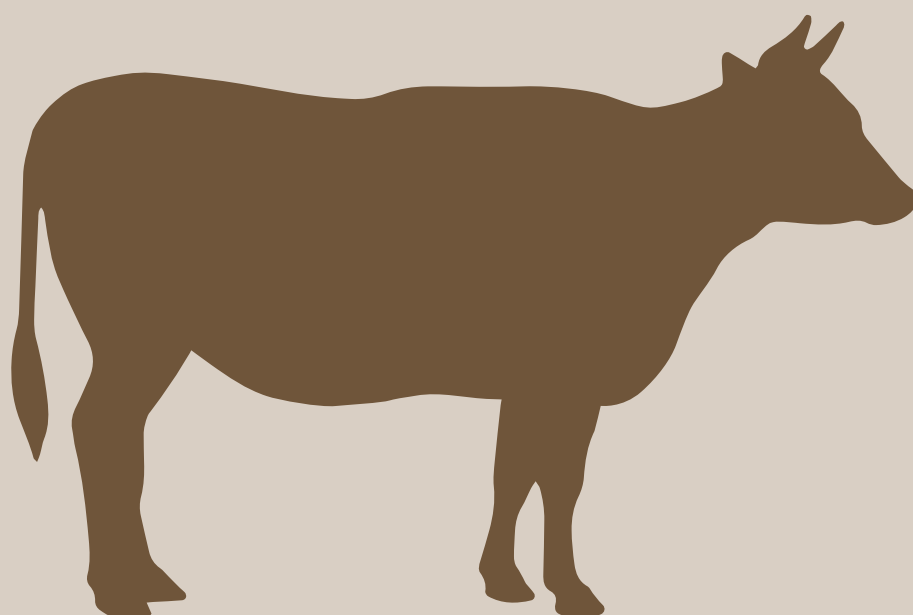




International
Labour
Organization



Cattle Sector

Business Opportunities and Support Services (BOSS) Project

- Intervention Report -



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Abbreviations

- BOSS**
Business Opportunities and Support Services Project
- IADE**
Institute for Business Support
- ILO**
International Labour Organization
- M4P**
Markets for the Poor
- MAF**
Ministry of Agriculture and Fisheries
- MECAE**
Minister of State, Coordinator of Economic Affairs
- MED**
Ministry of Economy and Development
- MSEs**
Micro and Small Enterprises
- NDRED**
National Directorate of Rural Economic Development
- SEAPRI**
Secretary of State for the Promotion and Support of the Private Sector
- VLW**
Village Livestock Workers

Executive Summary

The International Labour Organization has a mandate to “help advance the creation of decent work and the economic and working conditions that give working people and business people a stake in lasting peace, prosperity and progress”¹. In Timor-Leste, the priority for the ILO has included enhancing youth employment promotion, integrating employment into rural economic development and improving labour market governance. These priorities work in concert with Timor-Leste’s Strategic Development Plan 2010-30, which emphasises the support and development of the private sector.

The key ILO project focused on advancing the development of the private sector towards these priorities is the Business Opportunities and Support Services (BOSS) Project - a private sector development project with its core objective to contribute to employment creation and income generation. The project draws on the Making Markets Work for the Poor approach, addressing underlying constraints in functions that support core market systems. The project has been operational for nearly 5 years and is in its final months of implementation. At this juncture, the project wanted to reflect on progress and document key learnings from the components of its work. This report is one in a series of intervention reports, with a focus on the development of the beef cattle sector delivered in collaboration with the ILOs key counterpart, the Institute for Business Support (IADE).

The focus for BOSS in the sector shifted towards upgrading – including introducing modern techniques for slaughtering and butchering, raising hygiene standards, developing a legislative framework for quality improvement, promoting improved cattle health systems – and the creation of a national market for cattle farmers to sell to that adheres to these standards and laws, with a view to substituting imported beef products.

- Key learnings from the BOSS Cattle Intervention include:
- Shifting farmer behavior is a long-term investment
 - Re-occurring training of Village Livestock Workers has increased their capacity but...
 - Farmers still reluctant to pay for their services because the negative impact of provision of free services and medicine
 - Despite ample market opportunities and efforts by the project, not possible to attract larger private investment for intensive cattle farming
- The establishment of a national level market has been a huge achievement, stimulating demand for local beef products and providing a market for collectors and farmers to rely on. The importance of this achievement is highly significant and will, over the long term, create the pull factor for farmers nation-wide to engender change at the district level and in other supporting market functions.

¹ International Labour Organization: www.ilo.org

Introduction

The Business Opportunities and Support Services (BOSS) project is a private sector development project with its core objective to contribute to employment creation and income generation based upon a systemic approach to enterprise development. The BOSS project is embedded in the Institute for Business Support (IADE), under the remit of the Minister of State, Coordinator of Economic Affairs (MECAE) to address the needs of micro and small enterprises (MSEs) in Timor-Leste’s severely under-developed private sector. Funded by Irish Aid and NZAID, the project started in 2011 and finishes December 2016.

The project encompasses three main components:

Objective 1: Increased business opportunities for MSEs in target sectors (horticulture, cattle and tourism) and districts.

Objective 2: Nation-wide access to enhanced and innovative market / need oriented business development services.

Objective 3: Increased commitment and capacity to mainstream gender in all policies, programs and activities.

This intervention report will focus on Objective 1, specifically on the interventions in the cattle sector, which aimed to support the improvement of livelihoods of cattle farmers and others involved in the sector in Timor-Leste at both national and district levels. The BOSS interventions have been delivered using a “Making Markets Work for the Poor” (M4P) approach, avoiding direct intervention by working through key firms and agencies (market players) in the sector.

Section 2 describes the design, research and planning phase of the project, including the identification of core constraints and development of key interventions. Section 3 reflects on the realities of implementation,

particularly adjustments to interventions based on the behavior of market players in the sector. Section 4 summarises BOSSs key learnings in the sector and early impact and a brief summary going forward.

In the beginning

Design and planning phase

The Business Opportunities and Support Services (BOSS) project was designed to respond to the local context of a private sector characterized by small, agri-based and informal business activities. 80% of Timor-Leste’s population is involved in agricultural activities to support their livelihoods². Half of the population lives below the national poverty line and of these, two thirds live in rural areas³. Rurally based agri-enterprises are few and particularly weak. They are frequently small scale, near / almost subsistence farmers with low productivity, selling small surpluses at local markets. Despite employing a range of income generating strategies, these are generally insufficient for families to significantly reduce poverty levels. Businesses lack market access, while management and productivity – particularly on-farm – are weak. Market linkages between rural and urban areas are also limited. Few business development services exist and private-public dialogue to stimulate growth is poor. Furthermore there is a lack of information and analysis on available resources and areas for potential economic development.

The Timor-Leste government has acknowledged the importance of the private sector within poverty reduction strategies, including in its Strategic Development Plan 2010-30, and commenced movements towards creating a more favourable enabling environment to support private sector growth, such as the introduction of key regulations and reforms⁴.

BOSS was, originally, embedded in two institutions, the Institute for Business Support (IADE) and the National Directorate for Rural Economic Development (NDRED) under the Ministry of Economy and Development (MED). Following the election and Government restructuring in 2012, the

decision was made to merge the project and to have one counterpart, IADE, which moved under the Secretary of State for the Promotion and Support of the Private Sector (SEAPRI). Another government restructure in 2014 saw IADE move to the newly created Minister of State, Coordinator of Economic Affairs, which reports directly to the Prime Minister. The ‘embedded’ approach aimed to promote close working relationships with government staff to build institutional capacity to undertake key roles in the future. Each component of the project had a key counterpart within IADE. BOSS designed a logical framework detailing objectives and outputs for each component, as well as indicators.

BOSS set out, under Objective 1, to strengthen market systems to benefit the poor, particularly around improving job opportunities and incomes. The approach within this objective drew on the Making Markets Work for the Poor (M4P) methodology, seeking to address underlying constraints within markets and stimulate systemic change to create sustainable and widespread improvements. Figure 1 below depicts the market system which comprises the core function of supply and demand, with supporting functions and rules / regulations part of the broader market system that strengthen or hinder how a market system is operating. BOSS interventions are predominantly focused on strengthening the supporting functions and rules to address these underlying market blockages, although has also assisted in the strengthening of the core of the market system itself.

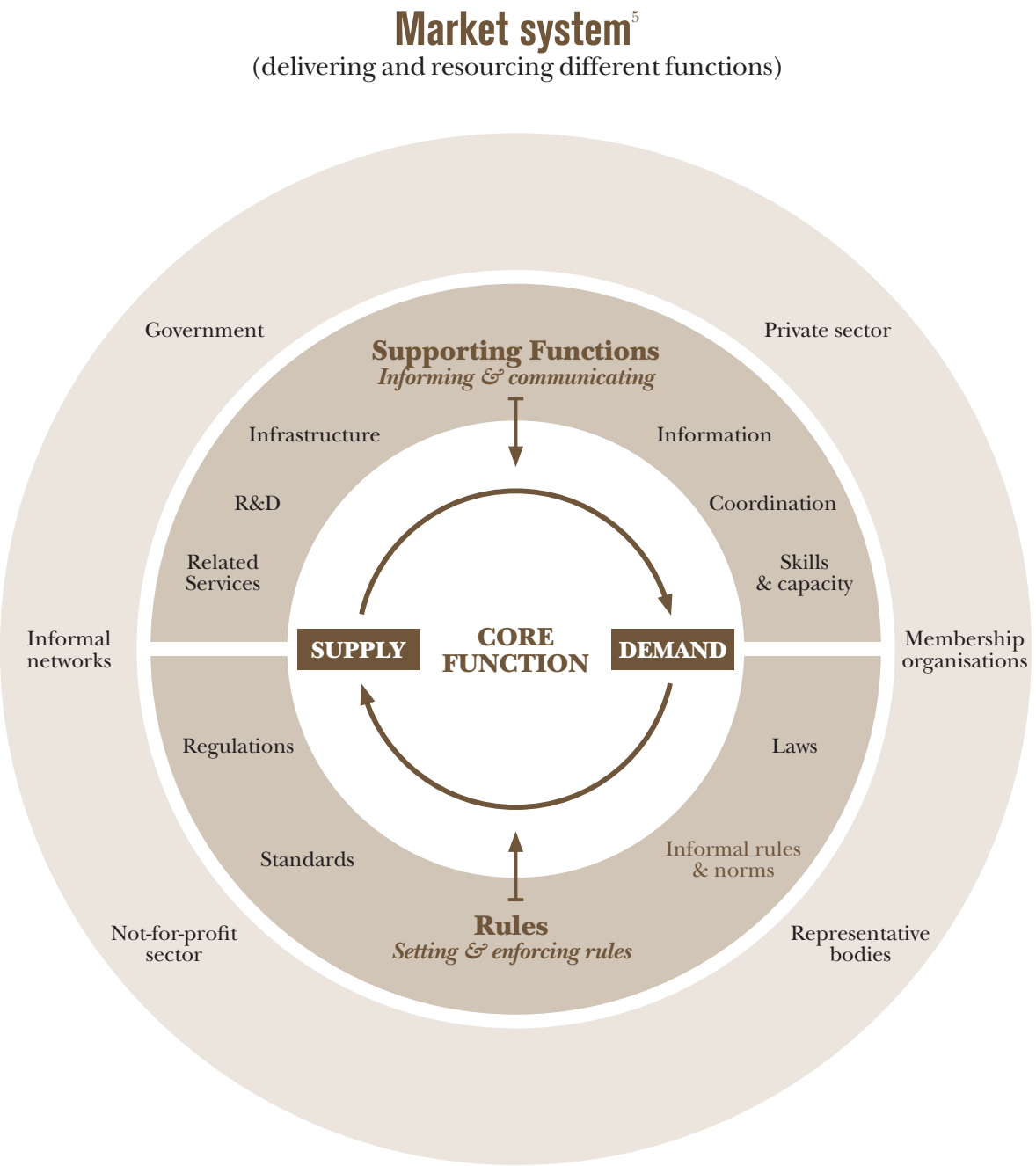
Objective level indicators related to increasing sales for MSEs, net additional full time jobs in MSEs, increasing numbers of MSE startups and public and private

² World Bank: *Timor-Leste Expanding Near-Term Agricultural Exports, Diagnostic Trade Integration Study, 2011*

³ World Bank / National Directorate of Statistics: *Timor-Leste, Poverty in a Young Nation, 2008*

⁴ Ref which decrees etc

investment. These were further defined following analysis of selected value chains (see below) and some indicators were refined with project experience and to more specifically support monitoring activities, drawing on the DCED Standard for Results Measurement.



5 The Springfield Centre: Making Markets Work for the Poor – Operational Guide, Second Edition, 2014



M4P advocates to ‘facilitate’, rather than directly provide, services and support, thereby building solutions to constraints within market systems players themselves. For BOSS, this has meant working with private sector firms (frequently newly established) as well as through IADE itself as a BDS provider.

The project placed an emphasis on the considerable challenges for the private sector at the rural level, initially taking a Local Economic Development approach. BOSS structured the initial phase for Objective 1 around local engagement with key public and private sector stakeholders in 3 priority districts, selected due to their poverty rankings in the country and the need to maintain a geographical balance of support between the East and West. The pivotal aspect of this approach was the development of District Economic Forums (DEFs), through which socio-economic and value chain analyses were undertaken and decisions made around project direction, including developing and monitoring Action Plans. Stakeholders in the DEFs included district authorities, private sector representatives, including CCI members and NGOs. The DEFs were formed to support LED, enhance public sector delivery through relationships with the private sector and provide the private sector the opportunity to engage more effectively with government.

6 Annex 7: Potential Economic Sectors Selection Criteria, BOSS Progress Report #1, June 2011

In two of the projects 3 target districts, Lautem – on the north east coast and Bobonaro – in the country’s west, the DEFs selected the cattle sector on the basis of 3 key criteria:

- Considerable potential to reach the poor in terms of level of outreach and pro poor growth potential (numbers of MSEs involved in the sector and potential to create jobs – see Box 1 below).
- Pro-poor growth potential (notably through substituting imported beef) and competitive advantage (particularly access to land for grazing).
- Feasibility of BOSS supporting the intervention⁶.

NDRED and IADE staff, together with staff from the Ministry of Agriculture and Fisheries, the Chamber of Commerce and Industry of Timor-Leste and Cabinet for Gender Equality were trained by BOSS and rolled out a participatory value chain analysis using the ILO approach to Value Chain Development for Decent Work to underpin the planning of interventions.

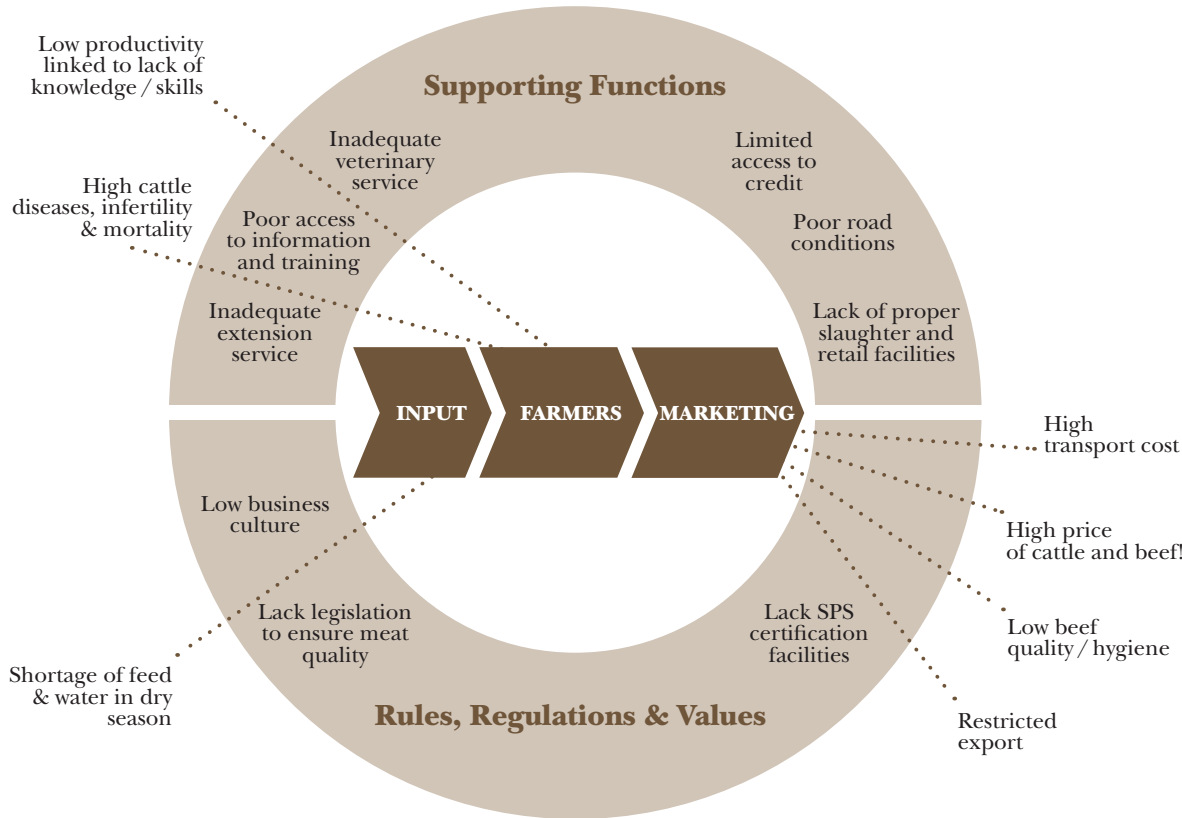
The cattle sector in Timor-Leste

The cattle sector is prevalent in rural Timor, with many households owning cattle, primarily for cultural purposes and also as a security asset to sell when cash needs arise. At project commencement, it was estimated around 31% of households across the country owned cattle, and a much higher proportion in the targeted districts (between 80-90%). However, cattle is not generally seen as a commercial activity by farmers. The vast majority of cattle farmers are smallholders with 2-5 head of cattle with generally low productivity, battling against a range of disease and mortality issues.

At the commencement of BOSS, there were no breeding programs operating. Grazing was free roaming on the plentiful natural grazing land with little to no focus on animal fattening. Government, through the Ministry of Agriculture and Fisheries (MAF), provides vaccinations and extension services, but these have limited outreach across the country. Medicines suppliers were generally only available in Dili. Health services were extremely limited, with any veterinary services available only in the capital through less than 10 qualified vets and Village Livestock Workers in the districts with the bare minimum of skills, mostly to administer vaccinations.

Slaughtering and butchering in Dili and the districts was being undertaken in broadly unhygienic and cruel / inhumane conditions. The national abattoir had just been rehabilitated but was yet to operate and access to the capital's markets was mainly through district level collectors selling to about 10 slaughter points in Dili. Exports to the Indonesian market had slowed and then ceased entirely in 2011, the border being formally closed to cattle trading by the neighbouring government, citing health concerns. Regaining access to the Indonesian beef market and substituting beef imported from Australia and New Zealand and sold in local supermarkets represent significant market opportunities for local cattle farmers, if cattle farmers are willing to view cattle production through a commercial lens.

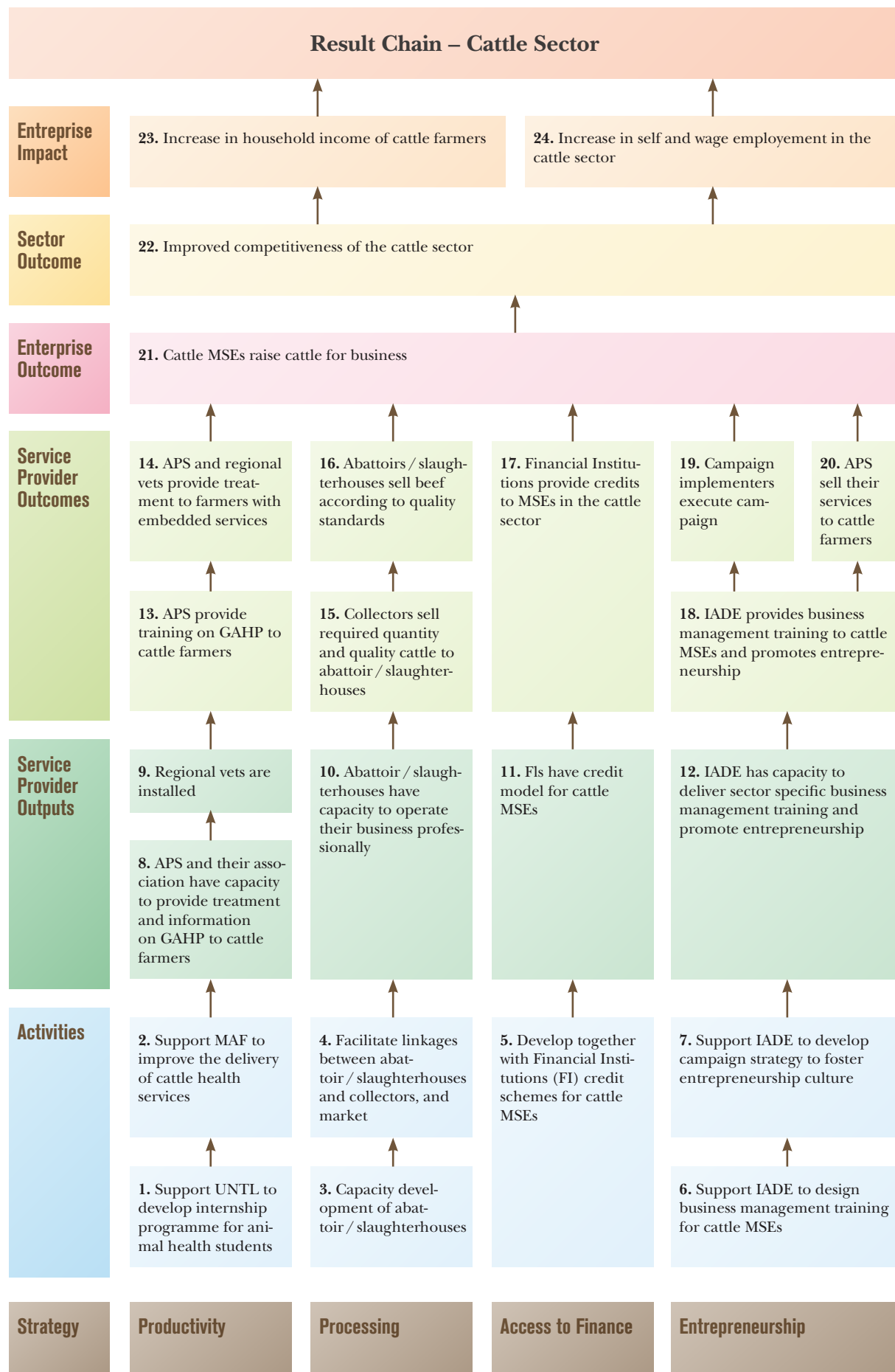
The value chain analysis mapped the groups within the value chain and analysed their roles, particularly looking at the constraints in the various levels of the value chain. Constraints were also elaborated using a market systems lens⁷:



- The VCA set out 4 intervention areas to address these constraints including:
- 1. Productivity:** Animal health services and Good Animal Health Practices.
 - 2. Processing:** Improving slaughtering and processing to international standards.
 - 3. Access to finance:** Finance available at national and district levels.
 - 4. Entrepreneurship:** Promotion and development of entrepreneurship culture in the sector.

BOSS developed “theories of change” through detailed results chains to describe anticipated change through the 4 interventions. The results chains provided the opportunity to check that the logic underpinning the theory of change held, and if not, whether the project needed to make adjustments. The original sectoral-wide results chain is shown below, showing impact ultimately that focused on increases in farmer income and in self and wage employment.

⁷ Ministry of Economy and Development: Report on Value Chain Analysis of the cattle sector in Bobonaro and Lautem districts, Timor-Leste. 2011.



Dr. Acacio Amaral of UNTL teaching VLW in Bobonaro

Market players (stakeholders or firms) within the results chains has cut across both public and private sectors, acknowledging the role allocated to government around livestock. These include:

Village Livestock Workers (VLW / in tetum APS - Agente Pecuaria do Suco): Village livestock workers, previously trained by the Ministry of Agriculture and Fisheries (MAF) to provide vaccination services. The intention was that the VLW would be self-employed, however they are generally viewed as volunteers by the community, and many have stopped working or have been absorbed by MAF.

Regional vets: Yet to exist but with a view to be installed by MAF.

UNTL: first batch of animal technicians were being trained by UNTL.

National abattoir: The national abattoir had just been rehabilitated by government but had yet to be operational at the commencement of BOSS.

Local slaughterhouses: Available at several

points in Dili and in local district markets, generally operating under unhygienic conditions.

Collectors: Middlemen between cattle farmers and markets. These self employed workers collect heads of cattle and transport these for sale in other markets, particularly slaughterhouses and markets in Dili.

Financial institutions: These included micro-finance institutions in the districts and some commercial banks with district branches.

IADE: The Institute for Business Support, delivering business development and information services in Timor-Leste.

The market players are a critical aspect in the interventions and changes in their behavior are fundamental to whether impact can ultimately be achieved.

Against this background, Section 2 discusses implementation and adjustments to the original plans and framework for this sector, focusing on each intervention and particularly on market players.



EBAI butcher boning

Then what happened

Reality and tailoring interventions

BOSS found that practice at the farmer level is entrenched and governed largely by cultural obligations, traditional practices and the use of cattle as ‘savings’ to be sold for cash in emergencies or to cover household needs. Shifting this behaviour to be more commercially oriented in order to provide ongoing, quality supply is a long-term goal. It requires that market players are operating in a commercial manner and are able to provide embedded services to farmers. Therefore, the cattle interventions have focused on change at this level – supporting market players, including Village Livestock Workers (VLWs), the national abattoir, two newly established butcher shops and agricultural input suppliers. The interventions particularly draw on market “pull” through supporting the establishment of butcher shops and rehabilitation of the national abattoir to allow consumers to access local beef products that have been slaughtered and butchered to an international standard. Consumer demand through these outlets would allow domestic markets, currently serviced predominantly through imports, to open up to domestic cattle farmers.

During implementation, plans changed, as frequently happens and especially so in the private sector. There were two levels of changes for BOSS. Firstly, changes in the government counterparts for BOSS due to a government re-structure and secondly, a range of adjustments to market players and interventions to mirror the reality of what was and wasn’t happening on the ground. From this process, BOSS has drawn lessons around “capacities” and “incentives”⁸ of market players and recognized their importance in tailoring interventions to be effective.

8 Ref M4P Op. guide

Project structure

After a year of implementation, the project began to understand that the LED approach initially proposed in the project document did not fit the reality of Timor-Leste. One of the main elements of LED is to make sure that the private sector has a platform to influence local planning and decision making to ensure that the Government creates an enabling environment for the private sector to operate in. Timor-Leste has yet to decentralize, hence decision making power is with the national level as well as budget allocations. It was felt that the established LED forums risked becoming a platform for discussion without follow on-actions, something Timorese are very wary about, the term NATO – *No Action Talk Only* was used. The only “budget” allocated to implement activities the Forums had decided on came from the BOSS project and since the decision about decentralization had been deferred indefinite, the chance that funding would come from local Government was unrealistic. It was clear that the forums would not continue past the close of the project, so it was decided to discontinue the LED Forums.

Intervention: Increase cattle productivity

The market players outlined in the original VCA intervention for productivity included the Ministry of Agriculture and Fisheries, Village Livestock Workers (VLW), Regional Veterinarians. As the intervention was implemented, it became clear that de-concentration of veterinary services to the districts by MAF would occur after the end of the project, with veterinarians still undertaking their qualifications in Portugal. Therefore the intervention removed vets from the results chains and focused specifically on working through the University of Timor-Leste (UNTL) to support the development of the VLWs.



Key activities to support the development of productivity included:

Training of Village Livestock Workers (VLW)

The Project has supported the University of Timor-Leste (UNTL) Agro-Livestock Department to design and deliver technical training and Training of Trainers in cattle health, reproduction and nutrition for 37 Village Livestock Workers (VLW) in Bobonaro and Lautem districts. The purpose of the training was to enhance the technical knowledge of the VLWs and to prepare them to train farmers on Good Animal Health Practices. Farmer training was delivered to 1,014 (26% women) cattle farmers across the two districts by the VLW in 2012.

The purpose of the farmer training was twofold; firstly, to increase the skills and profile of VLWs to cattle farmers, thereby making them more marketable and in demand and secondly, to identify potential farmers to act as “model” farmers, specifically farmers holding more than 7 head of cattle. BOSS would support training on cattle fattening, breeding and other technical areas. The underlying assumption in using these criteria was that farmers with more cattle meant farmers may be more commercially oriented and more likely to attend to productive activities

(fattening, breeding etc). Other VLW training has included castrations training and the provision of appropriate equipment, delivered by EBAI and supported by IADE.

The training highlighted the generally low capacity of the VLWs and the need for ongoing training and close mentoring to be able to apply new concepts in practice, or risk losing the new knowledge through lack of use. Whilst the VLW have delivered training to farmers, anecdotal observations of VLW practice have shown a weak correlation between training and an increased provision of treatment with embedded advice for farmers. This is partly due to the low capacity of the VLW and partly due to their perception by farmers, generally seen as being volunteers or as government staff and therefore not a service worth paying for. This also reflects a low willingness of farmers to pay for animal health services and a low awareness of why this would be beneficial.

It seems that many farmers fatalistically accept the high mortality rate of their animals as a natural part of life that cannot be influenced. Furthermore, farmers do not seem to understand the difference between prevention (i.e. vaccine) and treatment. As vaccination is provided free by Government, although irregular and incomplete, there is an expectation that medicine should be provided free of charge as well, which also sometimes

occurs. A key constraint was lack of access to medicines by the VLW. To further support the VLWs, BOSS sub-contracted Mercy Corps to assist with the supply of animal medicines in the districts and help the VLW promote their services to farmers (see below in Intervention: Input supply – Animal Medicine). BOSS also requested that UNTL select the top 10 VLW in each district and supported the provision of further training on animal health and cost / profit calculations.

The initial perception of larger cattle herds providing an indicator of potentially more business minded / interested farmers proved false. The experience of BOSS has found that the number of head of cattle a farmer owns seems to have no bearing on their interest to operate at a more commercial level. Some farmers owning in excess of 100 head of cattle can pay little attention to the herd, simply drawing on it for cultural reasons when needed. BOSS

then turned to a different approach to potentially engage entrepreneurs for “model” farms (see below in section “Establishment of Model Cattle Farm”).

BOSS and IADE surveyed 12 VLW in late 2015 to determine their response to the training and provision of animal medicines through kiosks and any changes that had occurred as a result. Two of the

...farmers fatalistically accept the high mortality rate of their animals as a natural part of life...



VLW training on cattle reproduction in Bobonaro



Dr. Alipio de Almeida of UNTL with VLW in Bobonaro

VLW reported having received training on identification and treatment of illness in 2014-15, nine reported receiving training on animal nutrition in 2012-13 as well as reproduction, introduction to animal health and identification and treatment of animal illness. The last VLW reported training on parasites and viruses. All but one reported positively on the training provided. The VLW all reported they provided treatment services, and nine reported also providing information about vaccination, nutrition and reproduction.

Challenges the VLW encounter in delivering their services included inability to re-stock medicines provided from the project, transport challenges and difficulty finding regular clientele / work. The VLW also reported that farmers often had difficulty paying, however they all reported receiving payments either in cash or in-kind (usually in the form of animals). Four VLW felt their costs were usually recovered, three thought only sometimes and four reported their costs were not covered (one non-respondent). Seven of the VLW relied on other work for their main source of income, four rely on their work as VLW (one non-respondent) showing this is often a part-time activity, given the sporadic nature of business at this stage. All but two VLW had been providing this service prior to the ILO training, reporting working every day or 5-10 days a month. One VLW mentioned working through government contracts to provide vaccination and another mentioned that there was quite a lot of work because there were not many VLW to provide services. Few VLW re-invest

in their services – only 2 reported buying new equipment. Eleven VLW intended to continue their work (one non-respondent). Those intending to continue cited their experience and capacity built over time, previous training, a sense of responsibility, being “used to” the work and having existing relationships with farmers.

After the training, six VLW thought they had more clients than before. Four felt business had dropped, one felt it was the same and the last wasn’t sure. All the VLW felt more confident to identify animal illnesses after the training, while nine felt more confident to provide treatment services. Ten reported they provided more information to farmers now about animal nutrition, the rest report this being largely unchanged. Eleven now provide information about animal reproduction to farmers.

Half the VLW buy medicines from kiosks. Medicines are purchased from Toto 88 (Dili), loja Marimar in Manufahi, Boaventura (Dili) and APS in Los Palos, loja Gunilabe (Maliana), MAF and two report only receiving through Mercy Corps / ILO support. In total, six VLW purchase through kiosks in the districts. Medicines purchased included vitamins, antibiotics and other medicine. When asked what they will do once the Mercy Corps medicine kits have been used, three said they would buy locally from kiosks, two from Dili, two from MAF, one from Indonesia, one said they would seek support from ILO and three were non-respondents. Kiosks were trained by Mercy Corps to refer farmers to APS for the administration of particular medicines. However, only four VLW said that the kiosks are linking them to farmers to help treat animal illnesses.

Animal health student internship

To enhance the practical knowledge of students studying animal health at UNTL, the project facilitated financial and technical support from SEPFOPE to UNTL to organize short-term internship for the students, however this only occurred once due to staff relocation to another position within UNTL.

Establishment of VLW association

In Lautem, the VLW had informally established an association but needed assistance in formalizing it. The project supported the revision of their “charter” and submission to Ministry of Justice, the head of the informal association has still to follow through with it’s formalization. In Bobonaro, the interest to establish an association was not strong and the project decided not to pursue it. For both groups of VLW, marketing material (business cards, T-shirts and hats) were produced to create a common identity for the VLW and strengthen the feeling of being a group.

Establishment of model cattle farm

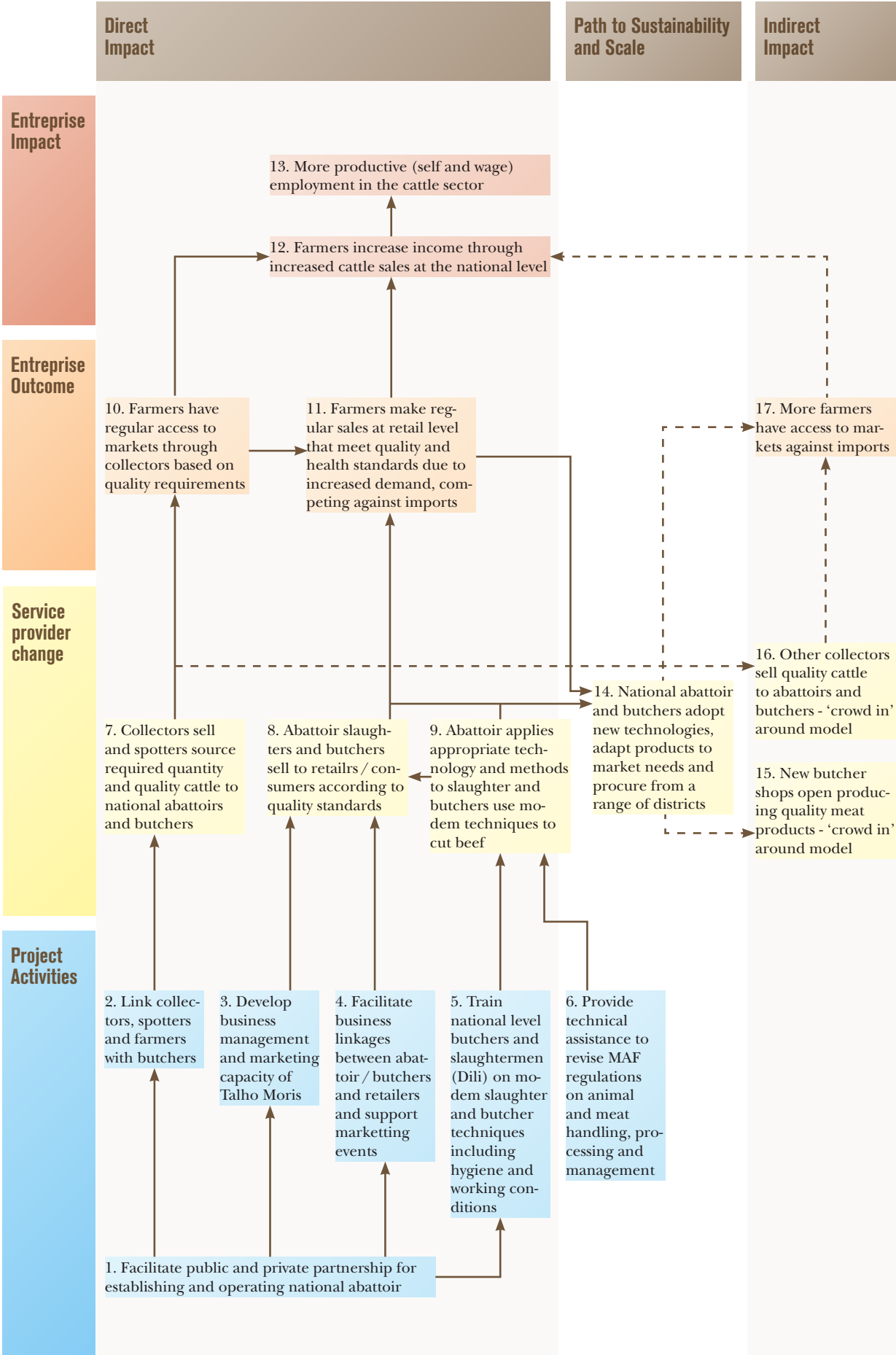
BOSS intended, through the VLW training, to identify potential farmers that may be motivated to apply semi-intensive farming methods, with support from the project. No farmers were identified as appropriate and BOSS changed its approach to engage with those entrepreneurs that approached IADE directly for support. Two potential clients with large land holdings and around 100 head of cattle indicated interest to be

involved. The concept was that BOSS would be able to provide technical and some financial assistance if requested. However, in both cases the interest of the entrepreneurs to focus on cattle as a business and invest time in changing key practices waned. BOSS decided to respond to requests of support, rather than ‘push’ the clients. The requests were never forthcoming and this activity did not progress. It was also felt that this was to be a large undertaking if any result was to be produced. Given resource limitations and other priorities the decision was made not to involve further in model farming.

Intervention: Improve meat processing

Within the processing intervention, key market players include local slaughtermen and butchers, the national abattoir, collectors and two new butcher shops in Dili and the Ministry of Agriculture and Fisheries.

In 2014, BOSS reviewed the original results chains to elaborate the theory of change and anticipated pathway to systemic, scaled change and sustainability (see graphic below).





Inauguration of Talho Moris butcher shop

Key activities within the processing intervention are outlined below:

Opening of National Abattoir & butcher shops

BOSS supported the establishment of a public-private partnership between the Ministry of Agriculture and Fisheries (MAF) and a private investor (EBAI) to operate Timor-Leste's national abattoir, situated west of Dili. EBAI then established Dili's first international standard butcher shop. BOSS facilitated the training of slaughtermen and butchers in modern slaughter and butcher techniques as well as supporting promotional efforts in Dili (to customers) and in the districts (to cattle farmers to sell to EBAI). The butcher shop sells to restaurants, supermarket, institutional buyers and private customers from its shop front in Dili, employing 7 full time staff.

The business rapidly grew following its opening in early 2013. This year, the Store Manager cites increasing competition (see below) and a less commercially strategic location as factors impacting a slight decrease in sales. However, the shop continues to receive orders from institutions (i.e. national prison, ordering around 280kg a week) and also a range of local restaurants (10-20kg a week), which has remained stable over the previous year. The shop also sells to two supermarkets in Dili – Leader and Lita, generally purchasing around 100kg every 1-2 weeks.

EBAI used to sell to Kmanek supermarket also, around 100kg a week, according to the Store Manager, but this has now ceased. The Kmanek manager cited prices and quality consistency with imported meat from Australia and New Zealand as the reasons for the change. He also noted that EBAI sells chilled meat, which has a much shorter shelf life than frozen imports. Currently, Kmanek are importing around 1 container (15 tonnes) of meat, including a range of cuts, from Australia and New Zealand per month. This is in direct comparison to last year, when imports were lower due to consumption patterns. Interestingly, Kmanek is now importing cattle meal for feed and showed an interest to supply cattle breeders in order to buy back meat with consistent local quality.

EBAI generally buys its cattle from cattle collectors, and predominantly from Suai district. The border with Indonesia has been closed for cattle trading, forcing collectors to seek other markets to sell to. Over the last year, the key change in practice is that EBAI staff no longer need to travel to Suai to purchase cattle. Collectors and also farmers are familiar enough with the national market, and cattle are now being transported from the districts and sold to EBAI in sufficient numbers each week. EBAI normally purchases 7 head of cattle from collectors and farmers, slaughtering around 6 head of cattle per week to meet consumer demand, with an animal in reserve if required.

EBAI also keeps their own Brahman cattle herd at a farm in Lois, east of Dili and in 2015 spent around 3 months slaughtering from this herd. The key issue in maintaining the herd is the lack of grass for fodder available on the property – an inputs issue for cattle farmers throughout Timor-Leste. The herd has grown to a considerable size and needs to be culled as the cattle reach slaughter weight and age. EBAI has been slaughtering 4 Brahman cattle per week to supply their customers, given their significantly larger size compared with Bali cattle. During the period of the Brahman cull, the shop maintains some Bali cattle purchased from collectors at the national abattoir in reserve.

As the new regulations are rolled out, EBAI and Talho Moris continue to compete with what are now 'illegal' slaughters at local markets, with meat from this informal source generally sold at cheaper prices given the lack of equipment and overheads, including government taxes per head of cattle slaughtered.

In 2014, a second butcher shop, Talho Moris, opened in the centre of Dili, placing pressure on the national abattoir to slaughter more cattle to service increasing

market demand, and demonstrating early crowding-in effects. Once opened, the number of slaughters nearly doubled. Talho Moris has played an active role in sourcing its cattle for slaughter. BOSS, through the establishment of the Business Incubation Facility at IADE, supported Talho Moris as the facility's first client. This included training in modern butchering techniques, business counseling, promotional and financial support.

The opening of the national abattoir, EBAI and Talho Moris generate a 'pull' factor of district cattle to national markets. The role and practices of the two new commercial outlets (EBAI and Talho Moris) form the basis for improved market opportunities in the districts for cattle farmers and sustainable change. Talho Moris has grown rapidly since it's opening and is now establishing a second retail outlet, a huge achievement in such a short space of time and demonstration of the very real demand for local beef products in Timor-Leste.

BOSS and IADE surveyed farmers that had sold to EBAI and / or Talho Moris since they opened. Only 6 farmers were interviewed



EBAI butcher shop

(all men), therefore results provide a broad indication of farmer responses only. 3 farmers owned 7 head of cattle, selling once a year through the national abattoir; the other 3 farmers owned 13, 15 and 25 head of cattle. Five farmers reported selling through EBAI once during the last year, with the smallholder of 15 cattle selling twice. This farmer sold 2 head of cattle to EBAI, the larger cattle holder sold 4 head of cattle and the rest only sold one. For all these farmers, EBAI had directly collected from their farms. The incentive to sell cattle through EBAI included the convenience of having EBAI come to collect the cattle was also a significant factor, pricing was seen as better than local buyers paid, and one farmer preferred the use of the kilo measurement system (compared with pricing by sight).

Prior to the opening of the national abattoir, the farmers report selling one or two head of cattle once or twice a year or as low as one animal every two years. The larger cattle holder (owning 25 head of cattle) reported selling two head of cattle per year. Farmers sold to the local market, family and friends, and one reported selling through a collector. Four farmers reported that they would continue to sell to these local markets when the need arises, two responded they no longer sold locally. Decision-making is situational and relates to households needs (i.e. sending children to school) or when animals are large or mature enough to sell. The numbers of cattle sold per year after the opening of the national abattoir and butcher shops did not change greatly. Five of the six farmers responded they would continue selling through EBAI, although the farmer who responded “no” seemed to misunderstand the question. Three felt the prices offered by EBAI were better than other buyers, two others commented that it depended on the cattle they had available and which buyers were first to purchase. When asked about their plans

to breed more cattle (to sell to EBAI), five out of six farmers responded positively although linked this to household needs and whether EBAI was likely come and purchase regularly. Overall, it seemed the opening of the national abattoir has not greatly affected selling patterns for these farmers, although the timing to see such behaviour change for raising large ruminants is still very early. It is unsurprising that small holders are, essentially, willing to take advantage of market opportunities as they arise, depending on their cash needs and readiness of their cattle for sale.

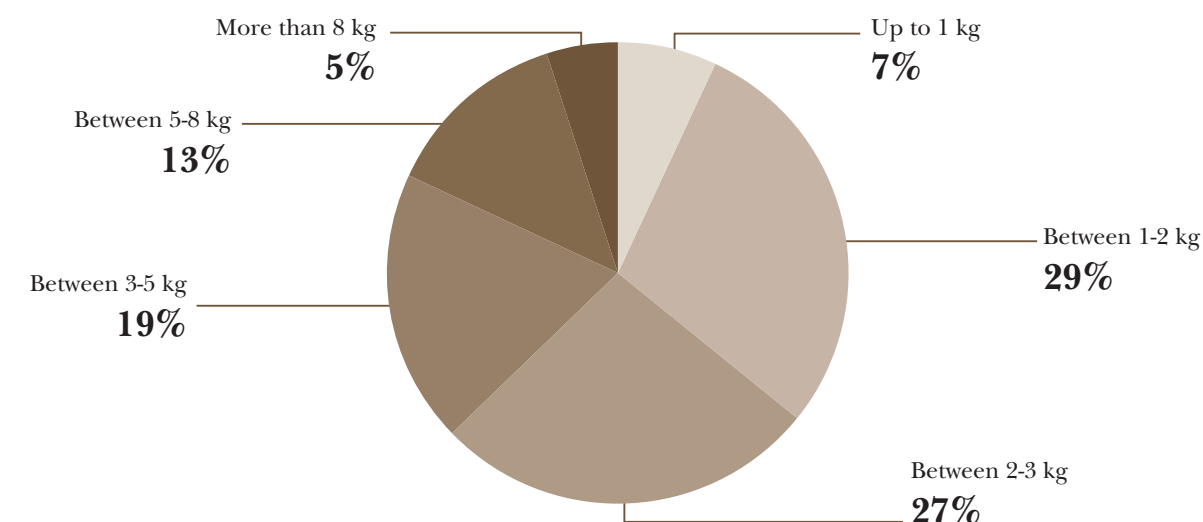
BOSS wanted to investigate customer’s responses to the opening of the two butcher shops, and to this end coordinated with IADE to conduct customer surveys. 104 interviews were undertaken (50 women were interviewed and 54 men). This included 38 customers from EBAI (29 Timorese, 9 foreigners), and 66 customers from Talho Moris (35 Timorese and 31 foreigners). The vast majority of customers (86%) had heard about the new shops via word of mouth (neighbours, family and friends), 8% from television with the remaining negligible amounts from journal (2%), one from IADE itself or from passing and seeing the shops or because they lived nearby.

10% had only purchased from the shop for the first time. 12.5% came ones a month, 17% said they came twice a month, 2% said 3 times a month. 29% said they came every week, although didn’t specify how often. A further 10% specified once or twice a week. 11% shopped between twice to four times a week. Two customers claimed they bought every day. Aggregating these findings shows that over 50% of customers responded that they were regular customers at the butcher shops.

The average amount purchased was 2.9kg, with a median amount of 2kg.



Average amount of meat bought



Customers were asked to reported the reasons they went to the butcher shops (multiple choice). 85% of customers surveyed said the primary reason they bought meat from the shops due to the quality of the meat was good. A range of other reasons were also selected - 43% also said the prices were good, 24% liked that the kilo measure were ‘standard’, 35% rated the customer service as good, 25% lived close to the shops and 29% said there was a choice of meat cuts.

25% of customers thought the shops were cheaper than local markets, 38% felt it was the same pricing, 24% thought it was more expensive, the remaining customers hadn’t shopped at local markets and couldn’t compare. Customers commented that even if it was more expensive, it was good quality meat, cleaner than the local markets and they felt the shops didn’t “steal” kilos. (i.e. used scales to correct weigh meat sold).

Prior to the shops opening, 48% of respondents bought meat at local markets and 45% bought imported meat from supermarkets, showing some displacement imports in favour of locally grown beef. Others previously bought from friends or family (3%), or didn’t tend to buy beef (3%). To support the import displacement trend, from those who previously purchased imported beef from supermarkets, 68% said they no longer did. For those who continued

to purchase imported beef, the reasons cited included convenience and the variety of meat that is available in supermarkets.

65% said they purchased a lot more meat now the shops were open, 45% reported increasing their purchasing a little bit. 26% said they bought the same amount. Only 6% claimed they reduced their purchasing while for the remainder, it was their first visit to the shops. This is very encouraging in terms of the impact the opening of the butcher shops has had on consumer behaviour for local beef in Timor-Leste. Customer feedback in general was positive, suggesting more shops be opened, that the quality was good, hygiene and service was also considered good. Suggestions included to stock different meats (i.e pork, lamb, chicken, goat), with requests to lower pricing.

Linking national abattoir to collectors, spotters and farmers

EBAI mainly sources and collects its cattle from one district in Timor-Leste, although has purchased cattle from other districts, when collectors or farmers deliver them direct to the abattoir in Dili. The intervention aims to expand cattle sourcing across Timor-Leste, to open the national market to as many cattle farmers as possible. BOSS, together with IADE, has mapped and linked EBAI and Talho Moris with a range of collectors and farmers throughout the country as part of its assistance.

A model using local “spotters” to identify sales ready cattle for EBAI was seen as appropriate – allowing a level of certainty of sales through an agent model for EBAI prior to them travelling to the districts to purchase cattle, reducing the time burden on the company. However, while spotters were identified in Maliana district in the west, EBAI did not source through this channel, resulting in a loss of confidence of those assigned as spotters and also of cattle farmers. IADE also drew on its newly established ‘Business Matchmaking’ service to link EBAI to collectors and farmers in several different locations and undertook these events 6 times, only one of which resulted in the purchase of cattle. In the main, EBAI continues to source from one district, in which there are familial connections, so the incentive for the company to adjust this practice does not appear strong at this stage, despite increasing pressure for more slaughters from an additional retail butcher shop. Talho Moris has, however, drawn from the list of collectors collated by BOSS. After a year of business operations, Talho Moris now source animals independently of EBAI as the exercise become costly. Prior to the opening of the second butcher shop, cattle was predominantly sourced from farmers in Suai (through EBAI). Talho Moris now has a nationwide network of collectors from most districts.

Initial prices offered by EBAI to farmers were low (\$2.00 / kg), comparative to prices that were accessible in local district markets, particularly in the east and west of the country. Over time, EBAI has adjusted

its prices upward to remain competitive with local pricing. EBAI now offers \$2.50 / kg for heads of cattle collected in the districts and \$2.70 / kg for those delivered directly to the abattoir in Dili. Weighing by scales has proved impractical to implement in the districts however EBAI staff have become familiar and proficient at pricing “by sight”, the traditional method used in the districts. The preferred model is for collectors and farmers to bring cattle directly to the abattoir for slaughter and sell by weight, which is seen as fair to all parties.

IADE also conducted interviews with two collectors, to gain a sense of the response from the “middle man” about their experiences selling through EBAI and the two butcher shops in Dili. Both collectors were from Covalima district and used to sell at local markets or through quarantine in Suai (presumably to Indonesia). One heard that “the government had opened two places in Dili that sold beef.” The other reported that EBAI came directly to them to organize to buy cattle, although in the end they took the cattle directly to EBAI in Dili to sell them.

One collector sold irregularly to the national abattoir – once or twice a year, but sold in bulk, reporting 18 head of cattle, whereas previously he tended to sell about 12 head of cattle a year and usually every month. The other reported selling more regularly, once a week, which was the same as his previous sales pattern, although wasn’t able to report total number of sales to the abattoir. The appeal of selling to the abattoir was the fixed

by kilo pricing, meaning no negotiation was needed and that the prices were better than those in the districts. Other factor were also that it was easier to sell regularly to one place and that the abattoir paid immediately, whereas other buyers sometimes didn’t have the cashflow and worked on credit systems. Both collectors intend to continue selling to the abattoir and didn’t intend to sell locally.

One collector experienced a problem selling to the abattoir when they still had plenty of cattle in stock. The other commented about the challenge of ensuring the health of cattle due to either the lack of APS services available locally. Neither collector felt there was any particular impact on farmer’s cattle rearing as a result of the national abattoir.

District slaughterhouses



Slaughtering and butchering for local market

Initially BOSS had plans to upgrade and find more sustainable business models for the district based slaughterhouses in two target districts. Over the course of activity at the national level, BOSS found resources within its project team and at IADE were stretched and unable to extend to district slaughterhouses. BOSS decided to focus instead on the national abattoir as a business model and training centre, and foster national markets that would be accessible to Timorese cattle farmers. Furthermore, rehabilitation of slaughterhouses at the district level relied on government support, which was yet to be implemented or had, in some instances, been implemented inadequately (as in Bobonaro, where the slaughterhouse was constructed far from town in a rice field with no connecting roads and not according to any slaughterhouse standards).

Legislative framework



Meat selling in local market

The lack of a legislative framework governing the quality of beef products and processing standards has considerable implications for the development of markets for Timorese beef, both locally and in the long term, for export potential. BOSS has supported the development of 5 Decree Laws to underpin the strengthening and growth of the cattle sector which were passed in 2014, including a) Animal Identification, Registration and Circulation Regime, b) Animal Movement Restriction Inside Urban Areas, c) Hygiene and Sanitary Conditions in the Preparation, Transportation and Sale of Meat and Meat Products and d) Slaughterhouse Permit Regime. Finally, a Transitional Regime for the Implementation of Decree Laws was developed allowing a phased implementation by the State Secretariat of Livestock of the Ministry of Agriculture and Fisheries of the new laws while awareness was being raised across the sector. The implementation of the new decree laws will further enhance quality and increase demand for local beef products. Transition will occur in Dili over 2014-15, with a longer time frame for the districts (2017).

The slaughterhouses will, over the next few years, be subject to new legislation governing slaughter and processing standards, which may cause displacement of jobs for local slaughtermen. This also places pressure on the abattoir to expand its slaughter numbers from 3 to 30 animals per day, which has implications for both infrastructure and human resources. The latter may present opportunities for displaced slaughtermen. BOSS is facilitating planning between EBAI and MAF to develop a ‘roadmap’ to develop capacity at the abattoir to cope with the increased flow of slaughters required as the regulations take effect.



Slaughterplace in Los Palos

Intervention: Input supply – animal medicine



Train shop owners in basic knowledge of appropriate medicine application

A workshop was conducted with VLWs in 2013, who previously had been trained in animal health, reproduction and nutrition and who had subsequently trained farmers. During the workshop, VLWs identified a key constraint to undertaking their core function of animal treatment was a lack of access to basic animal medicines. The original intervention plan for the cattle sector had not included the input supply of animal medicines and this was developed in 2014. There were no dedicated agricultural input supply shops in Dili at the commencement of the BOSS project and while there were few shops that stocked some inputs, this was not their core business and it was of little interest to shop owners to scale up.

By 2014, there were at least 2 dedicated agricultural input suppliers in the capital. The new intervention linked agricultural input suppliers at the national level in Dili to small, district level shops (“lojas” or “kiosks”) that sold a range of everyday items and were also interested to sell agricultural inputs to farmers, including animal medicines. The shop owners would be trained in basic animal medicines and linked to the local VLWs, particularly for medicines that required animal health knowledge for correct administration.

Mercy Corps was contracted to deliver this intervention as

an extension to a previous input supply intervention the organization had undertaken independently of BOSS in the horticulture sector. The intervention has focused on shops that are selling or willing to sell animal medicines and further training of VLW on animal disease identification and treatment. UNTL identified the 10 strongest VLWs in each target district who had previously been trained and another 4 VLW in Ainaro and Manufahi were included in the training as Mercy Corps had local kiosks operating in those two districts already. As part of the training, the VLW were linked to the local kiosks with the intention that the kiosks would refer farmers with serious animal disease issues to the VLW.

At the end of last year, Mercy Corps facilitated a marketing campaign for the local kiosks and the VLW, encouraging farmers to seek advice and buy medicine from VLWs in severe cases of animal disease or directly from kiosks in milder cases. The campaign also intends to change farmers perception that high mortality rate is not normal and that they must take action when animals are sick.

BOSS explored the response of four kiosks to the intervention through a short survey process implemented by IADE. Early signs are that the kiosks are starting to share information about animal medicines with consumers / farmers, that they are selling small amounts of medicines and that they are calling APS to administer particular medicines. Two of the kiosks claimed there was a significant growth in the number of consumers buying animal medicines since they received training from Mercy Corps. After receiving medicine from Mercy Corps as part of the project, 3 of the 4 kiosks had already restocked (once or twice), two buying from shops in Dili (Loja Egui and Loja Serafim) and one buying medicines in Indonesia. If the trained staff were not present at the kiosk, respondents reported that family (specifically, children)



would be able to provide information to farmers / consumers because information from the Mercy Corps training had been shared in the family and materials were available to refer to.

BOSS and IADE also interviewed farmers to understand their experiences dealing with kiosks and VLW. Thirteen farmers were interviewed across Manufahi, Lautem and Bobonaro. Nine respondents reported that whenever their animals were sick, they would contact VLW while 4 comments they would contact MAF. Five noted that they accessed medicines from MAF while 8 said these were provided by the VLW themselves. Interestingly, two mentioned they purchased medicines from MAF. No farmers reported receiving information on animal medicines if these were purchased from kiosks. Only two farmers reported that kiosks called VLW to assist with their animals. Ten farmers reported having received assistance from VLW, including for nutrition, reproduction and vaccinations. Twelve farmers thought that VLW had good knowledge and capacity in terms of treating animals but comments that the VLW didn't attend regularly or they had difficulty treating animals if they had been sick for a long time. Only six respondents said they paid VLW for their work although only one payment (\$5) was reported. Eight farmers reported particular training the VLW had provided, including vaccination, nutrition and reproduction, how to use particular medicines and how to measure the appropriate amount of medicine, how to raise good quality cattle and how to grow grass to feed cattle.



Lizete Maria dos Santos, VLW coordinator, Bobonaro

Intervention: Access to finance

There has been no demand for these services by collectors or farmers. The complexity / immaturity of the financial sector in Timor-Leste is currently prohibitive for this intervention. In particular, securing collateral for loans was not yet underpinned by a legal structure.

Intervention: Entrepreneurship

The role of IADE in the cattle sector has been to promote and facilitate increased entrepreneurship throughout the cattle results chain.

Foster entrepreneurial culture

The original intervention highlights general entrepreneurship awareness campaigns, support to the VLWs to develop their awareness of business principals to pass onto farmers, and to also develop specific training and counseling services for cattle farmers.

Over time, it became clear that the capacity of cattle farmers was extremely low and IADE training and counseling would be inappropriate and ineffective. Therefore, BOSS has focused on raising entrepreneurship within the services providers, in particular the national abattoir and the VLWs. BOSS supported IADE to develop and deliver ILOs ‘Start Your Business’ training to VLWs and to design entrepreneurship awareness training for cattle farmers, as part of embedded services and direct training to farmers offered by VLWs. BOSS has continued supporting the national abattoir including mapping the cattle sector across the country – peak districts of production and identifying collectors / farmers willing to sell. The purpose of this approach is not only to provide the information to the abattoir but to raise awareness in the districts of a national market.

Systemic change in early signs of impact

Systemic change

The focus for BOSS in this sector shifted towards upgrading – including introducing modern techniques for slaughtering and butchering, raising hygiene standards, developing a legislative framework for quality improvement, promoting improved cattle health systems – and the creation of another market for cattle farmers to sell to that adheres to these standards and laws, with a view to displacing imported beef products.

The most progress has been made at the market level and stimulating demand for local beef products. Talho Moris in particular show huge potential for growth and is instigating plans to expand beyond the assistance of the project. Other emerging players are also discussing potentially opening new retail butcher outlets. That a ready market would exist at the national level is aimed at stimulating farmers' incentives to raise and sell more cattle. This strategy not only relies on the national level apparatus being available for processing and sales, but the quality and quantity of cattle being supplied from the districts. Moving cattle farmers from utilising their cattle stock from cultural and traditional use to commercial based farming is a long-term supply side strategy requiring significant behaviour change, including accessing investment to grow herds, raising nutrition and health standards (lowering disease and improving nutrition), lowering mortality rates and boosting fertility, as well as time for cattle to mature in order to be saleable. However, early signs are very positive with farmers and collectors alike now familiar with the national level market and retail activity expanding, particularly for Talho Moris.

The capacity of VLW to treat animal has been strengthened, the challenge lies in their ability to develop these services into more sustainable businesses. The distribution of medicines, however, through kiosks and the embedding of services within this model remain relatively nascent although it is early to see results from this recent intervention.

Impact: Early signs

Impact within the cattle sector has proved challenging for BOSS to assess during the lifetime of the project for a few reasons. Mainly, this is due to the establishment of national level, international standard markets and the time it takes to move traditional production and selling practices by cattle farmers to be more commercially oriented. Not least to this is also the time taken for a head of cattle to grow to be productive and saleable.

Indicators within this sector for impact have also proven somewhat complicated. In its original indicators, BOSS had pre-identified net full time employment (which adheres to the DCED Standard) as one key indicator by which to measure impact. Jobs have been created in the new butcher shop and national abattoir (13). In the case of raising cattle, BOSS understands this as a generally part-time activity for farmers, therefore measuring change in time may not provide much insight into improvements in income. BOSS has also drawn on the ILO definition of employment, as follows when establishing indicator targets at the projects outset⁹, however this definition is extremely broad, so as to be less useful in determining impact from a time or monetary perspective, for example.

⁹ **Employment:** Persons in civilian employment include all those employed above a specified age who during a specified brief period, either one week or one day, were in the following categories: i) paid employment; ii) employers and self-employed; iii) unpaid family workers; unpaid family workers at work should be considered as being self-employed irrespective of the number of hours worked during the reference period. For operational purposes, the notion of some work may be interpreted as work for at least one hour. www.ilo.org

For the sake of a proxy for jobs, BOSS calculated a reasonable number of head of cattle sold per farmer per year would be the sale of 2.5 cattle per year. As at December 2015, BOSS could estimate 641 jobs within this definition had been supported (on the basis of slaughters through the national abattoir). However, it must be qualified that BOSS has not reviewed if these are new jobs and it could reasonably be asserted these cattle farmers were highly likely already raising and selling cattle to other buyers, even if their sales behavior had moved to EBAI. As the measure is purely an estimate, the possibility of double counting of farmers is not taken into account. More importantly, this measure does not really provide any rigorous indicator of how income or livelihoods for existing cattle farmers may have improved as their economic or poverty status has not been analysed for review.

Within the timeline of the project, given the longevity needed to raise and sell cattle, and to expand herds and sell additional heads of cattle, it could be suggested that it is simply too early to expect impact for cattle farmers. Increasing farming productivity is a lengthy

process and also outside ILOs mandate. The initial intention of BOSS was to be involved in productivity but with limited resources and other organisations focusing solely on producing, BOSS determined it would work in other priority areas. Other agencies are providing assistance in this area (i.e. ACIAR.)

Other indicators developed for the logframe included sales, business start-ups and public and private investment in the sector. Business starts up particularly relate to the butcher shops, with some VLW operating as micro start up enterprises. Public investment has been positive, with a total \$300k leveraged for the national abattoir rehabilitation over the life of the project, and an additional recent pledge of \$45k for further extend the facility.

The government has also drawn on key technical inputs to improve cold store facilities at local markets. Specific advise was sought by the Secretary of State for Livestock regarding the rehabilitation of local meat markets in Taibessi, now using air-conditioning and closed cool boxes for storing and selling meat products to consumers.



Cattle farmers in Bobonaro

What we learned and where to from here

BOSS significantly changed the way it interacted with farmers regarding production. The initial concept of having VLW identify productive farmers was not successful and frequently farmers had similar “hands off” approaches to cattle raising, with little input or time invested. BOSS also attempted to attract those farmers with larger cattle holdings and land who were looking to invest. However, these farmers tended to be busy with other activities to commit to work with BOSS.

For BOSS, the key areas of impact and change are within meat processing and market development, which are arguably critical to stimulate long lasting change in other areas of the sector.

The VLW in Bobonaro and Maliana have higher capacity than in Ainaro and Manufahi, which at least partly due to BOSSs re-occurring training. With improved access to medicine and marketing campaign, changes may start to occur at farmer level. Farmers tend to see the high mortality

rate as normal, they know no different. A campaign will inform farmers that they can take action for the diseases of their animals. Payment of VLW does, however, remain somewhat challenging. BOSS learned the time need to change farmer’s perceptions and the negative impact of provision of free services and medicine underpinning the development of emerging support markets.

Significant obstacles remain in the sector requiring a long-term focus and coordinated investment to improve animal health (vaccinations and treatment) and productivity (including nutrition and reproduction).

However, the market exists for local beef within Timor-Leste and is rapidly growing at a national level through internationally accredited meat processing and international

standard retail butcher shops. Without even considering the enormous neighbouring export potential, there is clearly ample opportunity to grow farmer sales with investment in key sectoral areas.



Kunfi Maria Soares, manager of Talho Moris with her staff

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