

Maziwa Zaidi Theory of Change: Context and 'start point'

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MAZIWA
ZAIDI

Research for Development Partnerships



CGIAR is a global partnership that unites organizations engaged in research for a food secure future. The CGIAR Research Program on Livestock and Fish aims to increase the productivity of small-scale livestock and fish systems in sustainable ways, making meat, milk and fish more available and affordable across the developing world. The Program brings together four CGIAR centres: the International Livestock Research Institute (ILRI) with a mandate on livestock; WorldFish with a mandate on aquaculture; the International Center for Tropical Agriculture (CIAT), which works on forages; and the International Center for Research in the Dry Areas (ICARDA), which works on small ruminants, and the Swedish University of Agricultural Sciences (SLU) which provides expertise particularly in animal health and genetics. <http://livestockfish.cgiar.org>


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Contents

Country Program Theory of Change	1
Country Program ToC and Narrative Report	1
Basic Country Information	1
Theory of Change Narrative	2
Country/Value Chain Context	2
VCTS Entry points	3
The program’s overall vision of success	4
Explanation of the ways in which you will be working	5
Summary of the change areas and specific assumption	5
A summary of other context specific assumptions that you will also be testing over the first year of the program	6
Country Program Change Pathway	7
Start Points for identified areas of change	8
Starting points for planned short term changes	8
Summary of projects that are planned for this year with an indication of which area of change they will support. Add more columns as necessary	25
Analysis of risks to VCTS program staff and partner organizations and their staff in relation to working to achieve these changes	26

Country Program Theory of Change

Country Program ToC and Narrative Report

Basic Country Information

Country	Tanzania
Region	East Africa
Level of engagement (low/medium/high)	Piloting
Program start and completion date	'Start Point': August 2015
Value Chain Transformation and Scaling (VCTS) program coordinator	Amos Omore
Other key VCTS colleagues involved (e.g. Regional Directors, Output Leads, other key people that have been significantly involved to date)	<ol style="list-style-type: none"> 1. ILRI: Edgar Twine; Isabelle Baltenweck; James Rao; Alessandra Galie; Ben Lukuyu; Alan Duncan; Acho Okike; Immaculate Omondi; Michael Kidoido; Julius Githinji, Amos Omore 2. CIAT: Brigitte Maass, Birthe Paul, An Notenbaert, 3. Emory: Amy Web Girard
Brief summary of partners involved in this ToC process: names, organizations, focus of their work and any other relevant information	<p><i>Above plus:</i></p> <p>Heifer International-Tanzania (Henry Njakoi/Leticia Mpuya): capacity building of farmer groups</p> <p>Faida Market Linkages (Tom Sillayo; Adolf Mushi; Nisefori Mkwama) : Facilitation of market linkages</p> <p>Tanzania Dairy Board (Deo Mlay and Mayasa Simba): Milk quality assurance and DDF communication</p> <p>Tanzania Livestock Research Institute (Julius Bwire): Piloting of local innovation platforms in Tanga</p> <p>Sokoine University of Agriculture (Lusato Kurwijila): Research and policy Linkages & Germana Laswai : Piloting of local innovation platforms in Morogoro</p> <p>Local Government Authorities in 5 districts</p>
Estimated total funding over the three year period	
This document was completed by	Michael Kidoido, Edgar Twine, Julius Githinji, Amos Omore
Date of completion	October 2015

Theory of Change Narrative

Country/Value Chain Context

Tanzania has the second largest livestock population in Africa comprising 25 million cattle and other animals, 98% of which are indigenous breeds primarily the East African short horn zebu. These cattle make significant contributions to the economy of Tanzania, particularly its rural economy, although this is constrained by the low productivity associated with these breeds. The latest national accounts (2014) show that Tanzania livestock sector contributed 7.4% to the National Gross Domestic product (GDP) and 13% to the Agricultural Gross Domestic product (Ag GDP). The livestock sector grew by a modest 2.2% in the same year. This is consistent with records from the previous decade that indicate a modest increase in production of livestock products such as meat (39.2%), milk (102%) and eggs (600 million-2.9 Billion) between years 2000/2001 and 2009/2010. These increases have been due to increases in herd size rather than in productivity. The dairy sector currently contributes 30% of the livestock contribution to agricultural GDP¹. These contributions of livestock to the Tanzania economy are generally much lower than in many developing countries with fewer livestock numbers².

On the other hand, demand has been increasing rapidly driven by rising incomes and population growth. An estimated increase in per capita consumption of meat (140%), milk (95.4%) and eggs (295%) has been reported over the same period. A key objective of the Tanzania national livestock policy is to contribute towards national food security through increased production, processing and marketing of livestock products to meet national nutritional requirements and the growing demand.

The supply of livestock products could be higher with more investments. The livestock sector is considered to have suffered considerable under-investment over many years. Opportunities for the sector to contribute more to improving rural livelihoods have therefore not been fully exploited. Across the various livestock commodities (dairy, meat, eggs), the greatest opportunities in Tanzania are considered to be in the dairy sub-sector. Dairying offers unique opportunities for rural livelihoods amongst agricultural pathways out of poverty in that it offers many pro-poor benefits from small-scale production and marketing. These include opportunities for intensification and enhanced productivity and incomes, employment in services and marketing, and nutrition both for the smallholder household and the poor in towns and cities served by informal markets. Unlike most crop and livestock enterprises, its benefits throughout the value chain are generated daily rather than seasonally. But despite opportunities for market-led growth, private sector participation in Tanzanian dairy markets has been insufficient to fill gaps in service and input provision, and in milk marketing for smallholders and agro-pastoralist cattle keepers. With more arable land, consumption culture and population size that higher than that of neighboring Kenya, the current annual milk production of 2 billion litres in Tanzania could grow to rival or surpass that of Kenya's 5 billion litres annually, given the requisite public and private investments as has happened in Kenya over the last few decades.

Previous investments to stimulate collective action and entrepreneurship for dairy development relied heavily on highly capitalized cold chains. The program considers these to be unsuitable where individual volumes are small and dispersed, and where occasional and opportunistic marketing prevails as pertains to many parts of Tanzania. Access to adequate feeding, breeding, animal health and credit services has remained low. Production of a marketable surplus remains a fundamental challenge, especially when animal

¹ http://data.worldbank.org/topic/poverty#tp_wdi and <http://datacatalog.worldbank.org>. The livestock sector makes up about 40% of the a GDP in developing countries on average but receives only 4% of agricultural official development assistance (FAOStats 2014; <http://stats.oecd.org/Index.aspx>)

² For example, with fewer livestock, Kenya generates more dairy output from its 18 million cattle (including 3.5 million improved breeds kept by about 1 million households) that contributes 8% to its GDP than Tanzania with 25 million heads of cattle (including 700,000 improved breeds kept by about 220,000 households) that contributes less than 2% to its GDP

nutrition is an initial constraint. Stakeholders increasingly recognize the need for a combination of public, collective and private action for more widespread and inclusive dairy development, but as outlined above, these approaches have yet to emerge in Tanzania and cattle productivity has remained low. As a result, investments in milk processing in Tanzania (about 420,000 litres per day) have remained grossly underutilized (generally below 30%) for many years. For example, Njombe *et al.* (2011) report that the capacity of milk cooling centres that channel milk for processing from Morogoro region is about 7,000 liters per day, but on average just 17% of this capacity is utilized³. Overall, informal non-pasteurized milk markets continue to offer about 97% of the domestic marketed supply in Tanzania.

VCTS Entry points

Tanzania represents many countries in the South where approaches to dairy development have tended to be poverty and gender neutral and in some cases even anti-poor, especially those that promote aspects of the Western dairy models, such as cold chains, pasteurisation and packaging. This was a conclusion drawn from reviews that informed the choice of the country for concerted dairy research and development during the design of the CGIAR Research Program on Livestock and Fish that is being implemented as *Maziwa Zaidi* in Tanzania. Other factors included:

- Existence of value chain growth and market opportunities
- Pro poor potential of the value chain
- A body of researchable constraints to sustain various research agendas in the value chain
- Existence of enabling environments
- Existence of considerable CGIAR legacy activities

A review of past successes and failures⁴, and various value chain assessments identified the following inter-linked challenges as key bottlenecks that need to be addressed to overcome low dairy productivity at farm level and upgrade the value chain. Poor access to inputs (feeds, breeding, animal health), and services (lack of extension services, poor policies) leading to poor disease control, lack of knowledge and information, and poor animal husbandry. Feeds scarcity is mainly related to seasonality of rainfall and its effects on feed availability and transhumance. The second major challenge for the Tanzania dairy value chain is the dominance of direct sales of small volumes of raw milk by smallholder producers that preclude economies of scale. This results in high costs of production and marketing and milk safety concerns. Several factors including the small-scale nature of the production systems, absence of appropriate organizational structures for farmers and other value chain actors, are partly responsible. The sector also lacks appropriate financial arrangements to increase farmers' access to basic inputs and services through affordable credit products. This has discouraged investment in productivity improving innovations and thus perpetuated the low-input low-output vicious cycle⁵. The entry points provided the rationale for the hub approach that in turn would become a platform for channeling existing and new technologies and approaches emanating from the L&F program.

³ Njombe, A. P., Msanga, Y., Mbwambo, N., and Makembe, N. (2011). The Tanzania dairy industry: Status, opportunities and prospects. In Ministry of Livestock and Fisheries Development. African Dairy Conference and Exhibition, Dar es Salaam, Tanzania.

⁴ <http://livestockfish.cgiar.org/2015/06/26/tanzania-dairy-review/>

⁵ Livestock and Fish CGIAR Research Program, 2015. Enabling Innovations for Value Chain Transformation and Scaling Tanzania Dairy Value Chain. CGIAR Research Program on Livestock and Fish.

The program's overall vision of success

The *Maziwa Zaidi* Program's vision for Tanzania is to work towards an inclusive and sustainable development of the smallholder dairy value chain by 2023.

Long term changes which will ensure the success of this vision

For the *Maziwa Zaidi* (MZ) vision to become a reality, the smallholder dairy system must be more productive and the performance of associated value chains must improve. This can be aided by multi-stakeholder interventions with communities and along value chains while ensuring inclusivity by targeting the poor and marginalized. A collective capacity is required within CGIAR to demonstrate how research can develop appropriate solutions as integrated interventions for pro-poor transformation and work towards their implementation at scale by development partners and eventual impact at scale. Due to low milk availability, the focus and immediate opportunities for improvements along the value chain lie more around improving access to and use of inputs and services and **growing short market linkages involving small-scale milk traders** that serve smallholders. The aims are captured in these long-term goals:

- a) Smallholder farmers have reliable and consistent access to quality inputs and services that enable them to efficiently achieve high dairy productivity;
- b) Smallholder farmers have access to an inclusive, reliable, well-coordinated, and efficient dairy products marketing arrangement with resultant improvement in household income and livelihoods; and,
- c) Poor consumers can access quality, safe, and nutritious dairy products at affordable prices, reflected by an increase in their per capita consumption of the dairy products.

According to *Maziwa Zaidi* program, a central precondition for achieving these aims is to have more private and public investors replicating the pre-commercial dairy market hub approaches in inclusive ways. Piloting of interventions aimed at promoting uptake of scalable value chain approaches with improved organization, and in the process, generating and communicating evidence on business and organizational options for increasing participation of resource poor men and women in dairy value chains, thereby increasing household dairy income, is critical to influencing decisions towards more investments.

Program goal and expected changes in this three year period

The key changes for each stakeholder group that we expect to see towards the intermediate change of **“private and public investors replicating the program's pre-commercial hubs approach in inclusive ways”**, are as follows:

- i. Smallholder farmers are actively participating in and employing collective action mechanisms to efficiently access and use inputs and business development services to improve dairy production. In the process, they are also experimenting with gender-sensitive innovations.
- ii. Researchers and development partners involved in MZ contextualize approaches to meet the needs of local men and women and to attract private and public investments for replicating the pre-commercial dairy market hubs approaches towards the ultimate aim of a more developed dairy sector in Tanzania
- iii. Local Government Authorities (LGAs) include hub development and gender issues into their plans and budgets
- iv. The private sector (milk traders, business service providers and milk processors) responds to business opportunities created by the hubs and collaborating with researchers and public sector actors involved in MZ to develop and co-innovate –

- v. The Dairy Development Forum (DDF) mobilizes dairy sector stakeholders effectively
- vi. Local governments include hub development and gender issues in their plans and budgets

Explanation of the ways in which you will be working

Given the problems and entry points for improving the value chain identified above, the interventions proposed comprise piloting multi-stakeholder processes (MSPs) comprising of adapted dairy market hub (DMH) approaches and innovation platforms at local, community and national levels. These approaches are selected because they offer the best opportunity for market actors and dairy industry stakeholders to innovate, manage risk, and reduce vulnerability among pre-commercial livestock keepers. The adapted DMHs revolving around milk traders or chilling plants bring together small-scale producers with common interests in enhancing their access to milk markets, inputs and services such as training and credit with milk as collateral. The farmers also use the DMHs and innovation platforms to network and find shared solutions to dairy and various other social challenges that they face. These MSPs provide the ideal platforms for the research and development partnerships involved in the piloting to implement interventions and measure their outcomes.

Summary of the change areas and specific assumption

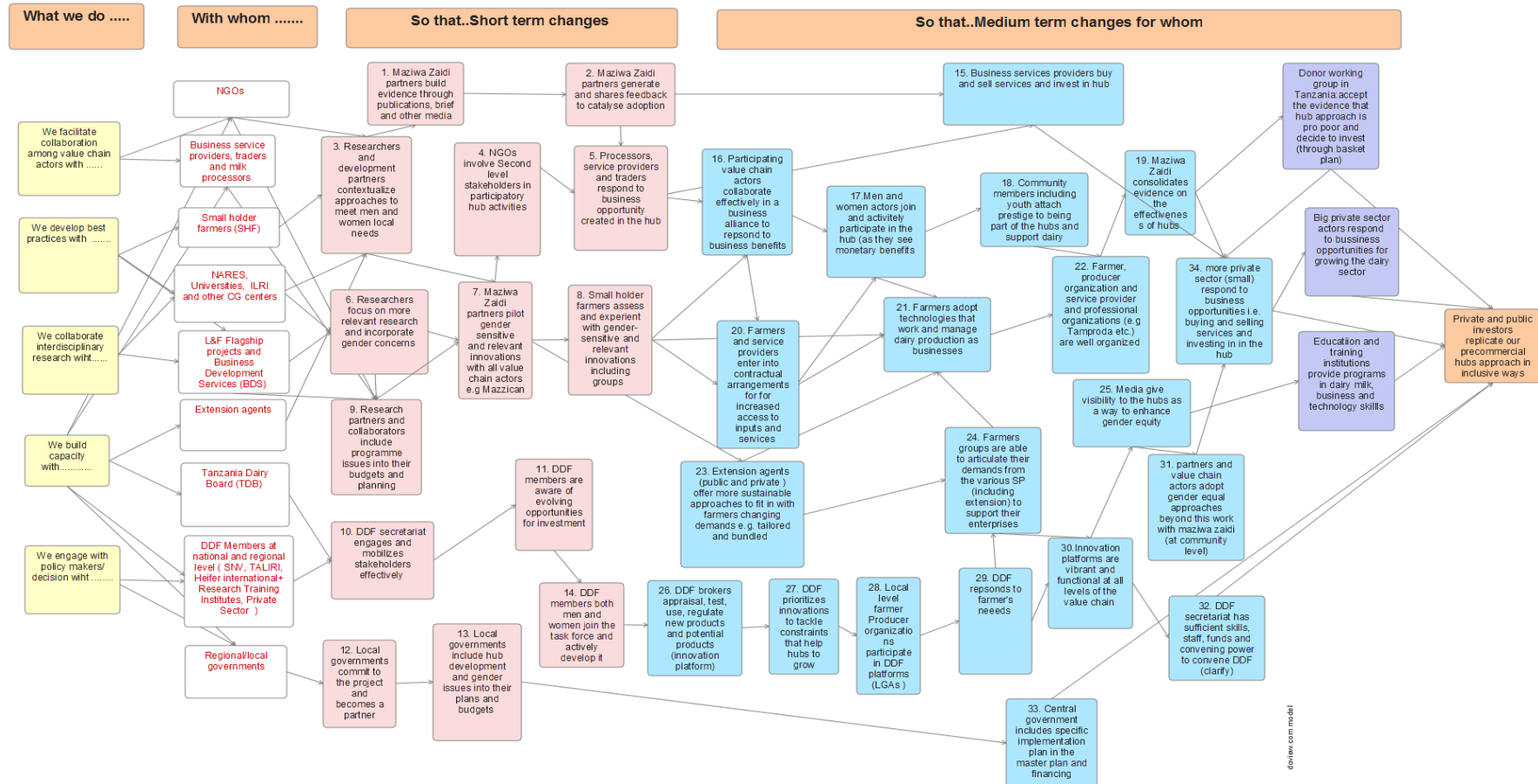
Change area	Related assumptions
<i>Change area No. 3: Research and development partners contextualise approaches to meet needs of local men and women</i>	Promoted approaches are appropriate for smallholder farmers. Partners engage in a concerted manner to achieve their institutional and program objectives and have flexibility to test alternative approaches
<i>Change area No.5: Processors, traders and service providers respond to business opportunities created in the hub</i>	Value chain agents are behaving competitively, are maximizing profit and there are no information asymmetries
<i>Change area No. 8: Smallholder farmers access and experiment with gender-sensitive and relevant innovations including groups</i>	Groups not involved in collective bulking and marketing of milk are able to meet farmer needs
<i>Change area No. 10: Dairy Development Forum (DDF) engages and mobilizes stakeholders effectively</i>	The DDF is the right modality to drive the chain
<i>Change area No. 11: DDF members are aware of evolving opportunities for investment</i>	DDF effectively communicates emerging investment opportunities
<i>Change area NO. 13: Local government includes hub development and gender issues into their plans and budgets</i>	Commercial milk production and gender issues are considered by district authorities a priority in efforts to alleviate food and nutrition insecurity and in improving household incomes

A summary of other context specific assumptions that you will also be testing over the first year of the program

Context level assumptions	Location (change area linked to)
Input and output markets will enable the Tanzania value chain to be competitive	Linked to change area no. 5 and no. 8
Land use conflicts are managed efficiently	Linked to change area no. 1
Partners appreciate the role of gender in achieving the big change	Change area no. 12 and no.13

Country Program Change Pathway

Please ensure that all change areas are numbered and that assumptions are indicated where on the pathway they will need to be tested



Start Points for identified areas of change

Starting points for planned short term changes

Planned Areas of Change 3: Research and development partners contextualise approaches to meet needs of local men and women

1. Situation at the start of the program:

The situation at the start of the program captured below reflects the mandates and objectives of research and development partners in relation to what needs to be achieved towards transforming the smallholder dairy value chain towards greater inclusivity, sustainability, coordination and interactions among value chain actors including researchers and development agents servicing the transformation. The partners comprise those that were considered key to achieving the long-term change of more private and public investments replicating the pre-commercial dairy market hub approaches in inclusive ways. They include research partners, development partners, membership organizations, private sector actors and membership organizations involved in Tanzania’s dairy sector. We present a combined list in Table 1 and their intended relationship to Maziwa Zaidi. We then describe each actor in more detail in relation to how they contextualize approaches to meet the needs of local men and women at the start of the program towards the ultimate aim of a more developed dairy sector in Tanzania.

Table 1: Partners to achieve more investments in pre-commercial dairy market hub approaches in Tanzania⁶

Partner	Relationship to <i>Maziwa Zaidi</i>
Research partners	
Sokoine University of Agriculture (SUA)	MZ implementing organization
Tanzania Livestock Research Institute (TALIRI)	MZ implementing organization
International Livestock Research Institute (ILRI)	MZ implementing organization
CIAT	MZ implementing organization
Emory University	MZ Research partner
Royal Veterinary College (RVC)	MZ Research partner
Wageningen University	MZ Research partner
Government agencies and departments	
Tanzania Dairy Board	MZ implementing organization
Local Government Authorities	MZ implementing organization. Also target for influencing
Ministry of Livestock and Fisheries Development (MLFD)	Sits on MZ Steering Committee and DDF Advisory Committee. Also target for influencing

⁶ Other partners not directly involved in piloting pre-commercial hub approaches but contribute to the Maziwa Zaidi program through collaboration in various targeted projects included Nelson Mandela African Advanced institute of Science and Technology (NMAIST) and Global Alliance for Livestock Vaccines (GALVMED)

Non-governmental organizations Heifer International Tanzania (HIT) Faida Market Linkages (Faida MaLi) Global Alliance for Veterinary Medicines (GaLVMed) Netherlands Development Organization (SNV) Land O'Lakes Inc. (LoL)	MZ implementing organization MZ implementing organization Upscaling Sits on DDF Advisory Committee Sits on DDF Advisory Committee
Membership organizations Tanzania Milk Processors' Association (TAMPA) Tanzania Milk Producers' Association (TAMPRODA) Mtandoa wa Vikundi vya Wakulima Tanzania (MVIWATA).	MZ target for influencing MZ target for influencing MZ target
Private Sector Farmers Milk traders Inputs and service providers Milk processors	MZ target for influencing MZ target for influencing MZ target for influencing MZ target for influencing

a. Research partners: Sokoine University of Agriculture (SUA) and Tanzania Livestock Research Institute (TALIRI), International Livestock Research Institute (ILRI) and International Centre for Tropical Agriculture (CIAT)

- SUA** is the premier agricultural research and capacity development organisation in Tanzania with a significant record of research in livestock systems and university-level training in animal nutrition, breeding, animal health and husbandry. Its research objective is to provide national leadership in basic and applied research in order to generate evidence, knowledge and innovations that respond to emerging societal issues. Given this position and mandate, SUA is a strategic research partner with long-term program-based memorandum of understanding (MoU) under MZ and ad-hoc collaborative research agreements (CRAs). One of SUA's senior professors acted as a project coordinator for policy engagements and facilitating engagements of other researchers for implementing field activities and targeted research under one of MZ core projects, MoreMilkIT. SUA is also represented in the DDF Advisory Committee
- TALIRI** is a parastatal research organisation formed in 2012 with a mission to develop, disseminate and promote use of appropriate livestock technologies to improve livestock productivity sustainably. It's took control of six research stations previously under the MLFD that are spread across different agro-ecological zones in the country to address livestock issues unique to those zones on feeds, breeding, animal health and husbandry. TALIRI is also strategic research partnership with long-term program-based MoU. TALIRI-Tanga is responsible for feeds research and was the main implementing partner for MZ at the start of the program under a CRA through the MilkIT project that experimented with feeds innovations. TALIRI is also represented in the DDF Advisory Committee
- ILRI** is one of 15 CGIAR research centres dedicated to advancing science and technology to address the central development challenges of reducing rural poverty, improving food security, nutrition and health, and sustainable managing and utilizing natural resources. ILRI's work helps poor people keep their livestock

productive, increases and sustains their livestock and farm productivity and finds profitable and sustainable markets for their animal products. Building on past dairy systems research for development in East Africa and elsewhere since the 1990's, ILRI is currently involved working with other CGIAR centres in Tanzania in a range of public and private partnerships for dairy research and development under the L&F Program, locally referred to as Maziwa Zaidi, which it leads. Maziwa Zaidi has integrated within it food safety and nutrition elements linked to the CRP on A4HN. ILRI is also represented in the DDF Advisory Committee

- **CIAT** is another CGIAR research centre that is involved in the implementation of MZ, working within its mandate to conduct research to improve tropical forages for livestock. CAT was responsible for the implementation of the feeds innovations project (MilkIT) in Tanzania. CIAT is also represented in the DDF Advisory Committee
- **Emory University** is a top-ranked private institution based in the United States of America is a collaborator in conducting nutrition studies.
- **Wageningen University**, Department of Social Sciences (in particular the Management Studies group) collaborates in doing research, developing capacity and sharing knowledge on how different business models lead to inclusiveness, both in term of income opportunities for farmers and value chain workers, and in terms of availability of quality dairy products for consumers.

b. Government agencies and departments: Tanzania Dairy Board (TDB), Local Government Authorities (LGAs) and Ministry of Livestock and Fisheries Development (MLFD),

- **TDB** is a statutory body established by the Tanzania Dairy Industry Act, 2004 with a mandate is to regulate, develop and promote the Tanzania Dairy Industry. It's promotion activities is carried out with and through stakeholders active in the dairy sector. TDB role in MZ is to promote milk quality assurance and communication among stakeholders through its involvement in the MoreMilkIT project. TDB is also the secretariat of the DDF.
- **LGAs**, commonly known as 'Tawala za Mikoa na Serikali za Mitaa' (TAMISEMI), fall under Prime Minister's office that is responsible for good governance, investment promotion and extension services provided through district councils. MZ implementing organizations worked through subject matter specialists (SMS) employed by the LGAs to conduct field activities.
- **MLFD** was a Tanzanian government ministry responsible for developing the dairy industry. Beside dairy, the ministry is also responsible for the development of the livestock and fisheries sectors as a whole. MZ engages the ministry both in its Steering Committee (through the directorates of a) animal production and marketing, b) policy and planning and c) research, training and extension services). MLFD is also represented in the DDF Advisory Committee. These channels are intended to feed MZ outputs and outcomes into policy processes through the lifetime of the program. The ministry became one of three departments under the Ministry of Agriculture, Livestock and Fisheries (MALF) when government was reorganised following the national election in 2015. MLDF is also represented in the DDF Advisory Committee

c. Non-Government Organizations: Heifer International Tanzania (HIT), Faida Market Linkages (Faida MaLi), Netherlands Development Organization (SNV) and Land O'Lakes Inc. (LoL)

- **HIT** has a mission of working with communities to end hunger and poverty and to care for the Earth. HIT has been in Tanzania since 1974, mainly focusing on the heifer in-trust scheme that it pioneered in Tanzania. The scheme, also referred to as 'passing on the gift' is credited with having facilitated acquisition of improved dairy animals by many poor families in Tanzania. Through this scheme, families that obtain a heifer as a gift share the training they receive and pass on the first female offspring of their livestock to another family. HIT also leads the implementation of EADD2 in Tanzania in a consortium involving TechnoServe, ICRAF and ILRI. HIT's role in MZ through the MoreMilkIT project is to develop scalable value chains approaches with improved organizations and institutions serving smallholder male and female households. Specifically, it aims to play a leading role in the project towards achieving vibrant, well organized, and sustainable DMHs

delivering demand-led inputs. Accomplishing these objectives entail working with communities to ensure group formation, social capital empowerment and group dynamics skills. HIT is also a member of the DDF Advisory Committee

- **Faida MaLi** is a Tanzanian non-profit company limited by guarantee. It was established in 2003 to assist small scale farmers take advantage of the increasing opportunities for entrepreneurial development offered by market liberalization and private agro-industrial investment. They facilitate contracts between smallholder producers and agricultural companies, bringing together actors from both supply and demand sides to catalyse a specific enterprise development. Faida Mali's role in MZ is through the the MoreMilkiT project is promote market linkages between producers, milk traders, processors and inputs and service providers.
- **SNV** works in the agriculture, water sanitation and hygiene, and renewable energy sectors to provide advisory services, broker knowledge and support advocacy in partnership with a wide range of public and private partners at the local, national and international level, and in association with local organisations that provide capacity development services. SNV nurtured the growth of Faida Mali in this role. SNV is a member of the DDF Advisory Committee.
- **LoL** through its international development division offers business services to local cooperatives and agricultural producers to generate economic growth, improve health and nutrition, and alleviate poverty. In Tanzania LoL implemented the Tanzania Dairy Development Program (TDDP) from 2010 – 2013 in Mara, Manyara, Arusha, Kilimanjaro and Tanga. LoL is a member of the DDF Advisory Committee.
- **Membership organizations: Tanzania Milk Processors' Association (TAMPA), Tanzania Milk Producers' Association (TAMPRODA) and Mtandoa wa Vikundi vya Wakulima Tanzania (MVIWATA).**
- **TAMPA** is an association of Tanzania milk processors with the objective of improving the business environment for growth of milk processing in the country. The association was established in 2001. The association is active and has been holding its meetings regularly. TAMPA Secretariat is represented in the DDF Advisory Committee and is a member of TDB.
- **TAMPRODA** is a newly formed association of milk producers. It is represented in TDB.
- **MVIWATA** is a mall-scale farmers' network that was contacted to explore potential opportunities for engagement in MZ through its networks
- **Private actors: Inputs and service providers, farmers, farmers' associations (TAMPRODA and MVIWATA), milk traders and milk processors.** **Inputs and service providers** comprise commercial providers of inputs (feeds, breeding, drugs) and services (credit, training, insurance). In a few cases they provide inputs for the dairy enterprise (and other household items) with milk delivery to traders as collateral.
- **Farmers** are classified as either relatively more commercial dairy farmers with improved breeds or pre-commercial cattle keepers. Out of about 1.7 million cattle keeping households in Tanzania (about a third of total livestock keepers), it is estimated that about 220,000 households keeping about 700,000 improved dairy cattle. An equivalent number of less commercial cattle keepers with low producing indigenous zebu breeds also sell milk. Therefore, whether keeping improved cattle or not, about 26% of cattle producers (440,000 households) currently sell milk mostly to small-scale traders or neighbors. The remaining 74% of livestock keepers rarely engage in milk markets currently. Whilst some of the more commercial producers who keep improved breeds are members of Dairy Cooperatives, most of them (and the pre-commercial producers) are in general not involved in dairy related farmer groups. A few farmers access inputs and services on 'check-off' arrangements with milk delivery to traders as collateral.
- **Farmers' groups** comprise various forms of collective action ranging from informal self-help farmer groups to more formal dairy cooperatives for accessing milk markets and inputs and services. More flexible local arrangements like hubs do not exist. The Tanzania Milk Producers' Association (TAMPRODA) does not have linkages at the grass-roots and the Mtandoa wa Vikundi vya Wakulima Tanzania (MVIWATA) does not appear to pay much attention to addressing the needs of cattle keepers

- **Milk traders** and a variety of local markets are the most common market outlets for milk sales (12%) after sales to neighbors (86%). In most areas including the project pilot sites, they are neither certified by TDB nor trained in basic milk hygiene and business planning. Some milk traders also offer inputs and services with or without credit.
- **Milk processors** only contribute only 3% of the milk sold in Tanzania equivalent to about 120,000 liters per day. However, they have a larger installed capacity of about 420,000 liters per day. Some processors collect milk from as far as 400km from where they are based. TAMPA represents interests of the private processors.

Extent of alignment of activities between program research and development partners

- The mandates and objectives of the research and development partners capture what needs to be achieved towards transforming the smallholder dairy value chain, however, the extent to which **inclusivity** and **sustainability** are captured in the objectives of the partner organizations is not clear and there is limited **interaction** between research and development actors that service the transformation agenda
- There is no mechanism for coordination of the dairy sector. This gap was identified at the onset of the program, hence the step taken to set up the Dairy Development Forum at the onset to fill this gap
- Additionally, in 2014, the program facilitated the development of site specific plans for more than 30 villages in Morogoro and Tanga regions to align program's activities with those of target beneficiaries.
- Another mechanism for joint planning and coordination of research and development activities has been the six monthly review meetings with quarterly or monthly planning workshops via skype in between
- Following their commitment to the program, the local government has contributed to planning and facilitating meetings among key partners/stakeholders both at the district and village levels. **However, their level of contribution is constrained by logistical inadequacies.**
- The level of involvement by the local government/public extension in implementing program activities varies by activity and program site. **Local government planning remains exclusively at the district level with little of it happening at the village level. Group site plans are not yet reflected in local government plans.**
- **Government departments allocate few resources for dairy value chain research and development at the village level. Available resources are mostly applied to development of infrastructure like roads.**
- **Gender integration in local government activities at the village level is low.**

2. Barriers and challenges that may affect progress in this area of change

Research partners

- Though their mandates are aligned to the program, there is risk that limited funding may compromise continued support to sustain engagements at community and national levels to ensure continued flow of benefits from the changes

Partnerships with the public sector

- The contribution of livestock to agricultural development is not fully appreciated by the public sector in Tanzania beyond the responsible ministry of livestock and its agencies. This ministry is also yet to articulate research priorities. Research is currently seen as not directly useful to immediate development needs. As such, there is limited interplay between research and development actors.
- Disconnect between extension staff and technical line ministry of livestock. This makes data and information to be scattered in districts and not available at a central location at the ministry headquarters
- Tanzania Dairy Board is under resourced given its huge mandate to regulate, promote and coordinate the sector

Development partners

- Local NGOs are few and small in size as compared to international NGOs. However, though larger international NGOs often have greater capacities to draw from, they are often spread thin across several agribusiness activities, some of which may not be aligned to the program’s activities. There are no local and international NGOs with capacities and experience in value chain development (e.g., covering both production and marketing) and this may compromise their ability to contextualize appropriate value chain approaches to meet local needs. Larger organizations also tend to be more bureaucratic and take time to reach sustainable agreements with.
- Membership organizations** While TAMPA is relatively strong with active member participation among processors, TAMPRODA is weak and is yet to develop a clear strategy for serving its members. Generally, these membership institutions have weak grass-roots linkages

Private sector partners

The private sector actors in the dairy sector in Tanzania are few, have weak linkages among themselves and are not integrated in dairy value chain research and development activities.

3. Potential drivers or opportunities relating to this area of change

Research partners

TALIRI has a national network of research stations while SUA is widely respected as the premier agricultural research and training organization. Both organizations have a history of project-based collaboration with international research partners

Partnerships with the public sector

- Willingness to collaborate and interact with other sector players as demonstrated at the start of the program though existing (e.g., in Tanga) and emerging national and local area platforms as envisaged under the DDF.⁷

Development partners

- Local NGOs are nimble while international NGOs often have greater capacities and experience to draw from. Both categories have long experience working with government institutions and have visible presence at the grassroots. It is easier to reach agreements with smaller local NGOs because they are less bureaucratic.

In general: Site specific plans with potential solutions to local dairy development constraints that were developed with participation of all the above partners and in consultation with farmer groups provide a foundation for strengthening collaboration for dairy development⁸⁹.

4. Specific assumptions that relate to this area of change which should be tested

Promoted technologies and approaches are appropriate for smallholder farmers

5. How does this area of change link to other ILRI plans, levels and reporting requirements? Please be as specific as possible, citing project names and/or reference numbers and specific indicators at all levels

Global/ international strategy indicators	Sustainable Development Goals (SDG) No. 4. Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all.
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⁷ <http://ddftz.wikispaces.com>

⁸ L&F Tanzania value chain annual report (2014)

⁹ <https://moremilkit.wikispaces.com>

	<p>No.9. Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation.</p> <p>No.16. Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels.</p> <p>Livestock and Fish Intermediate Development Outcomes (IDO)</p> <p>No.6. Policies (including investments) and development actors recognize and support the development of the small-scale production and marketing systems, and seek to increase the participation of women within these value chains, to contribute to all outcomes at the system level</p>
Flagship	<p>Animal Health: ITM delivery and herd health</p> <p>Animal genetics: multiplication and delivery of appropriate genetics</p> <p>Feeds and forages: innovation platforms</p> <p>Value chain transformation and scaling (VCTS)</p> <p>System Analysis for Sustainable Innovation (SASI)</p>
Cluster	<p>Genetics</p> <p>Cluster 1: System, Strategy and Genome Assessment: Develop strategies based on system and genome assessment techniques to ensure the best use of livestock and fish genetic resources in targeted value chain production systems</p> <p>VCTS</p> <p>Cluster 1 – Piloting and validating best bet interventions</p> <p>Cluster 2 – Implementation of innovation at scale</p> <p>SASI</p> <p>Conduct system component research and identify promising innovations</p> <p>Conduct system analysis guiding the design and development of integrated intervention packages of the VC</p>
Projects	As below

Planned Areas of Change 5: Processors, traders and service providers respond to business opportunities created in the hub

1. Situation at the start of the program:

At the start of the program, there were no innovation platforms and not more than five cooperatives. There were no dairy market hubs and value chain agents and actors had limited interactions. Service providers transacted business with individual milk producers. There was no holistic dairy value chain development program. The program has facilitated the creation, registration and capacity building of more than 25 milk producer groups as a means to realizing the benefits that collective action offers in accessing input and output markets and services. As a result, one private milk processor, ASAS Dairies Ltd. has initiated efforts to procure milk from five of the newly created producer groups. In addition, some service providers and input sellers have been willing to offer services and inputs on credit through a check-off arrangement or by the use of membership fees as collateral. This willingness is evidenced by the formal contracts that the agents signed with the groups.

2. Barriers and challenges that may affect progress in this area of change

Low level of capacity utilization by milk collection centers (MCCs). MCCs collect between 500 to 1,500 liters per day and it takes about 3 days to fill up the storage tanks.

Highly seasonal nature of milk production hinders further investments in milk production, processing and marketing.

Absence of appropriate infrastructure that is largely in the form of public goods. This includes electricity to enable milk cooling and all-weather roads to enable faster transportation of milk. Milk processors travel as far as 400 km to source for milk. This has hindered strengthening of linkages such as that between ASAS Dairies Ltd. and the five producer groups.

Milk processors (formal value chain) and milk traders supplying the informal value chain are competitors and are yet to find a way of working together for mutual benefit.

Fierce competition among milk processors is hindering their ability to work together to create a favourable business environment for milk processing¹⁰ and is detrimental to the growth of the Tanzania Milk Processors Association (TAMPA).

3. Potential drivers or opportunities relating to this area of change

Ever increasing demand for milk and other dairy products in Tanzania due to growth in population and household income.

The Government of Tanzania and its development partners are convinced about the potential of the private sector to lead the growth of the dairy industry. Therefore they are willing to support private sector-led initiatives to strengthen dairy market hubs.

The elasticity of demand for milk by milk traders with respect to farm price is large¹¹. This means that a small reduction in the farm price of milk would lead to a large increase in the amount of milk demanded by milk traders. Therefore business opportunities such as those that lower milk production costs are likely to increase trader demand for milk.

4. Specific assumptions that relate to this area of change that should be tested

¹⁰ This was expressed by a Director of one of the major milk processing companies in a meeting with MoreMilkiT staff.

¹¹ <https://cgspace.cgiar.org/handle/10568/75686>

There are no significant information asymmetries between and among value chain agents. That is, for processors, traders and service providers to respond to business opportunities created in the dairy market hubs, they should easily (and cheaply) access information on new opportunities.

5. How does this area of change link to other ILRI plans, levels and reporting requirements? Please be as specific as possible, citing project names and/or reference numbers and specific indicators at all levels

Global/ international strategy indicators	<p>Sustainable Development Goals (SDG)</p> <p>No. 9. Industry, Innovation and Infrastructure - Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation.</p> <p>No. 9.2. Promote inclusive and sustainable industrialization and, by 2030, significantly raise industry’s share of employment and gross domestic product, in line with national circumstances, and double its share in least developed countries.</p> <p>Livestock and Fish Intermediate Development Outcomes (IDO)</p> <p>No 2. Increased quantity and improved quality of the target commodity supplied from the target small-scale production and marketing systems.</p>
Flagship	<p>Value chain transformation and scaling (VCTS)</p> <p>System Analysis for Sustainable Innovation (SASI)</p>
Cluster	<p>VCTS</p> <p>Cluster 1 – Piloting and validating best bet interventions</p> <p>Cluster 2 – Implementation of innovation at scale</p> <p>SASI</p> <p>Conduct system component research and identify promising innovations</p>
Projects	As below

Planned Areas of Change 8: Smallholder farmers access and experiment with gender-sensitive and relevant innovations including groups

1. Situation at the start of the program:

At the start of the program, there were not more than five producer groups and there were no innovation platforms. There were no visible efforts targeting women involvement in milk production.

Some of the innovations promoted by the program include use of better fodder species and concentrates, artificial insemination, and collective action. Gender considerations have been crucial in program implementation. In facilitating formation and development of producer groups, emphasis has been put on women participation and representation as evidenced by, say, the proportion of female members of producer groups. Over all, household membership in producer groups in the program sites is at 47% of the total number of households, of which 47% of the membership is held by women and 53% by men. No aspects of the design and delivery of the various trainings on animal husbandry and business management were non-inclusive. Some of the positive impacts of the program interventions have accrued to female milk producers-cum-traders¹².

Site specific plans that were developed in a participatory manner with male and female members of producer groups have provided a basis for experimenting with gender-sensitive innovations. Also, they are a blueprint for future activities and groups' engagement with LGAs.

2. Barriers and challenges that may affect progress in this area of change

Cultural norms tend to dictate the extent to which women can effectively experiment with innovations even if the innovations are supposedly gender-sensitive. In areas where women do not own or have access to productive resources especially land or do not control income from commercial enterprises, the program might not be successful in promoting innovations.

The ability of the program to effectively guide and monitor farmers as they experiment with innovations partly depends on the capacity of implementing partners to ensure smooth continuity of activities in case of staff departures. This has been a challenge in some cases.

3. Potential drivers or opportunities relating to this area of change

An important driver of this change area is the availability of innovations that have already been tested in other contexts and the lessons learnt are being used to inform experimentation in Tanzania.

Existence of a few female entrepreneurs in dairy production that could act as change agents.

4. Specific assumptions that relate to this area of change which should be tested

Farmers are willing to experiment with innovations whether or not they participated in developing them.

The infrastructure needed to support practical application of innovations to be tested exists.

Criteria for assessing innovations exist and are acceptable to experimenting farmers.

¹² White gold: Milk business improving lives of Tanzania traders

5. How does **this area of change** links to other ILRI plans, levels and reporting requirements? Please be as specific as possible, citing project names and/or reference numbers and specific indicators at all levels

Global/ international strategy indicators	<p>Sustainable Development Goals (SDG)</p> <p>No. 5. Achieve gender equality and empower all women and girls.</p> <p>No. 10. Reduce inequality within and among countries.</p> <p>Livestock and Fish Intermediate Development Outcomes (IDO)</p> <p>No. 3. Increased employment and income for low-income actors in the target value chains, with an increased share of employment opportunities for and income controlled by low-income women.</p> <p>No. 4. Consumption of the target commodity responsible for filling a larger share of the nutrient gap for the poor, particularly for nutritionally vulnerable populations (women of reproductive age and young children).</p>
Flagship	<p>Value chain transformation and scaling (VCTS)</p> <p>System Analysis for Sustainable Innovation (SASI)</p>
Cluster	<p>VCTS</p> <p>Cluster 1 – Piloting and validating best bet interventions</p> <p>Cluster 2 – Implementation of innovation at scale</p> <p>SASI</p> <p>Conduct system component research and identify promising innovations</p>
Projects	<p>See below</p>

Planned Areas of Change 10: Dairy Development Forum (DDF) engages and mobilizes stakeholders effectively

1. Situation at the start of the program:

There was no DDF at the commencement of the program. Following its formation through facilitation of the program in 2012, the DDF has been accepted by dairy industry stakeholders as an important mechanism for driving dairy development in Tanzania with its secretariat at the Tanzania Dairy Board. Its membership has been growing steadily. For example, its 4th meeting held in October 2014 in Dar es salaam was attended by about 50 participants (including 9 women) compared to the 5th meeting held in Babati that was attended by 120 participants (including 22 women). The 4th meeting attracted much fewer producers (?%) and other value chain actors (?%) compared the 5th meeting that comprised producers (35%), processors (5%) and services providers (4%) joining other participants from NGOs, Universities, LGAs, policy makers and regulators to address given industry bottlenecks. While the DDF operates at national level, its membership includes stakeholders who also participate in district- and regional-level innovation platforms.

2. Barriers and challenges that may affect progress in this area of change

Active participation of all members of the DDF remains sub-optimal. This is probably because of the informal nature of the Forum, which members are yet to fully comprehend.

The Forum's secretariat at TDB is highly constrained in terms of resources for mobilization, communication and convening of meetings.

3. Potential drivers or opportunities relating to this area of change

The Government of Tanzania, through the relevant ministry, is a key member of the DDF. This should help the DDF to effectively influence policy formulation.

The private sector has keen interest in the DDF. This means that the agenda of the DDF is driven not only by the long-standing constraints that the dairy industry faces but also by the dynamics in the market for dairy inputs and products. This should help the Forum to effectively target its mobilization efforts and engagement with stakeholders.

4. Specific assumptions that relate to this area of change which should be tested

The informal nature of the DDF is appropriate for advancing policy advocacy for the dairy industry. (Note that government bureaucrats are usually not keen at working with informal organizations).

5. How does this area of change link to other ILRI plans, levels and reporting requirements? Please be as specific as possible, citing project names and/or reference numbers and specific indicators at all levels

Global/ international strategy indicators	Sustainable Development Goals (SDG) No.16. Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels. No. 16.6 Develop effective, accountable and transparent institutions at all levels. No.16.7 Ensure responsive, inclusive, participatory and representative decision-making at all levels.
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	<p>No.16.b Promote and enforce non-discriminatory laws and policies for sustainable development.</p> <p>Livestock and Fish Intermediate Development Outcomes (IDO)</p> <p>No. 6 Policies (including investments) and development actors recognize and support the development of the small-scale production and marketing systems, and seek to increase the participation of women within these value chains, to contribute to all outcomes at the system level.</p>
Flagship	<p>Value chain transformation and scaling (VCTS)</p> <p>System Analysis for Sustainable Innovation (SASI)</p>
Cluster	<p>VCTS</p> <p>Cluster 1 – Piloting and validating best bet interventions</p> <p>Cluster 2 – Implementation of innovation at scale</p> <p>SASI</p> <p>Conduct system component research and identify promising innovations</p> <p>Conduct system analysis guiding the design and development of integrated intervention packages of the VC</p>
Projects	<p>See below</p>

Planned Areas of Change 11: DDF members are aware of evolving opportunities for investment

1. Situation at the start of the program:

The DDF is essentially a space for sharing information. By identifying critical bottlenecks to the industry and generating consensus on the appropriate solutions, the DDF has pointed the government to priorities for public investment in the dairy industry. In addition, it is through the DDF that a major milk processor has been linked to milk producers to explore the possibility of engaging in a commercially viable vertical linkage, and some milk producers have been made aware of available private sector credit facilities. DDF members are now aware of the importance of dairy market hubs and this should help in scaling them up.

2. Barriers and challenges that may affect progress in this area of change

TDB's budget constraint is a major challenge to enhancing communication among DDF members.

3. Potential drivers or opportunities relating to this area of change

Industry stakeholders have, through increased participation in the annual DDF meetings, demonstrated their willingness to share information.

Innovations in communication and information technology have dramatically reduced the cost of searching for and sharing information.

Stakeholders are willing to support the DDF secretariat to develop an appropriate communication strategy.

4. Specific assumptions that relate to this area of change which should be tested

The DDF communication strategy is able to fully engage the recipients and is adaptable to changes in their contexts.

5. How does this area of change link to other ILRI plans, levels and reporting requirements? Please be as specific as possible, citing project names and/or reference numbers and specific indicators at all levels

Global/ international strategy indicators	<p>Sustainable Development Goals (SDG)</p> <p>No. 9. Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation.</p> <p>No.16.7 Ensure responsive, inclusive, participatory and representative decision-making at all levels.</p> <p>Livestock and Fish Intermediate Development Outcomes (IDO)</p> <p>No.6. Policies (including investments) and development actors recognize and support the development of the small-scale production and marketing systems, and seek to increase the participation of women within these value chains, to contribute to all outcomes at the system level.</p>
Flagship	<p>Value chain transformation and scaling (VCTS)</p> <p>System Analysis for Sustainable Innovation (SASI)</p>

Cluster	<p>VCTS</p> <p>Cluster 1 – Piloting and validating best bet interventions</p> <p>Cluster 2 – Implementation of innovation at scale</p> <p>SASI</p> <p>Conduct system component research and identify promising innovations</p> <p>Conduct system analysis guiding the design and development of integrated intervention packages of the VC</p>
Projects	See below

Planned Areas of Change 13: Local government includes hub development and gender issues into their plans and budgets

1. Situation at the start of the program:

At the start of the program, local governments lacked platforms for inclusive smallholder dairy value chain research for development. They committed themselves to the Maziwa Zaidi program and to implementing the concept of dairy market hubs as a means to commercially improving milk production. A suggestion by program implementers to drop those hubs that are not developing fast enough was rejected by the District Executive Directors and instead they committed themselves to support the hubs to grow. This indicates a commitment by LGAs for the inclusive approach to continue. Farmer group site-specific plans have been provided to the districts to follow-up issues of concern to the farmers and to be incorporated into the district plans.

2. Barriers and challenges that may affect progress in this area of change

Sustaining commitment depends on whether or not livestock production will remain a priority in the districts' development plans. In some extensive cattle feeding areas, there is little or no representation of cattle keepers on district councils and this is likely to result into livestock production not being a priority. And even if it does remain a priority, the tendency by districts to prioritize physical investments such as construction of cattle dips and dams rather than service delivery – a major component of the program – might be a disincentive for sustained commitment to the program.

A new government policy requires each district to focus on only one commodity for development. In the event that milk is not that commodity, there might be reduced support for hub development.

But even where milk is the number one commodity, the government's budget constraint does not allow for adequate support for hub development in general, let alone incorporating gender considerations in the process.

Existing land conflicts in some of the program areas have pitted milk producers in the extensive feeding areas against local government authorities. This is especially the case where the latter have attempted to tag cattle and restrict their movement through land demarcation. This has created a lot of mistrust for local government authorities and will potentially make it hard for them to secure the cooperation they need to implement hub development activities.

3. Potential drivers or opportunities relating to this area of change

The program is well-aligned with the objectives of the country's agricultural sector development program and the district agricultural development plans.

Program beneficiaries have clearly articulated their needs in their site-specific plans. Formulation of the plans was done in a participatory manner akin to the way districts generate their plans. Site-specific plans have been availed to and well-received by the districts and could to a certain degree inform the district plans.

A stage-gating exercise to assess the level of development of dairy hubs will be undertaken in collaboration with the districts to identify issues pertinent to the growth and sustainability of individual hubs.

Following the new government policy that each district identifies one commodity to target for development, milk has been identified as a priority in one out of four program districts.

Service provision by local governments is normally targeted at producer groups rather than individual producers. The newly created producer groups and innovation platforms provide an avenue through which local governments can increase service delivery.

4. Specific assumptions that relate to this area of change which should be tested

Commercial milk production and gender issues are considered by district authorities a priority in efforts to alleviate food and nutrition insecurity and in improving household incomes.

5. How does this area of change link to other ILRI plans, levels and reporting requirements? Please be as specific as possible, citing project names and/or reference numbers and specific indicators at all levels

Global/ international strategy indicators	<p>Sustainable Development Goals (SDG)</p> <p>No.5. Achieve gender equality and empower all women and girls.</p> <p>No.8. Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all.</p> <p>No.9. Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation.</p> <p>No.10. Reduce inequality within and among countries</p> <p>Livestock and Fish Intermediate Development Outcomes (IDO)</p> <p>No. 6. Policies (including investments) and development actors recognize and support the development of the small-scale production and marketing systems, and seek to increase the participation of women within these value chains, to contribute to all outcomes at the system level.</p>
Flagship	<p>Value Chain Transformation and Scaling (VCTS)</p> <p>System Analysis for Sustainable Innovation (SASI)</p>
Cluster	<p>VCTS</p> <p>Cluster 1 – Piloting and validating best bet interventions</p> <p>Cluster 2 – implementation of innovation at scale</p> <p>SASI</p> <p>Conduct system component research and identify promising innovations</p> <p>Conduct system analysis guiding the design and development of integrated intervention packages of the VC</p>
Projects	See below

Summary of projects that are planned for this year with an indication of which area of change they will support. Add more columns as necessary

Project code	Project Title	Start Date	End Date	Implementing partners	Areas of change that project contributes to (description and number)
	Enhancing dairy-based livelihoods in Tanzania and India through feed innovation and value chain development approaches (MilkIT; IFAD)	2012	2014	CIAT, SUA, TALIRI, ILRI	#3, 5, 8,
	Dairy Genetics East Africa Phase II (DGEA2, BMGF)	2012	2013	ILRI, NMAIST	#3
	Scaling up the delivery of ITM in Tanzania through facilitation of ITM delivery value chain	2015	2016	ILRI, GalvMed, MALF	#3
	Leveraging Dairy Value Chain Development in Tanzania for Improved Nutrition and Health of Women and Children (USAID Linkage)	2014	2015	ILRI	#3
	Study on “Looking beyond income: impact of hubs on human nutrition in Tanzania ” (SPIA)	2014	2015	ILRI	#3
	More milk by and for the poor: Adapting dairy market hubs for pro-poor smallholder value chains in Tanzania (MoreMilkIT; Irish Aid)	2012	2017	ILRI, SUA, HIT, Faida MaLi, TDB,	#3, 5, 8, 10, 11, 12, 13
	Local and International business collaboration for productivity and Quality Improvement in Dairy chains in South East Asia and East Africa (LIQUID)	2016	2018	ILRI, SUA?	#3
	East Africa Dairy Development Project (EADD) Phase II (BMGF)	2013	2019	HIT, ILRI, TNS, ICRAF	#3, 5, 8, 10, 11, 12, 13
	BMZ-small grant: Potential farm to landscape impact and adoption of forage technologies in smallholder dairy production systems in Tanzania	2013	2014	ILRI	#3
	FtF Innovation Lab on Small Scale Irrigation (USAID)	2015	2018	Texas A&M, ILRI, IWMI	#3
	Women’s empowerment in livestock-focused agriculture: Identifying and understanding pathways to impact for maternal and child nutrition (IMMANA)	2015	2018	Emory University, ILRI	#3
	Safe Food Faor Food (BMZ)	2012	2015	ILRI	#3

Analysis of risks to VCTS program staff and partner organizations and their staff in relation to working to achieve these changes

You will be asked to complete a more detailed risk management analysis elsewhere. For the purpose of this document please include brief summary points. **Add rows as necessary**

Risk	How it might affect staff or the organisation	Mitigation measures that you have put in place
Lack of efficient institutions to manage land access and ownership	Land use conflicts in some sites, especially in Mabwegere, Kambala, Mbwade and Twatwatwa villages have resulted in violent clashes between the Maasai pastoralists and crop growers, thus posing a threat to growing dairy market hubs in these areas.	The program is supporting the development of innovation platforms to help in resolving land conflicts
Milk importation may affect local milk prices	The proportion of imported milk has been rising steadily - currently at about 60%. Initial assessments have indicated that its more profitable to sell imported milk than to rely on local production	One of the program's partners is leading a study to generate evidence
Farmers' reluctance to embrace collective action due to historical experiences with the approach	In the past, official interferences in the management of farmer cooperatives and their poor performance as a result discouraged farmers from joining such cooperatives.	The program is testing a new form of more flexible collective action known as 'hubs', where smallholders with common interest in accessing inputs and services group themselves before they are linked to suppliers of the required goods and services.
The negative impact of seasonality on access to feeds and water resources	This threatens the viability of commercial dairying in certain locations	Constraint is captured in site specific plans but not directly addressed by the program Generating evidence on the extent to which fodder markets can mitigate this