 2 will be organised around three key focus areas/objectives. The following are the priorities for the coming year under each of these areas:

- **Promoting the commercialisation of the MADE's six focus markets by demonstrating how agriculture can work as a business for northern Ghana.** Informed by the success and learning from the pilot radio programmes this year, the priority for the coming year will be to commission the production of the flagship radio programme. The production of the programme will be put out to tender in May and production companies will be invited to submit proposals, the successful bid will include a plan on how to make the programme commercially viable after MADE funding ceases. The contract to the successful applicant will be awarded in May and we expect the first programme will be rolled-out in August.
- **Facilitating better linkages between farmers, input dealers, traders, service providers (incl. financial services), agribusiness and exporters.** The priority here is to complete the activities which were initiated this year, specifically the finalisation of the investment profiles and investment promotion packs, and the organisation and hosting of the investment tours and market development conference(s).
- **Improving the provision of commercially actionable information to farmers and farmers' organisations** (i.e. prices, market and investment opportunities etc.). The priority for next year will be to stimulate the market information provision by working with different knowledge service providers to disseminate information to farmers and rural entrepreneurs. This will include the setting up of a call centre to provide callers with information on inputs, prices and marketing opportunities; print material and audio visual material on GAP to reinforce field level demonstrations; infomercials to coincide with key times in the cropping calendar (similar to the pilot radio programmes in year 1); and a bulk text messaging/SMS system to disseminate price and other key market information.

It is important to note, however, that the assessment and evaluation of the reach and impact of the radio programmes that is being undertaken will guide the implementation of the media campaign in Year 2. The recommendations are expected to include the media platforms, e.g., radio, TV/audio visuals, farmers' durbars, etc., and formats, panel discussions, dramatization/role play, to be used to ensure the media campaign achieves the expected impact including not only contribution to behaviour change but also commercial viability and sustainability.

The detailed work plan setting out the sequence of these activities is included in Annex 2.

The indicative communications budget for year 2 is presented in the table below.

Interventions	Total cost
Flagship Radio Programme, Media Resource Persons, Media Orientation, Pool of Resource Persons	████████
MADE booklet, Investment Packs, Market Development Conference	████████
Rolling infomercials, communication with farmers, call centre, Bulk SMS	████████
Monitoring and Evaluation	████████
TOTAL COST OF COMMUNICATIONS INTERVENTIONS	████████

ANNEX 1: DETAILED MARKET REVIEW TABLES

See attached file.

ANNEX 2: DETAILED WORK PLANS FOR YEAR 2

See attached file.

ANNEX 3: ACTION RESEARCH PROGRESS REPORT AND ASSESSMENT OF SCALABILITY

See attached file.

ANNEX 4: BUSINESS PLAN AND REVISED BUDGET

See attached file.