

Preliminary Capacity Assessment and Initial Capacity Development Road Map 2014 - 2016

Tanzania Dairy Value Chain - Maziwa Zaidi

Second draft

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Abbreviations

AI	Artificial Insemination
ARI	Agricultural Research Institute
ASARECA	Association for Strengthening Agricultural Research in Eastern and Central Africa
ASDP	Agricultural Sector Development Programme
ASDS	Agricultural Sector Development Strategy
AU-IBAR	African Union Inter-African Bureau for Animal Resources
BMGF	Bill & Melinda Gates Foundation
BRAC	A development organization from Bangladesh dedicated to alleviate poverty (formerly known as Bangladesh Rehabilitation Assistance Committee or Bangladesh Rural Advancement Committee)
CB	Commercial Bank
CRDB BANK PLC	A leading, wholly-owned private commercial bank in Tanzania (formerly the Cooperative Rural Development Bank was wholly government owned and then privatized, recapitalized and restructured)
CRP	CGIAR Research Program
DB	Development Bank
DDF	Dairy Development Forum
DGEA2	Dairy Genetics East Africa Phase II
DMH	Dairy Marketing Hubs
EADD	East Africa Dairy Development
FI-NGO	Financial Intermediary NGO
FSP	Financial Service Provider
GFAR	Global Forum on Agricultural Research
GIZ/BMZ	Deutsche Gesellschaft für Internationale Zusammenarbeit/German Federal Ministry for Economic Cooperation and Development
HPI	Heifer Project International
IBLI	Index-Based Livestock Insurance
IDO	Intermediate Development Outcome
IFAD	International Fund for Agricultural Development
ILRI	International Livestock Research Institute
INGO	International Non-Governmental Organization
IP	Impact Pathway
LAF	Livestock and Fish
M&E	Monitoring and Evaluation
MDB	Microfinance Development Bank
MilkIT	Milk in India and Tanzania
MLFD	Ministry of Livestock and Fisheries Development
MPC	Multi-purpose Cooperative
NBC	National Business Council
NARES	National Agricultural Research and Extension Institutes
NGO	Non-Governmental Organization
NIE	New Institutional Economics
NIRS	Near Infrared Spectroscopy
ODI	Overseas Development Institute
PMORALG	Prime Minister's Office Regional Administration and Local Government
PPP	Public Private Partnership
R4D	Research for Development
R&D	Research and Development
SACCO	Savings and Credit Cooperative Organization
SCG	Savings and Credit Group
SFC	Small Farmers Cooperative

SFF	SME Frontier Facility
SFFF2	Safe food, fair food (2)
SIP	Strategic Implementation Plan
SME	Small and Medium Enterprise
SNV	Netherlands Development Organization
SUA	Sokoine University of Agriculture
TAMPA	Tanzania Milk Processors Association
TAMPRODA	Tanzania Milk Producers Association
TCCIA	Tanzania Chamber of Commerce, Industry and Agriculture
TDB	Tanzania Dairy Board
TOC	Theory of Change
TOR	Terms of Reference
TPSF	Tanzania Private Sector Foundation
TZS	Tanzanian shilling
UK	United Kingdom
UNDP	United Nations Development Programme
UNFAO	United Nations Food and Agriculture Organization
UNV	United Nations Volunteer
USAID	United States Agency for International Development
VC	Value Chain

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Disclaimer

Providing capacity development (services) is only relevant if it assists Livestock and Fish (LAF) value chain actors to be (more) relevant and effective in their work, to be better performers, more stable, and to become more adaptable and resilient in addressing (sustainable) development challenges, and help them address their priorities.

Within value chain systems there are many thousands of actors and according to their position in the chain system they may possess different levels of capacities. Understanding the institutional environment, (existing) national and local organizations, (potential) partners and the context of change within the four main Tanzania dairy Impact Pathway narratives is hence of utmost importance before the full range of (possible) capacity development interventions can be outlined.

During the period that the two "Capacity Development" missions were conducted (in November and December 2013) the Tanzania Dairy Value Chain Partner Scoping Study was still to be developed by a national consultant. The first draft Partner Scoping Study submitted at the end of November did however not provide much background information about the wider (dairy) institutional environment nor on the broader organizational context. The constraints embedded in Tanzania's bureaucratic systems and the structure of human interactions (such as with indigenous Maasai dairy herders) which can be stumbling blocks to dairy development processes were also not illuminated. Further, the document did not include an inventory of (potential) partner (capacity development) service provider organizations. The absence of having such baseline ahead of the mission(s) made it somewhat difficult to for the mission members to comprehend the full scope of national and local government bodies, the (corporate) private sector, donors, INGOs, local NGOs, dairy cooperatives, women groups etc. involved in the dairy sector¹.

The mission thus focused first on getting a better "picture" of the wider stakeholder environment; this was done through meeting separately with (new) and existing stakeholders and by bringing together organizations and individuals. This was done with the overall aim to arrive at a common understanding about capacity development concepts and approaches to kick start discussions about the short and long term (capacity development) priorities of stakeholders, and to create understanding about the ILRI, TDB and national dairy value chain program "Maziwa Zaidi" objectives. Many of these discussions were not held before and ILRI/TDB/SNV met on a number of occasions for the first time with stakeholders.

At this juncture, no decisions have been made who exactly the "capacity development beneficiaries" are and what capacity development services will be provided directly by the CGIAR system, ILRI and/or other (partner) service providers.

¹ It is to note that the final (draft) Tanzania Dairy Value Chain Partner Scoping Study was submitted in March 2014.

1. Introduction

As part of the CGIAR Research Program on Livestock and Fish (LAF)², ILRI is leading a major initiative to consolidate research and development efforts for a pro-poor transformation of the smallholder dairy value chains in Tanzania³. The initiative has started to involve a range of national and international research and development partners and ensured complementary funding from GIZ/BMZ SFF and IFAD. Having identified appropriate entry points during the project's inception in 2012, ILRI also secured additional funding from Irish Aid-Tanzania towards a further four-year R4D phase to adapt dairy market hubs for pro-poor smallholder value chains in Tanzania, under a project titled "**More milk by and for the poor: adapting dairy market hubs for pro-poor smallholder value chains in Tanzania**" (also referred to as the MoreMilkIT Project). The R4D objectives of the Tanzania project over the next four years are to: 1) develop scalable value chains approaches with improved organizations and institutions serving resource-poor male and female smallholder dairy households emphasizing gender and youth economic empowerment; 2) generate and communicate evidence on business and organizational options for increasing participation of resource-poor male and female households in dairy value chains; and 3) inform policy on appropriate roles for pro-poor smallholder-based informal sector value chains in dairy sector development.

ILRI's interventions are aligned with the Tanzania Agricultural Sector Development Strategy (ASDS) and Agricultural Sector Programme (ASDP). The dairy program has three principle goals:

- Smallholder farmers have reliable and consistent access to **quality inputs and services** in order to efficiently achieve high milk productivity;
- Smallholder farmers have access to reliable, well-coordinated, and efficient dairy products **marketing arrangements** with resultant improvement in household income and livelihoods;
- Poor consumers have **improved access** to quality, safe, and nutritious dairy products at **affordable prices** to increase per capita consumption of the dairy products.

Long term impacts will be achieved through four main impact pathways:

- **Institutional innovations** for reliable and consistent access to **inputs and services**;
- Innovative strategies for consistent and reliable access to **artificial insemination** materials and services, forage, and water;
- **Generation of evidence** for achieving impact at scale and **influencing policy**;
- Innovative strategies for **increasing the consumption** of dairy products.

The main objective of the preliminary Capacity Assessment is to prepare the ground to develop a road map for Capacity Development 2014-2016 for the Tanzania dairy value chain stakeholders, Maziwa Zaidi.

² CGIAR Research Program on Livestock and Fish, <http://livestockfish.cgiar.org/>

³ <http://livestockfish.cgiar.org/focus/tanzania/>

2. Methodology

Capacity Assessment(s) - Objective, Purpose, Key Features, Limitations

The overall objective of a capacity assessment is to conduct an analysis of current capacities against desired future capacities which generates an understanding of capacity assets and needs that can serve as input for formulating a capacity development response that addresses those capacities that could be strengthened, and optimizes existing capacities that are already strong and well founded. It can also set the baseline for continuous monitoring and evaluation of progress against relevant indicators, and help create a solid foundation for long-term planning, implementation and sustainable results. Capacity assessments can serve a number of different purposes, they can:

- Identify capacity gaps along the value chain;
- Foster a discussion around priorities for actions in the context of specific impact pathways;
- Identify opportunities for investments and leveraging capacity development activities with partners;
- Provide a starting point for the formulation of a capacity development responses;
- Establish baselines and indicators for capturing learning, measuring, monitoring and evaluating progress in capacity development;
- Support comparative analyses across value chains.

Capacity assessments are framed around required capacities for the uptake of the value chain development strategies generated by the LAF program and Tanzania specific projects, focusing on constraints for scaling up. This includes for example the capacity to identify key research opportunities and best bets for testing as translational research, and the identification of what capacity exists among stakeholders and partners that can be leveraged to support the program activities to map priority entry points where functional and technical capacities need to be developed. The LAF CRP applies a capacity assessment guideline (2014) which can be used when:

- A value chain problem is encountered, help to identify and analyze the key dimensions and the types of (technical and functional) capacities that need to be strengthened to which capacity development interventions could be a solution;
- Developing a capacity development response strategy for specific (parts of value chain) impact pathways.

You can read more about the Three-Step (Capacity Assessment) Approach in Annex I.

Institutional development (as well as organizational change and strengthening processes) often begins with conducting an institutional context analysis assessment⁴ that focuses on political and institutional factors, as well as processes concerning the use of national and external resources in a given setting, the “change” landscape and the organization’s position in it and how all these have an impact on the research and implementation of initiatives. This is important as the nature of the legal framework within which agricultural (dairy) markets operate has a fundamental effect on the functioning on labor markets and the agricultural marketing system.

The (preliminary) capacity assessment was conducted by a team comprised of Mr. Deogratius Mlay - TDB secretariat, Ms. Maria Ijumba - SNV’s Senior Dairy Development advisor, Dr. Amos Amore - ILRI’s country representative in Tanzania, Dr. Iddo Dror - Head of Capacity Development at ILRI, and Ms. Diana Brandes – van Dorresteijn - Global Capacity Development Specialist at ILRI.

The capacity assessment scoping exercise involved two (ILRI) missions to Tanzania. In October 2013, meetings were held with representatives of the Tanzania Dairy Board (TDB) that has the mandate to coordinate the dairy sector and oversees the DDF Secretariat, representatives of the DDF Advisory Committee including: Tanzania Milk Processors Association (TAMPA), Sokoine University of Agriculture (SUA), Heifer Project International (HPI), SNV (The Netherlands Development Organization), and other “new” stakeholders which potentially can play a role in

⁴ Institutions are described as the formal and informal rules that structure and constrain human behaviour and interaction. They include the formal laws of the state, social customs and ideologies, as well as various forms of contractual arrangement between two or more parties, which may be upheld, either by formal laws or by other, less formal, mechanisms. The institutional environment is the fundamental set of rules, both formal and informal, that govern production, exchange and distribution within a society. Institutional arrangements, on the other hand, are specific arrangements between parties to a contract that govern the way the parties co-operate and/or compete. They are devised primarily for the purpose of reducing transaction costs.

the dairy sector: Tanzania Chamber of Commerce, Industry and Agriculture (TCCIA), Ministry of Industry and Trade, Department of SME Development, Tanzania Private Sector Foundation (TPSF), National Business Council (NBC) and United Nations Volunteer (UNV).

A desk review was conducted and relevant documents were collected and analyzed. Upon specific requests or recommendations made by representatives of (public and private) organizations met during the first visit, follow up meetings were scheduled including with “new” stakeholders in December 2013. Meetings were held with representatives from the Global Forum on Agricultural Research (GFAR under UNFAO), TDB, TAMPRODA, TAMPA, Profate, CRDB BANK PLC, Tanzania Private Sector Foundation, Small Industries Development Organization, PMORALG, BRAC, National Economic Empowerment Council, Agricultural Council of Tanzania, TCCIA, UNV, Ministry of Industry and Trade, and Ministry of Livestock and Fisheries Development (MLFD).

The meetings sought to debate and exchange knowledge to:

- Promote discussion among (private sector) partners involved in the dairy sector aiming to better understand private sector initiatives and private sector capacity needs and demands in the dairy sector (particularly these related to women-led enterprises), and to learn about different practical ways that projects have advanced Capacity Development initiatives that can be scaled up and/or replicated;
- Synthesize key areas where (joint) Capacity Development interventions can lead to co-creation of value e.g.: How can private sector partners enhance the capacity of other partners beyond financial resources?; What are the best ways to promote skills and knowledge transfer between different stakeholders that allow opportunities for innovation and mutual learning to emerge as a modality to introduce to develop or utilize new technologies or innovative practices in the dairy sector?;
- Promote discussion among financial organisations (banks, insurance providers, cooperatives) aiming to better understand financial sector initiatives; to share about capacity needs and demands for cooperatives and farmers to access financial products and; to learn about different practical ways that financial actors are advancing capacity development initiatives that can be scaled up and/or replicated;
- Synthesize key areas where (joint) Capacity Development interventions can lead to co-creation of value e.g.: How can financial service providers support to (re) design financial products for dairy farmers; and; how can financial organisations support the dairy sector to increase access to finance and insurance products?; What are the best ways to promote outreach efforts at the sub-national and local level that allow opportunities for innovation?.
- Promote discussion aiming to better understand specific organisational capacity needs and demands of cooperatives, processors and farmers particularly women/youth to analyse the context for key Capacity Development constraints and opportunities that hamper organizational growth;
- Analyze the role of existing service providers, the effectiveness of their services, their potential future role and how to effectively engage with them;
- Discuss about the level of capacity to engage and dialogue with private sector entities to create understanding and design public private partnerships (PPPs); capacity to motivate private sector entities to engage in PPPs based on their commercial interests and their added advantage of operational efficiency and capacity to innovate;
- Discuss about individual organisations' capacity to work with and strengthening the capacity and organization of community groups and citizen engagement approaches - do we know which organizations reside in different localities?;
- Learn about NGOs and/or CSOs that have an active role in promoting gender equality and women entrepreneurship - do we know the different needs that men/women (farmers) have in the dairy sector?.

Important cross-cutting questions included:

- What are the priority capacity issues that must be addressed in order for public institutions to be able to better deliver public services to meet national (dairy) development commitments?;
- Is “investment” a question of enhanced resources and budgets for Capacity Development? If so, how can adequate budget support for Capacity Development be integrated into national and local level dairy planning and budgeting processes and the policy domain?;

- How can effective sub-national institutional architectures and capacity investments be adapted to go to scale, to deliver dairy development in a manner that can have wider impact? What does this involve and where would this be possible?;
- What capacities are to be addressed at national levels to ensure national plans and policies have local impact? How can sub-national actors contribute to these?;
- Have decentralization policies and plans had any impact on institutional capacities at local level to better provide (dairy) development services and to encourage small enterprise development?;
- How to strengthen the institutional capacity of local state and non-state actors for sustainable and effective partnerships - public-private, multi-stakeholder, etc. - to deliver services and achieve (dairy) development results?.

In May, 2014, in collaboration ILRI's LAF gender team, a gender capacity questionnaire (see Annex II) was developed and sent to value chain partners. The objective was to identify and analyse the factors that hinder efforts to integrate gender into organization programs/projects and to identify approaches to strengthen staff capacity to integrate gender in planning, implementation and evaluation of programs/projects. The purpose of the study was to:

- assess partners' current capacities in program and project work related to gender
- determine key constraints to integrating gender in their work
- assess organizational capacity and commitment to integrating gender
- review any gendered monitoring and evaluation in project work

Eight responses were received (out of which 2 were from female staff). Most organizations responded either "Not at All" or "Moderate" to questions asked. The primary obstacles identified included lack of financial resources, lack of staff training and lack of appropriate gender tools. As the sample size was very small a greater responses among more diverse partners should be sought for in the next months. Also, further research needed on types of training and tools that would be most appropriate to partner needs/demand to strengthen capacities.

3. CGIAR Livestock and Fish Research Program - Context

The LAF research program aims to assure more meat, milk and fish, by and for the poor. This will be achieved by intensifying and commercializing smallholder agriculture within focused value chains in Latin America, Asia and Africa. To achieve this transformation, LAF aims to catalyze processes whereby appropriate innovations are enthusiastically adopted and owned by value chain actors, spread and achieve scale, and stimulate policy development that enables and encourages salutary new practice. The LAF CRP capacity development interventions are based on the premise that the CRP's five flagships and Intermediate Development Outcomes (IDOs) along with Theories of Change (ToCs) and Impact Pathways (IPs) are the framing context for capacity development work.

The signature for LAF success in Tanzania is achievement of program development outcomes at scale (improvements in productivity, productions, income, employment, better household nutrition, reduced environmental damage and better policies)⁵.

3.1. Gender Capacity Gaps in Livestock and Fish Value Chain Partners

The rationale for considering gender in agricultural programs relates to agricultural productivity, food security, nutrition, poverty reduction, and empowerment. In all of these, women play a critical but often under-recognized role and face greater constraints than men. Women tend to be locked out of land ownership, access to credit and productive farm inputs like fertilizers, pesticides and farming tools, support from extension services, and access to markets and other factors central to improving productivity⁶. In many instances, agricultural service providers are one of the only sources of agricultural information available to small holder farmers, many of whom are women. Increasing women's education and other resources is a key way to reduce their constraints and increase agricultural production, which can improve food security at the household and higher levels. Orienting agricultural programs to reduce those constraints can make a lasting contribution to this goal.

⁵ These are the defined Intermediate Development Outcomes of LAF.

⁶ The World Bank, O'Sullivan *et al.*, 2014.

Institutions, programs, and projects must have the skills and resources (both financial and human) to address the differing needs of men and women farmers. To do this, service providers must create equal opportunities for women and men to contribute to and shape the environments in which they live and work. As stressed in *The State of Food and Agriculture: Women in Agriculture: Closing the Gender Gap for Development (UNFAO, 2011)* closing the gender gap in agriculture is essential to increasing agricultural productivity, reducing hunger, and achieving food security. This is a key role of agricultural service providers.

Capacity development of partners in agricultural value chains is thus a critical piece to achieving gender equity. Many organizations express interest in integrating gender into their programming, but lack the knowledge and understanding of how to do so. Capacity development was highlighted as a priority in the Livestock and Fish Gender Strategy, "*Increased gender capacity within CGIAR centers, partner organizations and value chain actors to diagnose and overcome gender based constraints within value chains*"⁷. As part of this priority, a study was undertaken in May 2014 with partners in targeted livestock and fish value chains in four countries, including in Tanzania, to ascertain their gaps in gender capacity related to integrating gender into agricultural programming. Results from the study will be used to inform the development of gender capacity materials and future trainings for partners.

4. A Systems Approach to Capacity Development

The concept of research *for* development implies that a change must take place. It is the underlying supposition of this need for change which informs capacity development (engagement) processes, and this can happen if the program is successful in unleashing widespread development action and capability that transforms value chain function along the four main IPs (see annexes).

How to strengthen "Capacities"?

The LAF CRP adopts a systems thinking approach to capacity development. The main innovation that systems' thinking introduces is that *rather than prioritizing interventions that need immediate fixing*, emphasis is given to defining the "*issue creating system*", which is made up of interacting parts, which can be used to better understand reality, problems and the context in which they arise. Practically, systems thinking can be used in participation with value chain system actors⁸, to identify issues, analyze their boundaries, design strategies and policy interventions, forecast and measure their expected impacts, implement them, and monitor and evaluate their successes and failures.

A systems approach to capacity accounts for contextual factors and system patterns, such as individual constraints, organizational shortcomings, institutional interfaces and regulatory and cultural barriers, which may make efforts to build capacities ineffective. A holistic systemic approach is thus required for designing, implementing and measuring capacity development response strategies (which will be based on assessment methodologies and adaptive management) across three distinctive system levels namely:

- **the enabling environment:** the broader system including downstream/upstream policies, rules and legislation, regulations, power relations and social norms;
- **the organizational level:** the internal policies, arrangements, procedures and frameworks that allow an organization to operate and deliver on its mandate, enabling the coming together of individual capacities for achieving common goals. One of the focus areas under consideration for targeted organizational capacity development at the rural levels are (local) Public Private Partnerships (PPPs) that would seek to outline the full range of actions that the public and private sector can take to support and promote, for example, women's socio-economic rights and income generating opportunities;
- **the individual level:** the skills, experience, knowledge, leadership and motivation of people.

⁷ The Gender strategy of the CGIAR Research Program on Livestock and Fish, 2013, <http://bit.ly/19sP6Wi>.

⁸ Value chain system actors are defined as those who operate within and around a value chain. They include but are not limited to input suppliers, producers, transporters, processors, wholesalers, retailers, consumers, government regulators, and business development and financial service providers. They seek to create or stimulate a wider efficiency within a chain. They do so for reasons that range from creating better business opportunities for themselves, to public good actors that seek social and economic transformation through improved equity and access to services. In general, they are local businesses, Civil Society Organisations and NGOs and government departments, are embedded and can be considered permanent in those chains (Worsley, S., Development Partnerships Strategy, draft December, 2013).

A systems thinking view highlights that without enhancing capacities across institutional, organizational and individual levels it would be difficult for the value chain to transit from the traditional “research outputs” orientation to a more holistic “development outcomes” paradigm and to measure (capacity development) impact.

Why is “Capacity”⁹ needed for impact?

- Cross cutting element is capacity and gender¹⁰;
- To strengthen the capacity for research collaboration and research transformation into impact on the ground;
- Going from capacity strategy to action;
- Interaction within and among flagships for common approaches;
- The importance of documenting the impact of research from a capacity perspective.

What types of “Capacities” to strengthen? Why?

- Research capacity (mainstreamed along with the 5 flagships);
- Analysis capacity (capacity for analyzing the constraints for scaling up, for identifying research opportunities and best bets for testing as translational research);
- Policy process, planning and programming capacity;
- Institutional capacity;
- Organizational capacity;
- Regulatory capacity (capacity to remove adoption constraints);
- Others?.

Whose “Capacities” to strengthen?

- Scientists (in-house and these of LAF's and the dairy value chain partners)
- Key (local) partners/service providers/NGOs, farmers organizations, innovation platforms, dairy market hubs, farmer cooperatives, rural farmer communities, etc.;
- Research, extension, and educational institutions
- Policy and regulatory institutions;
- Others?.

4.1. Capacities for Innovation

Capacity development cannot be solely defined on the basis of a priori demand-driven goals or driven by short term considerations. There is evidence that transformational innovations are often not demand-driven and scientists and innovators have often envisioned transformational ideas, technical and commercial opportunities without apparent demand being there in advance. Finding a balance is thus extremely important, particularly where there has to be both a decided response to observable demand, but also a space preserved to emerging opportunities, imagination and innovative projects with potential transformational value. For research to take hold, value chain actors must thus participate in shaping research and innovations, since appropriate, owned and enthusiastically adopted innovations quickly reach sustainable scale. This can be done by establishing multi stakeholder learning and action platforms (through for example the national DDF) that will form the basis of joint action.

⁹ “Capacity” involves the ability of a society or a sector to continue to develop necessary skills, behaviours, networks and institutions that enable communities and organizations to adapt and become resilient. In practice that means that political and governance processes are required to function, that linkages are made across and between sectors to achieve shared goals and to deliver services and products. It also means that rural communities and organizations drive their own on-going capacity development and mobilize resources to develop new capacities in the face of new challenges. “Capacity” needs to be seen as an emergent property of the functioning of different processes in a system (“systems theory”). Capacity isn’t therefore a distinct “outcome” that can be influenced by a single intervention or organization. Capacity development also isn’t a one-off workshop or training event. It is also not about replacing “traditional” capacity development activities with digital tools or bolting on to social media and “new” knowledge (innovation) networks, although these elements are central to capacity development approaches.

¹⁰ Capacity development work in the CRP has strong links to the CRPs’ gender-related R&D activities. Mainstreaming is reciprocal: gender dimensions will be incorporated into capacity development actions, and appropriate capacity development tools and methods in gender strategies will be developed and used.

Capacity Development is only relevant if they assist value chain actors to be (more) relevant and effective in their work, to become better performers and more adaptable/resilient in addressing (sustainable) development challenges so that they can, innovatively, address their own priorities. Developing capacities in institutions¹¹ and value chain (agribusiness) markets is a subtle process in which key players (implementers), value chain actors (intermediate beneficiaries) and producers (primary clients), service providers / private sector partners and policy makers all play different roles, and in which partners like the TDB are to engage in (pro-poor) policy design, advocacy and reform processes, network and outreach efforts, and advisory services.

Information and communication technology (e.g. internet and mobile technology) has made available opportunities for wide outreach and large quantities of data, which are challenging traditional institutions and may require real-time data (systems), continuous monitoring, learning, joint reflection, adaptation and “new” behavior. It may hence not only be important to integrate more innovative tools and approaches and balance the facilitation of short-term change cycles in real time with longer-term structural change processes but also to revisit understanding what exactly is meant with “institutions”. This “new” understanding requires that research, innovation, tools and data analysis have to be linked with longer term change processes foreseen in institutions, organizations, individuals, networks and so on demanding sound understandings of the dynamics of innovative tools chosen and applied, what they capture and what not. The availability of tools in itself neither means that they are applied in a “neutral” or even benevolent way, nor that the stimulated change process in larger society is subsequently moving in the “desired” direction. A continuous circulation of (facilitated) steps with re-assessment and fine-tuning, data collection and interpretation, re-evaluating strategy goals, direction and interventions etcetera may hence be needed.

Innovation is the aggregation and transformation of knowledge that focuses on new or improved products, positions, paradigms, processes or services. Innovation is a dynamic process entailing a continuous process of searching, questioning, understanding, and learning that result in efficiency, effectiveness, quality of outcomes and impacts. Hall et al 2009¹² describe an innovation systems perspective where focus is placed on innovation rather than research in a bid to shift emphasis away from the production of knowledge and technology to its application for solutions that work in a specific context. The capacity for such innovation includes a system or network of multiple nodes of expertise mixing elements of new knowledge creation, new approaches to communicating, and new partnerships in which we continuously need to adapt and re-invent the way we apply knowledge. It encompasses thus the joint scanning, identifying, sharing and internalizing of best bet options, as well as the scaling up and replication of these options. Innovation entails thus moving away from the model of knowledge transfer through external experts towards joint investigation, sense-making, sharing of different mind-sets, and application as a peer-to-peer process to strengthening the exchange of knowledge and improving access the fast wealth of knowledge which resides within countries as well as what is available externally in the marketplace.

While there is no generally accepted definition of *Capacities for Innovation*, it is recognized that these capacities depend on the *individual* and *organizational* capacities of partners to search for, absorb and share information, knowledge and resources.

- *Individual capacities for innovation* are rooted in the expertise (combination of knowledge and skills in one or more particular fields), talent, creativity, motivation and the worldview held by these individuals. The level to which an individual is able to unleash her/his capacities is strongly influenced by the organizational context and the enabling environment in which s/he operates;
- *Organizational capacities* are more than the collection of the individual capacities of the organization’s members and are determined by a number of factors including operating routines, organizational cultures, incentives, resources and leadership. Organizational capacities cannot be easily copied or bought; they have to be built through sustained investments and training programs aiming to strengthen

¹¹ Institutions are described as the formal and informal rules that structure and constrain human behavior and interaction. They include the formal laws of the state, social customs and ideologies, as well as various forms of contractual arrangement between two or more parties, which may be upheld, either by formal laws or by other, less formal, mechanisms. Institutional arrangements, on the other hand, are specific arrangements between parties to a contract that govern the way the parties co-operate and/or compete. They are devised primarily for the purpose of reducing transaction costs.

¹² Andy Hall, Rashid Sulaiman, Tesfaye Beshah, Lias Madzudzo and Ranjitha Puskur, 2009; Tools, principles or policies? Agricultural innovation system capacity development; Capacity.Org

organizations and individuals working on different issues in the same chain (parallel action, not aligned); working on the same issues in the same chain (parallel action, aligned) and; working together on the same issues in the same chain (convergent action) through capacity development response strategies that focus on specific IPs.

Issue-based challenges cannot always be tackled by thematic-focused approaches, a continuous sharing of information, local knowledge, tools and perspectives is therefore necessary to enable the creation of new ideas, which goes beyond the scope of a single discipline or area of practice. As new technologies and communication channels promote “connecting and collaborating” the opportunities for innovative approaches to development, for new ways of thinking, has accelerated. This requires the ability to adapt to ever changing contexts and challenges and to continuously re-invent approaches, services and ways of working together.

Broadly speaking, adaptive capacity denotes the ability of a system to adjust, modify or change its characteristics or actions to moderate potential damage, take advantage of opportunities. A key component of this is ensuring that individuals, communities and societies are actively involved in processes of change (in behavior, as well as in resources and technologies)¹³.

5. Entry Points for Capacity Development through the Four Impact Pathways

Long term impacts are envisaged within four main impact pathways¹⁴:

1. Institutional innovations for reliable and consistent access to inputs and services

In this impact pathway emphasis is given to increase farmers’ ownership of improved dairy animals. Further, traders’ and farmers’ organizational capacity development is prioritized so that links can be made (individually as well as collectively) with input suppliers, processing units, micro finance and insurance organizations, (business development) service providers etcetera so that ultimately strong and sustainable Dairy Marketing Hubs (DMHs) will emerge. Targeted development and research activities include the facilitation and testing of alternative contractual arrangements, farmers’ group formation processes, and research on collaborative (partnership) capacities to strengthen service delivery, access to market information, quality assurance, and business management models.

Higher household asset ownership and improved household income are also expected to arise from more farmers accessing and selling to organized markets. Anticipated changes in knowledge, attitudes, and practices to accelerate these outcomes will include farmers accessing check-off systems for marketing and accessing services and inputs, either through DMHs or through direct linkages with micro finance institutions banks and farmer groups. The main program output to deliver on these outcomes will be innovative arrangements for increased access to financial and credit services where a specific research and development activity will entail focusing on creation of sustainable village banks and other credit access arrangements/models.

2. Innovative strategies for consistent and reliable access to artificial insemination materials and services, forage, and water

Here, outcomes will focus on having consistent and reliable access to affordable artificial insemination materials and services. Outputs focus, among others, on the development of innovative delivery strategies and strengthen extension delivery, to improve access to inputs and marketing services.

3. Generation of evidence for achieving impact at scale and influencing policy

In this pathway changes in attitudes, knowledge and practices are sought for in three main areas: 1) stakeholders (incl. NARES) and researchers strengthen mechanisms to communicate evidence of superior dairy practices; 2) farmers will be organized in farmers’ groups and organizations; and 3) farmers will adopt superior dairy practices. The main research and development activities include capacity development of traders’ associations to access information on marketing, quality assurance, and business management; generating evidence of sustainable benefits accruing from improved dairy value chains to influence institutional (policy) changes and regulatory

¹³ ODI, 2010, Towards a characterization of adaptive capacity: a framework for analyzing adaptive capacity at the local level.

¹⁴ Tanzania Dairy Value Chain Impact Pathways Narrative, M. Kikoido, L. Korir and the Tanzania value chain team, October, 2013

bodies; generating evidence for scaling out and scaling up of innovations; and co-creation of technologies and use of diagnostic studies to design research. Efforts will focus on linking farmers' groups to apex bodies including the DDF to efficiently lobby for institutional policy reform(s) accelerating pro-poor dairy value chain development.

4. Innovative strategies for increasing the consumption of dairy products

This impact pathway focuses on improving household nutrition and better household health status through lower incidences of zoonotic diseases, increased per capita consumption of dairy products, and increased composition of dairy products by working with farmers groups and apex bodies like the TDB. Processors will be encouraged to establish contractual relationships with actors in DMHs to enforce standards and ensure stable supply of (diverse) dairy products and households will improve equitable intra-household distribution and sharing of benefits from participating in the value chain. Foreseen outputs include collective action models for farmers' improved access to inputs and services and efficient milk marketing strategies, and facilitating farmers' organizations around marketing, inputs and service bulking.

LAF scientists are thus working to find solutions to critical value chain system issues within four main IPs. However, the effectiveness of solutions and their uptake is contingent on how well they fit within large complex value chain systems and whether value chain actors are willing and capable to absorb new knowledge and technologies; this is called absorptive capacities.

6. Maziwa Zaidi

6.1. Donors, Projects and Partners

The main donors of the (over ten) dairy projects are the CGIAR Consortium, IFAD, The Governments of Australia, Ireland and the United States, the International Development Research Centre and the Bill & Melinda Gates Foundation (BMGF).

Feeds	Enhancing dairy-based livelihoods in Tanzania and India through feed innovation and value chain development approaches (MilkIT) Fodder and feed as a key opportunity for driving sustainable intensification of crop livestock systems in Tanzania Feed the Future Innovation Lab on Small-Scale Irrigation in Tanzania, Ethiopia and Ghana
Genetics	Dairy Genetics East Africa Phase II (DGEA2) Evaluation of breed composition, productivity and fitness for smallholder dairy cattle in Tanzania
Animal health	What's killing my cow? Re-assessing diseases hurting smallholder dairying in Tanzania
Food safety/nutrition	Safe food, fair food (SFFF2) Rapid assessment of potential benefits to human health and nutrition from research on livestock and fish market chains. Leveraging Dairy Value Chain Development in Tanzania for Improved Nutrition and Health of Women and Children Study on "Looking beyond income: impact of dairy hubs on human nutrition in Tanzania"
Markets/hubs	More milk by and for the poor: Adapting dairy market hubs for pro-poor smallholder value chains in Tanzania East Africa Dairy Development Project (EADD) Phase II, a regional program in which HPI and TNS are the key development partners. Their roles include implementing development actions, facilitating the transfer of research outputs into use, and using research knowledge to catalyze the changes in attitudes, practices, and knowledge among actors identified along the impact pathways, i.e., to innovate. SNV in particular is well positioned to provide capacity development advisory services
Gender	Dairy goat and root crop production

Partners involved:

- Strategic Research Partnerships: SUA, TALIRI reinforced by CGIAR and ARIs;
- Development Partnerships: Heifer and SNV;
- National partners: The Dairy Development Forum (DDF), TAMPRODA and the Tanzania Milk Processors Association (TAMPA) represent dairy stakeholder platforms at the different levels of the value chains; FAIDA MaLi; Tanga Regional Dairy platform; TDB, Tanzania Bureau of Standards (TBS) and the Ministry of Livestock and Fisheries Development (MLFD) contribute to regulating¹⁵ the dairy industry and providing guidelines for controlling and maintaining the quality of dairy products;
- Project partners: Sokoine University of Agriculture (SUA)¹⁶; Tanzania Livestock Research Institute (TALIRI); Tanzania Dairy Board; Faida Market Linkages; Heifer International; African Breeders Services Total Cattle Management Ltd; TechnoServe; Federal Institute for Risk Assessment (Germany); Freie Universitaet Berlin; International Center for Tropical Agriculture; Royal Veterinary College (UK); University of Alberta; Nelson Mandela African Institute for Science and Technology; Scotland's Rural College (SRUC, UK); China Agricultural University (CAU) and Emory University.

Capacity Development interventions supported in 2013/14 include(d):

Training: forty people (13 were female) from partner organizations participated in different courses such as on systems dynamics modeling, feeds and food safety; five DDF staff-partners were trained on communication and knowledge management approaches and tools ; nine students (5 were female) were engaged in 2013 for long term training at masters' level, eight (4 female) in 2014 and one male student is engaged at the doctoral level.

6.2. The Tanzania Dairy Board - Historical Context

Since early 1980, dairy development efforts focused on smallholder development. Several development partners assisted smallholder farmers to acquire dairy assets and knowledge. HPI introduced Heifer-in-Trust scheme approach in various parts of the country. This approach was adopted by the Southern Highlands Dairy Development Project funded by the Swiss Government, the Tanga Dairy Development Project and the Kagera Dairy Development Project (funded by the Dutch government). The AustroProject Association was involved in supporting traditional pastoralists in the Coast region to market their milk in Dar-es Salaam. Commercial dairying and processing was done by government parastatal organizations, the Dairy Farming Company and Tanzania Dairies Ltd. Following policy changes, most of the dairy farms and all the dairy factories were privatized by 1995.

The presence of multiple players in the industry without a proper co-ordination mechanism prompted the various actors to initiate a National Dairy Development Conference in February 2013 as a platform for lessons learning and experience sharing. One of the outcomes of earlier held conferences was the need for a **formal dairy regulatory institution**. A taskforce was established in 1998 to pursue this goal which led to the in 2004 adopted Dairy Industry Act. In the same period some initiatives were undertaken in collaboration with the (corporate) private sector (e.g. with Land O'Lakes). Towards the end of 2001, dairy development projects foresaw a need for a form of coordination among themselves and subsequently seven meetings were held until 2004. By then the dairy board was assigned to lead the coordination of activities but probably due to closure of business of most of the participating (donor?) organizations no meetings were conducted. By the end of 2012, beginning of 2013, renewed recognition of many development partners, CGIAR research institutions, the government and other local institutions emerged to seek concerted collaborative partnerships leading to the re-establishment of the TDB¹⁷.

TDB is mandated to regulate, coordinate and promote the development of the dairy industry in the country by the Dairy Industry Act, 2004. In this regard, the Board also has the mandate to establish an effective organization

¹⁵ A baseline of existing regulation is not made available yet; policies, rules and regulations that are not conducive for dairy development (and which require reform) are not yet systematically documented;

¹⁶ TALIRI and SUA are research partners contributing to sustaining the dairy platforms, improving coordination of the various value chain stakeholders, and developing appropriate dairy innovations. Graduate students from SUA could be involved in action research and capacity development of farmers and pastoralists. SUA initiated a course program on dairy processing technology that could be scaled out.

¹⁷ (Prof.) Lusato Kurwijila from the Sokoine Agricultural University in Morogoro is the chair of the Tanzania Dairy Board.

structure and financing modalities for effective and efficient operations in its delivery of quality services to dairy industry stakeholders¹⁸.

The TDB tries, amongst others, to improve quantity and quality of milk passing through the various dairy value chain stages. An important tool is the registration of value chain actors i.e. dairy farmers, collectors and processors. Once registered, the actors are inspected for quality. So far about 350 members are registered (out of which 120 producers, 68 processors and collectors at different levels, including small collectors who supply to private companies). To increase registration and checking, in particular of dairy producers, linkages have been made with the local level district administrations (135 in total)¹⁹. Local administrations assign staff for registration/checking and to support capacity development (extension service) processes (which often happened after training was provided by the dairy board²⁰). Data could not be retrieved about which trainings have been exactly provided, by whom, to how many people and what the impact of the different trainings was.

It is TDB's role to promote, coordinate and stimulate school milk programs and to organize annual milk weeks. Milk school schemes only operate in milk producing/processing districts and are co-financed by parents, donors and processors that provide milk at reduced price. Currently 145 schools and about 66,000 children are involved. Inadequate (local government) budget allocations and the lack of technical capacity to design local level public private partnerships severely limits scaling out.

The main source of income for the board is the government who provides about 90% of the annual budget (which is around USD 300,000). Levies charged on imported processed milk are another source of income but it is not clear how much revenue is collected on an annual basis.

The TDB secretariat is greatly understaffed (only 3 persons are employed, but they are engaged with other government related responsibilities too). Management, project management, networking and partnering capacities appear to be weakly developed. The TDB has no operational action plan in place.

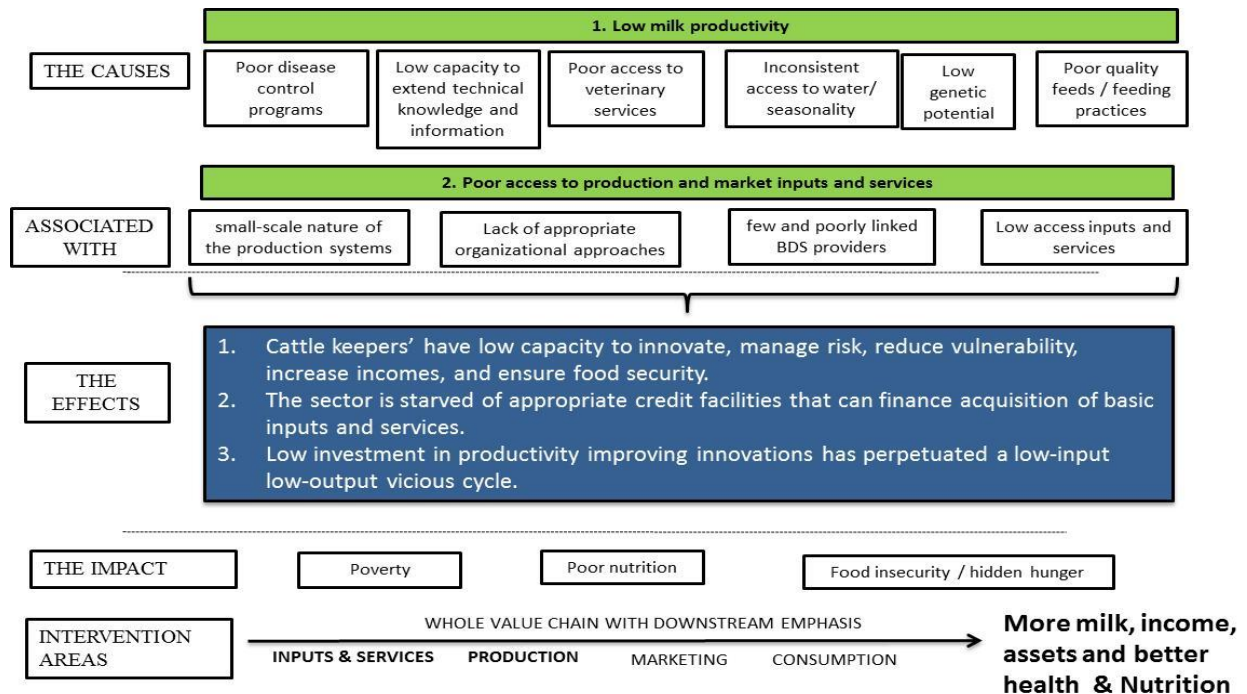


Figure 1: Illustration of key value chain challenges

¹⁸ Tanzania Dairy Board Corporate Strategic Plan 2013/14 – 2017/18.

¹⁹ All data provided by the TDB, October, 2013.

²⁰ Training and certification of dairy value chain stakeholders project by ILRI and TDB with USAID funding provided through ASARECA.

6.3. The Tanzania Dairy Development Forum

The DDF was launched in February 2013 (by the National Dairy Development Conference stakeholders) to bring together national dairy actors in a bid to explore a coordinated approach to collaborative development of the Tanzanian dairy industry. Nested under the authority of the TDB whose role is to strategically plan and coordinate sector development “in an orderly manner”, the DDF acts as a platform where initiatives can be conceived and acted on, where evidence of what works and what does not can be shared and discussed, and where action based alliances between like-minded actors can be formed. It aims to fill gaps in dairy technology and agribusiness skills, craft strategies for expanding the national dairy herd and seek business solutions for year round availability of quality feeds.

The forum aims to facilitate nurturing of smaller innovation platforms and acts as a non-formal consultative forum in which dairy industry stakeholders could come together for knowledge and information sharing and convene periodically as a national innovation platform to aggregate dairy industry information, synthesize it, and disseminate it; promote evidence-based information sharing to attract public and private sector investments; and promote professionalization of Tanzania dairy industry through adoption of best practices and standards. The DDF is co-hosted by TDB, SUA, ILRI, CIAT, HPI, SNV) Land O’Lakes, and the Tanzania Ministry of Livestock and Fisheries Development (MLDF).

At the two DDF meetings held in 2013, 29 different “pledges” were made by individuals and organizations around topics to expand and improve the national dairy herd, enacting business solutions to ensure feed supply throughout the year, and to develop capacity for dairy technology design and uptake while expanding agribusiness for inputs and services. The third DDF meeting in February 2014²¹ (following a 2-day meeting of the dairy genetics working group) reviewed work conducted by the four working groups established in 2013, and re-emphasized the need to fill gaps in dairy technology, expand the national dairy herd, and identifying business solutions for ensuring year-round feed availability as well as the need for facilitation of innovation platforms. During the meeting it was agreed that the DDF would assist to develop the capacity and skills to facilitate innovation platforms, and would provide leadership for coordinated capacity development efforts.

During the DDF Advisory Committee Meeting held on 23rd June, 2014 a decision was made to merge task forces formed during the dairy genetics meeting and task forces formed during the third DDF meeting. The following six task forces are now in place: 1) Heifer/bull/semen production; 2) AI field delivery 3) Recording registration system 4) Farmer organizations 5) Dairy Genetics policy and regulations and 6) Platform development and leadership.

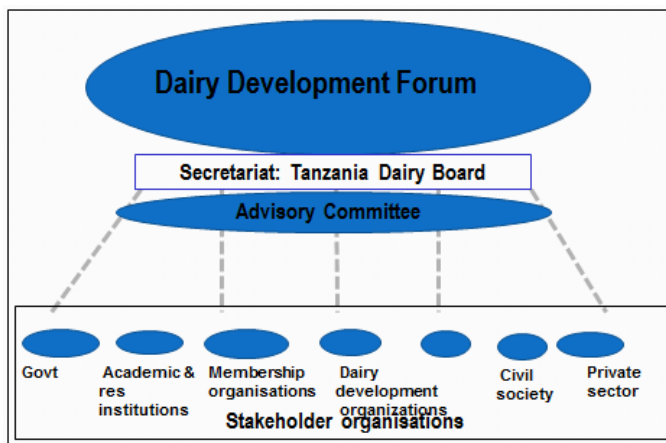


Figure 2: Structure of the Dairy Development Forum

²¹ See: <http://slidesha.re/1nre7GG>

6.4. Producers

There are significant risks to producers²² associated with unorganized milk sales, particularly in relation to prices, long term commitment to buyers or service suppliers, feed sources and health. This scenario, augmented by seasonal supply issues, discourages private sector investment, including by smaller producers, to improve productivity and quality. Although cooperative models have not been widely taken up, the nature of the high unit costs in the value chain indicate that collective action offers a role among pre-commercial producers. Studies conducted in 2012 show that access to adequate feeding, breeding, animal health and credit services has remained low and that production of a marketable surplus remains a fundamental challenge. This has been associated with poor animal health and nutrition, alongside shortages of land, low access to working capital, and limited information and knowledge. Access to capital was commonly nominated as a constraint faced by dairy producers and impacts of lack of working capital on dairy and cattle operations were revealed as poor access to and high cost of, inputs, long distance to markets, and lack of buyers.

In sum there are **four inter-related problems** faced by resource-poor milk producers:

1. Dominant direct sales of small volumes by smallholder producers precluding economies of scale;
2. Credit facilities for basic inputs/services/working capital lack discouraging investment to improve productivity;
3. Lack of appropriate organizational models for pre-commercial producers (complex cooperative models and technology-driven solutions have largely failed);
4. Seasonality of rainfall and related effects are strong.

The following observations were made after meetings with Tanzania Milk Producers Association (TAMPRODA) and the Tanzania Milk Processors Association (TAMPA):

- Both organizations were established as mandatory criteria to establish the TDB; both lack a clear business strategy and do not have resources to sustain themselves;
- TAMPRODA was highly donor dependent and is now desperately looking for funding (it is not clear though what the funding is exactly sought for). SNV has provided advisory services to TAMPRODA on strategic planning, business development in Q3-2013 and concluded that internal capacities are very weak and that there is hardly any staff to run the business. They further noted that “political motivations” hamper to run the organization as an association. TAMPRODA stated herself that: “we are a national organization but we do not have “legs” on the ground”. The legitimacy and representation of TAMPRODA is questionable.

The business council under the Prime Minister’s Office, and three private sector companies, including a corporate bank, emphasized that capacity development efforts are needed at both the policy and organizational levels. (pro-poor) Policy focus should be on improving (local) organizational models to achieve economies of scale for access to inputs and services, to unleash (public and private sector) incentives to raise productivity and production levels and address risks inherent in small scale production and marketing. In turn, these will justify bulking of milk and the transition to more vertically coordinated marketing channels.

Producer organizations, “service providers”, cooperatives, (formal and informal) banking systems, input (feed) supplier organizations in the different districts are somewhat mapped out but detailed information about levels of existing organizational capacities are not (assessed and) documented²³. It is also not known how specific organizations can co-deliver joint program outputs.

²² It is to note that the TDB classified producers into three categories depending on the volume of milk produced/sold.

²³ The Livestock Data Innovation Project, Identification and analysis of constraints faced by small holder producers and traders in Tanzania and Uganda, (draft) October, 2012 identified in Morogoro (Mlale, Mvomero) and Tanga district (Bungu, Mkalamo) constraints faced by producers (page 11, 41-50).

Main policy issues in inputs and services:

Genetics and Breeding:	<ul style="list-style-type: none"> • Certification of artificial insemination technicians too restricted (by the Veterinary Surgeons Act); • Animal Breeding Bill still to be submitted to Attorney General; regulator of breeding services acts also an active practitioner: can a Public Private Partnership (PPP) model be developed?; • Animal registration, performance recording and genetic evaluation administered by many different agencies with inadequate capacity to deliver services: is there a (local) PPP model that can be applied? • Brucellosis needs to be made a notifiable disease so testing and control are made mandatory and publicly funded; • No information system capturing livestock identification, registration, recording for breeding improvement and traceability.
Feeds:	<ul style="list-style-type: none"> • Compounded feed standards are variable and are based on recommendation of cattle with high genetic composition. How to develop recommendations that take into account genetic potential of cattle?; • Feed quality is variable in spite of the standards i.e. poor enforcement of standards and lack of stakeholders' participation; • Sourcing and import of forage seeds heavily controlled by the government restricting free flow; • Training and certification of small scale forage seed producers restricted, small scale producers are considered illegal (restricting opportunities to grow markets and improve quality); • Feed resources will be analyzed for key laboratory fodder quality traits in the nutritional laboratory in India, however, the Near Infrared Spectroscopy (NIRS) equations will have to be developed for Tanzania feeds in collaboration with the Tanzania NIRS facility (e.g. strengthening analytical capabilities). • No baselines and streamlined approaches to prioritizing feed interventions and inform policy; the feed assessment tool and TechFit tools will be deployed to assess, analyze and document available feed resources and help prioritize interventions.
Animal Health:	<ul style="list-style-type: none"> • Certification of para-vet practitioners restricted by regulations.

6.5. Dairy Market Hubs

Previous conventional approaches to collective action for dairy development that relied on highly capitalized cold chains have not been suitable where individual volumes are small and dispersed, and where occasional and opportunistic marketing prevails. Constraints identified amongst small scale dairy producers has shown that access to adequate feeding, breeding, animal health and credit services has remained low and that production of a marketable surplus remains a fundamental challenge, particularly in the dry season when shortages are reflected in high milk prices. This has been associated with poor animal health and nutrition, alongside shortages of land, capital, knowledge and information as also revealed from the value chain assessment(s) conducted. Stakeholders recognizes the need for a combination of public, collective and private action but models, such as strong market hubs for their delivery have yet to emerge, and it is expected that the dairy market hub (DMHs) approach will allow marginalized groups to “grow” towards greater participation in the value chain²⁴.

In 2013, Lushoto, Handeni, Mvomero and Kilosa districts were chosen as pilot areas for DMHs as improved organizational approaches of choice for achieving economies of scale for access to inputs and services. Close to

²⁴ Irish Aid MoreMilkiT proposal, Adapting dairy market hubs for pro-poor smallholder value chains in Tanzania, June, 2013.

100% of the producers from each of the four locations claimed to be interested in joining (hub) groups for each of accessing inputs, marketing products, accessing capital and receiving information (ILRI, 2012). Such expression of demand may however be made for the services of a collective action organization and may not be expressed for the hub organization itself.

It is not clear what the organizational set up and leadership structure for the “hub management” in the different localities is, and what strategies are/will be deployed to scale up farmers’ access to inputs and services but this will be addressed by the Irish Aid funded program.

6.6. Finance and Insurance

The seasonality of (the rural) agriculture (sector) means that farmers, poor and better-off, are likely to require short-term finance at various times of the year. Credit can also be used to finance longer term investment. However, particularly for poor farmers, this is only likely to happen after other, more pressing needs have been met. Finance will assist in the process of rural development if certain important conditions are met. The key condition is that profitable new technologies exist for farmers (and others) to invest in. This profitability, however, in turn depends on the macroeconomic environment in which the technology is introduced and the availability of accompanying services.

A variety of individuals and institutions, from both the informal and formal sectors, exist to provide financial services to farmers but lending can involve high transaction costs and/or risk. Collateral can reduce the risk of lending by transferring some of that risk to the borrower but many poorer borrowers do not have assets that can be used as collateral. The transactions costs involved in making loans include the costs of screening applicants to decide their creditworthiness, of monitoring their use of the money, and ensuring that they repay the loan as agreed. Lenders take various steps to minimize these and the associated problem of imperfect information. Non-market institutions, such as interlocking systems, are the outcome of this process, as is the tendency to restrict loans to borrowers who are linked to the lender through kinship, geographical proximity, or repeated dealings.

There is considerable debate in the literature about the extent to which lenders exploit borrowers by charging them excessively high interest rates. New Institutional Economics (NIE) thinking suggests that the costs of lending are often underestimated and that high interest rates may be more justified than is immediately apparent. However, NIE also explains why individual borrowers may find it difficult to switch from one lender to another, thus highlighting their vulnerability to a potentially “exploitative” relationship.

Direct government interventions to supply cheap credit have often failed because of high transaction costs and high default rates have made such programs unsustainable over the longer term. Government intervention to improve rural credit markets may be more effective if it concentrates on reducing the risks and transaction costs associated with lending by the private sector. In the long term, improvements in communications infrastructure (such by developing credit scoring apps by INSEAD university²⁵) may be innovative and effective ways of reducing rural credit market failures. In the short term, governments can help by promoting institutional arrangements that are better able to deal with imperfect information than those based upon purely competitive lending models.

In Tanzania, rural households have very low access to credit services. Nationally, only 6% of all livestock keeping households and 4% among the poorest quartile held credit²⁶. Coupled with low private sector participation in the livestock sector this has contributed to low use of inputs (feed, breeding, animal health) and related services.

It is not fully known which types of Financial Service Providers (FSPs) such as Commercial Banks (CBs), Development Banks (DBs), Microfinance Development Bank (MDB), Financial Intermediary NGOs (FI-NGOs), Savings and Credit Cooperative Organizations (SACCOs), Small Farmers Cooperatives (SFCs), Multi-purpose Cooperatives (MPCs), and dairy cooperatives, and Savings and Credit Groups (SCGs) exactly operate in the program areas (*note: an overview needs to be developed*).

²⁵ An initial partnership with INSEAD is being explored since April 2014.

²⁶ Katia Covarrubias, Longin Nsiima and Alberto Zezza, 2012, Livestock and livelihoods in rural Tanzania: A descriptive analysis of the 2009 National Panel Survey. Joint paper of the World Bank, FAO, AU-IBAR, ILRI and the Tanzania MLDF with support from the BMGF.

The total demand and (current) supply for financial services (such as loans) and the current financing methodologies available (in the dairy sector) is not known by the TDB and its key stakeholders. An “Access to Finance” assessment study, followed by the design of an Access to Finance Strategy, is recommended to be developed.

The following observations were made after meetings with BRAC and the CRDB BANK PLC, the Tanzania Private Sector Foundation, the National Economic Empowerment Council, the Business Council, TPSF and TCCIA:

- BRAC has 112 branches in Tanzania and they have 3,000 regular farmer group members whose saving/credit capacities they develop(ed) through trainings for which they have developed specific curricula packages. Referred to the latter, BRAC expressed a wish to upgrade their training packages with higher quality technical content such as with research on breeding/feeding/artificial insemination etcetera. BRAC has a livestock program (with focuses on maize and poultry), but never had any interaction with the TDB/other dairy partners. They are very keen to become partners in dairy. In collaboration with the national government, 150 staff have been recruited and trained in artificial insemination practices since 2011; they have also supplied the semen for 2 years through the government’s supply chain. It is not known which other semen suppliers exist, what the government’s supply chain exactly entails and what capacities exist (and-or are developed) within the decentralized government councils. BRAC recruited 20 graduates and 80 diploma level students from SUA to train them further in agriculture and crop sciences;
- All stakeholders met indicated that the current private sector umbrella organizations operate, almost solely, on the national policy level. So far, national and local level policies, rules and regulations have not been synthesized and this may partly explain there is little action to reform and-or design new policies influencing the dairy sector²⁷;
- The Empowerment Council under the Prime Minister’s Office has 2.3 million Tanzanian shilling (TZS) in its account. They claim that their initiatives have already benefitting 9.5 million people and they indicated that 45 cooperatives and 15 farms have been able to access funds during the last years. Almost all stakeholders that were met did not know about the fund and how to access the funds. The council is not engaged in the dairy sector yet; they indicated as the main reason that the livestock sector is not organized and that the “management” of pastoralists is very difficult. The council likes to receive a one-pager from the TDB/ILRI outlining areas for collaboration as they are keen to explore a partnership;
- The business council under the Prime Minister’s Office was established in 2001 and comprises of 20 government representatives and 20 private sector associations; none of the associations is related to the dairy sector. The council’s board does not have a representative on dairy though there is a board member who focuses on agricultural development in more general. "The regional business councils could be easily tasked to identify how many dairy associations exist at the national and local levels", said the business council. The council shared that they have huge challenges to establish “cooperative systems” and stated that they do not have a good policy and approaches towards developing/working with micro finance organizations and farmer associations. They indicated that the council requires substantive capacity development support on how to design (local level) public private partnerships. The council advised the TDB/ILRI to enhance knowledge capacities among the ministry of finance and ministry of planning as the “evidence” about how promising the dairy sector is not widely known. The council expressed willingness to more structurally engage with the TDB/others in deliberation processes and workshop events;
- The CRDB BANK PLC expressed interest to work together with the TDB to develop new products and services in the same realm as with other sectors (e.g. coffee, cotton). The bank indicated that they do not have specific “livestock insurance products”; they are very interested to learn from ILRI-IBLI’s initiatives. The bank indicated interest to work alongside the TDB to provide human capacities and finances to develop entrepreneurship and business management skills to meso/micro level (private sector) organizations;
- The Chamber of Commerce receives support (until the end of 2013) from UNDP/UNV to strengthen its capacities for innovative business support services. UNV indicated that the Chamber of Commerce is a strategic and good partner that showed solid progress towards developing internal capacities. UNV and

²⁷ A note on “Policies that work and do not work” will be developed in 2014 by, an at the DDF established, taskforce represented by the Ministry of Livestock and the Private Sector Foundation.

the Chamber of Commerce expressed interest to collaborate with the TDB/ILRI to design now project proposals.

7. Capacity Development Road Map 2014-2016

Costing a capacity development response is critical since it encourages stakeholders to realistically estimate the funding required for implementation. These can include leveraging other projects and resources and-or re-prioritizing actions. Since priority setting and (investment) decision making processes are inherently political, such a process should be managed carefully and transparently with involvement of relevant stakeholders. The costs for shorter-term capacity development response can be determined through activity-based budgeting. This starts from actions often already budgeted and planned. Projecting costs for a longer-term capacity development response is more complicated. If they cannot be accurately projected (which often involves using econometric modeling techniques), the costing exercise should probably be limited to costing actual, planned activities to avoid questioning the credibility or legitimacy of the costs. Elements of imputed costs may be estimated (and this is of course preferred) a priori and built into program or (new) project design.

Capacity Development work will be firmly embedded in the Tanzania Dairy Value Chain Strategic Implementation Plan for 2015 and beyond, and within the framework of below (five) flagships. Strong emphasis will be given to the value chain transformation and scaling flagship and its activities outlined during the planning meeting held in June, 2014.

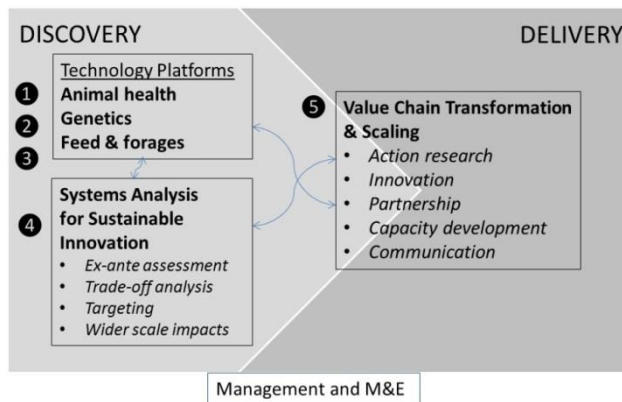


Figure 3: Five Livestock and Fish Research Program Flagships

Research Outcomes for flagship five are formulated as:

- Researchers are responsive in piloting and validating well thought out innovation;
- Researchers effectively share and communicate knowledge products targeted at various audiences;
- Impact change framework capturing all elements of (capacity) changes in outcome and outputs is in place.

Development Outcomes are formulated as:

- Various value chain actors increase business management and entrepreneurship;
- Organizations strengthened to improve gender equity;
- Development, public/private sector partners are more effective in delivering equitable and sustainable solutions;
- Development partners, public/private partners engage and are responsive to demands of value chain actions.

The flagship will have three major clusters of activities, namely:

- **Cluster 5.1: Piloting best bets**
Research Outcome: Researchers are responsive in piloting and validating well thought out innovations;
Development Outcome: Value chain actors improve business management and entrepreneurship;
- **Cluster 5.2: Capacity Development for VC Transformation**

Research Outcome: An impact change framework capturing all elements of (capacity) changes in outputs and outcome towards VC transformation is in use; Development Outcome: Development actors widely use new innovations;

- **Cluster 5.3: Implementation of interventions at scale**

Research Outcome: Researchers effectively share and communicate knowledge products targeted at various audiences; Development Outcome: Development actors widely use new innovations.

Key Activities 2014-2016:

- A questionnaire will be developed to assess the current status of strategic and integrated (gender) capacity development efforts within each flagships to determine initial areas for possible support, and subjects for research “investments”; recommendations and areas for initial support will be outlined based on the Tanzania SIP (2014-2015);
- A capacity development orientation process will be developed for value chain staff and non-capacity development scientists (2015);
- Capacity assessment methodology will be designed (2015);
- Potential capacity development service providers will be identified and assessed to co-deliver activities in specific IPs (2015)²⁸;
- The identification and selection of (formal/informal) organizations that will be beneficiaries of capacity development support provided by the CGIAR system and/or by service provider partners like SNV is foreseen for 2014 when it becomes clearer whose capacities (within each of the flagships) are to be developed on what, for what, by whom and through which means;
- An approach for fellowship programming will be developed (2015);
- Support strengthening of multi-stakeholder policy and knowledge sharing dialogue mechanisms to encourage innovation generation and diffusion by leveraging government-government, government-citizen and citizen-citizen engagement, strengthening practitioner capacities, and sharing expert knowledge (2014-2016);
- Within the already existing monitoring, evaluation and learning framework indicators for assessing the transformational impacts of capacity development interventions will be developed (2015);
- Capacity assessment and support provided for selected flagships in specific areas within IP frameworks (2015 and 2016);
- Value chain capacity development road map will be updated, strategy will be developed (2015);
- Training needs assessments will be completed and training modules will be developed and delivered, (2016).

Key Outputs:

- Report with recommendations and areas for initial support to strategic and integrated capacity development efforts within flagships and IPs (2014-2015);
- Capacity development orientation note and training (2015);
- Capacity assessment methodology (2015);
- Capacity impact framework (2015)²⁹;
- Capacity Assessment Reports for (farmer, hub) organizations and capacity development support provided identified by the capacity assessments (2015 and 2016);

²⁸ A strategy on partnerships will be developed in 2014. This will help the value chain to discuss with which capacity development partners / service providers it wants to engage with (as to not only to agree on fair sharing of resources, but also on sharing of responsibility and accountability for results). Funding is not the only measure or incentive for collaborative (partnership) arrangements, a role in the development of proposals and ideas is another, and a role in the management of the implementation of capacity development interventions is another. This is also important for sustainability and exit strategies as capacity development functions may need to be taken forward after the program ends.

²⁹ Results close the cycle and identify important evidence that in turn acts as feedback mechanism and a beneficial modifier that can correct flagship and value chain programming itself. The shorter the cycle, the quicker corrective interventions can be initiated. A focus on the process will not in itself be sufficient to lead to positive change. There will have to be a strong measurement framework, which should measure the marginal change of capacity and performance levels in the context of the research for development challenge being addressed. The process can lead to development only through results reflected in changes in performance and measured in terms of “better” research uptake, improved efficiency and effectiveness, leading to results-based sustainable development.

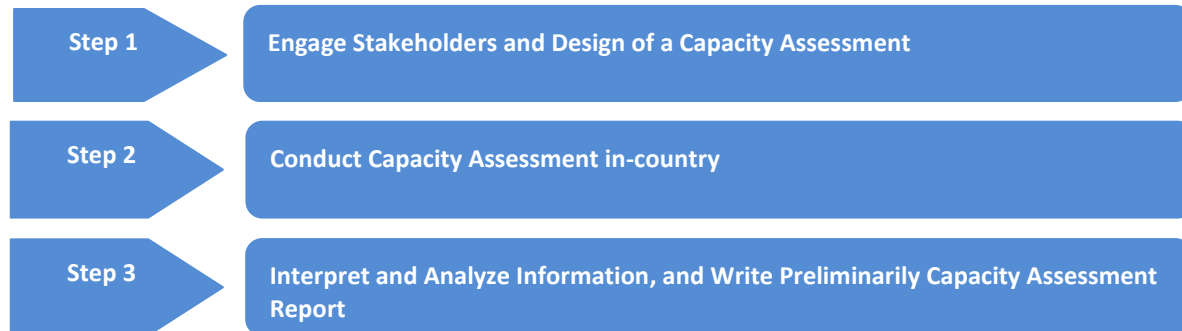
- List of potential capacity development service providers in selected value chains, assessment conducted (2015);
- Fellowship programmatic approach document;
- Value Chain capacity development strategy document and updated road map (2015)³⁰;
- Training needs assessments and training modules (2016).

³⁰ The effort and investment taken in the engagement and assessment phases come together in action during the design and implementation of the value chain capacity development strategy. Here, there is a great deal of emphasis on ensuring that strategies are implemented in such a way as to continue to promote ownership as well as alignment to national priorities and a strengthening of national systems. Experience has shown that setting up parallel (research) project systems is suboptimal. The implementation of strategies should be firmly aligned with and even embedded within existing flagship (research) initiatives as the concept of capacity is in itself cross-cutting across thematic and technical areas.

Annexes

Annex I: A Three-Step (Capacity Assessment) Approach

Three specific steps are set to systematically and rigorously, yet flexible and adaptable, facilitate a capacity assessment process:



Step 1: Engage Stakeholders and Design a Capacity Assessment

Step 1 The concept of research *for* development implies that a change must take place. It is the underlying supposition of this need for change which informs capacity assessment processes.

Rational

The capacity (needs) assessment process involves a number of aspects of dialogue and engagement, focusing on identifying which individuals, institutions, and stakeholder groups need to be involved in the given research and-or development process: what role they have and what stake they have in bringing about a change. This step is devoted to engaging stakeholders on the critical questions of **whose capacities** and **what capacities** (functional and technical) need to be developed. This approach is focused on process and is meant to generate a sense of ownership of decisions and actions.

Here, it is vital to have commitment and full support of the value chain coordinator and/or LAF's flagship/cluster leaders in order to gain access to relevant resources in the forms of dedicated time and availability from specific people and essential documentation (data and information). The representation of the client/partner organization in the team is critical, as their presence not only reinforces ownership of the process, but also provides a direct link to officials and key staff members of the organization, and help to facilitate dialogues and data collection.

Before conducting a capacity assessment tools, the scope and assessment objectives need to be determined. Quantitative and qualitative methods (such as questionnaires, focus group discussions and key informant interviews) may be developed. Given the contextual demands of an assessment and the diversity of stakeholder groups, questions are to be contextualized.

Step 2: Conduct capacity assessment in-country

Step 2 During the assessment, inputs will be collected either quantitatively or qualitatively. Since both have pros and cons, a capacity assessment should ideally generate both a quantitative ranking of capacity and qualitative information.

Rational

During this step quantitative and qualitative methods (such as questionnaires, focus group discussions and key informant interviews) will be applied to dive deeper into findings derived from the desk review and to gather new information. As part of the on-going stakeholder engagement it is important to conduct a validation meeting to corroborate preliminary findings and to provide an opportunity to share additional contributions or correct/adjust earlier provided information.

Step 3: Interpret and Analyze Information and Write (Preliminarily) Capacity Assessment Report

Step 3

Once stakeholder meetings have been conducted, and interviews (and questionnaires) have been completed the capacity assessment team will summarize and interpret the results. The process of analyzing the information collected from various sources and methodologies can be complex. In practice, during this process, ad hoc consultations and discussions with key stakeholders may continue to occur. The capacity assessment team may also consider further exploration in areas when additional information is required and-or when conflicting insights need to be interpreted before finalizing the analysis.

Rational

The assessment team will summarize and interpret its results. This starts with comparing the level of desired capacity against the level of existing capacity which helps to determine whether the level of existing capacity is sufficient or needs improvement. This in turn helps the team identify where to focus the initial capacity development response. When interpreting the assessment results, the team should try to discern patterns in capacity gaps. The assessment team may find that the data and information gathered from different sources provide conflicting insights, especially with self-assessments and qualitative data. Individual perceptions are influenced by many factors, and the same rankings may be interpreted differently by different people. It is therefore important to get a variety of perspectives and take into account different points of view when writing the (preliminarily) capacity assessment report (see Annex 6 for the report template). The report will reflect upon an integrated set of deliberate and sequenced actions, attempting to build momentum for the capacity development process by outlining a combination of high-priority short-term initiatives and immediate quick-impact actions, as well as long-term activities that lead to the desired capacity development outcomes.

Annex II: Gender Capacity Questionnaire Sent to Value Chain Partners in May, 2014

Objectives: to identify and analyze the factors that hinder efforts to integrate gender into organization programs/projects and to identify approaches to strengthen staff capacity to integrate gender in planning, implementation and evaluation of programs/projects.

Please mark the responses that most accurately reflect your answers to the following questions and statements about your organization.

PROGRAMMING

1. Are gender equality goals and objectives included in project or program activity designs?

- not at all
- to a limited extent
- to a moderate extent
- to the fullest extent
- do not know

How?

2. Does the implementation plan for your project or program include activities that strengthen skills and provide women/girls with equal access to services and training?

- not at all
- to a limited extent
- to a moderate extent
- to the fullest extent
- do not know

If so, can you provide examples?

3. Does the implementation plan for your project include activities that strengthen skills and provide men/boys with equal access to services and training?

- not at all
- to a limited extent
- to a moderate extent
- to the fullest extent
- do not know

If so, can you provide examples?

4. Have there been any gender analyses in your organization to determine gendered constraints and opportunities along the agricultural value chains you work in?

- not at all
- to a limited extent
- to a moderate extent
- to the fullest extent
- do not know

If so, what kind of gender analyses?

Types of value chains your organization works with:

5. Does your organization have any projects or programs that focus exclusively on gender equality?

- not at all
- to a limited extent
- to a moderate extent
- to the fullest extent
- do not know

Can you give a brief description of the project or program?

6. Do you use participatory methods to incorporate the views and preferences of both male and female community members in planning, implementation and evaluation projects/programs?

- not at all
- to a limited extent
- to a moderate extent
- to the fullest extent
- do not know

What kind of methods?

7. Is gender disaggregated data collected and used systematically in planning and reporting?

- not at all
- to a limited extent
- to a moderate extent
- to the fullest extent
- do not know

8. Do you monitor and evaluate gender impacts of projects and programs?

- not at all
- to a limited extent
- to a moderate extent
- to the fullest extent
- do not know

9. What are some of the obstacles to integrating gender in project planning, implementation and evaluation in your organization? Please check all that apply.

- lack of financial resources for gender programming
- lack of staff training or understanding of how to integrate gender into project or programs
- lack of tools on integrating gender
- lack of support from senior management
- low organizational priority for gender issues
- negative gender stereotypes
- other, please specify:

ORGANIZATIONAL OPERATIONS

10. Is there a person or department responsible for gender in your organization?

- not at all
- to a limited extent
- to a moderate extent
- to the fullest extent
- do not know

11. Is there assigned staff responsibility for gender integration in different field offices?

- not at all
- to a limited extent
- to a moderate extent
- to the fullest extent
- do not know

How many staff is assigned exclusively to integrating gender into your organization's work? Locations (s)?

12. Does your organization frequently draw upon the person(s) responsible for integrating gender?

- not at all
- to a limited extent
- to a moderate extent
- to the fullest extent
- do not know

13. Do project staff have the necessary knowledge, skills and attitude to carry out their work with gender awareness?

- not at all
- to a limited extent
- to a moderate extent
- to the fullest extent
- do not know

14. Has project staff been trained in gender awareness and sensitization?

- not at all
- to a limited extent
- to a moderate extent
- to the fullest extent
- do not know

15. Does your organization provide training and tools on gender planning, analysis and evaluation to their own staff, partner or local NGO affiliate staff?

- not at all
- to a limited extent
- to a moderate extent
- to the fullest extent
- do not know

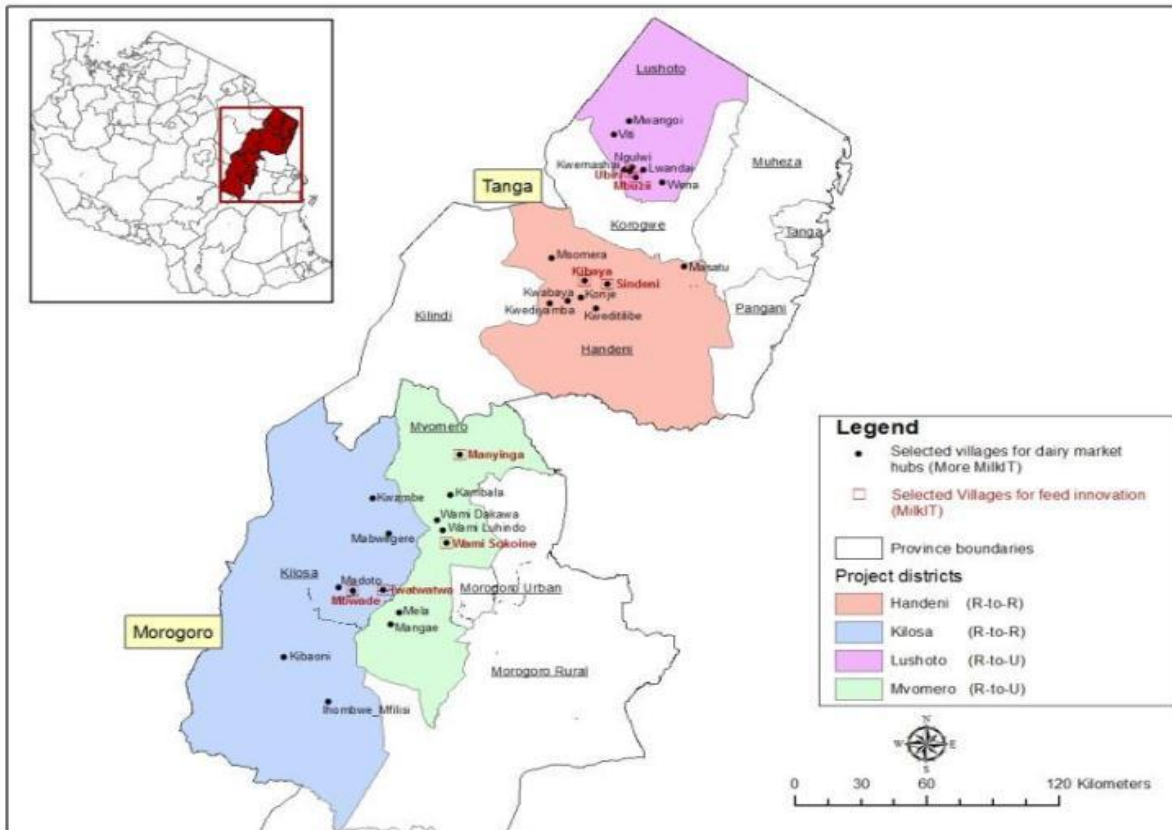
16. Does your project office have a written gender policy that affirms a commitment to gender equality?

- not at all
- to a limited extent
- to a moderate extent
- to the fullest extent
- do not know

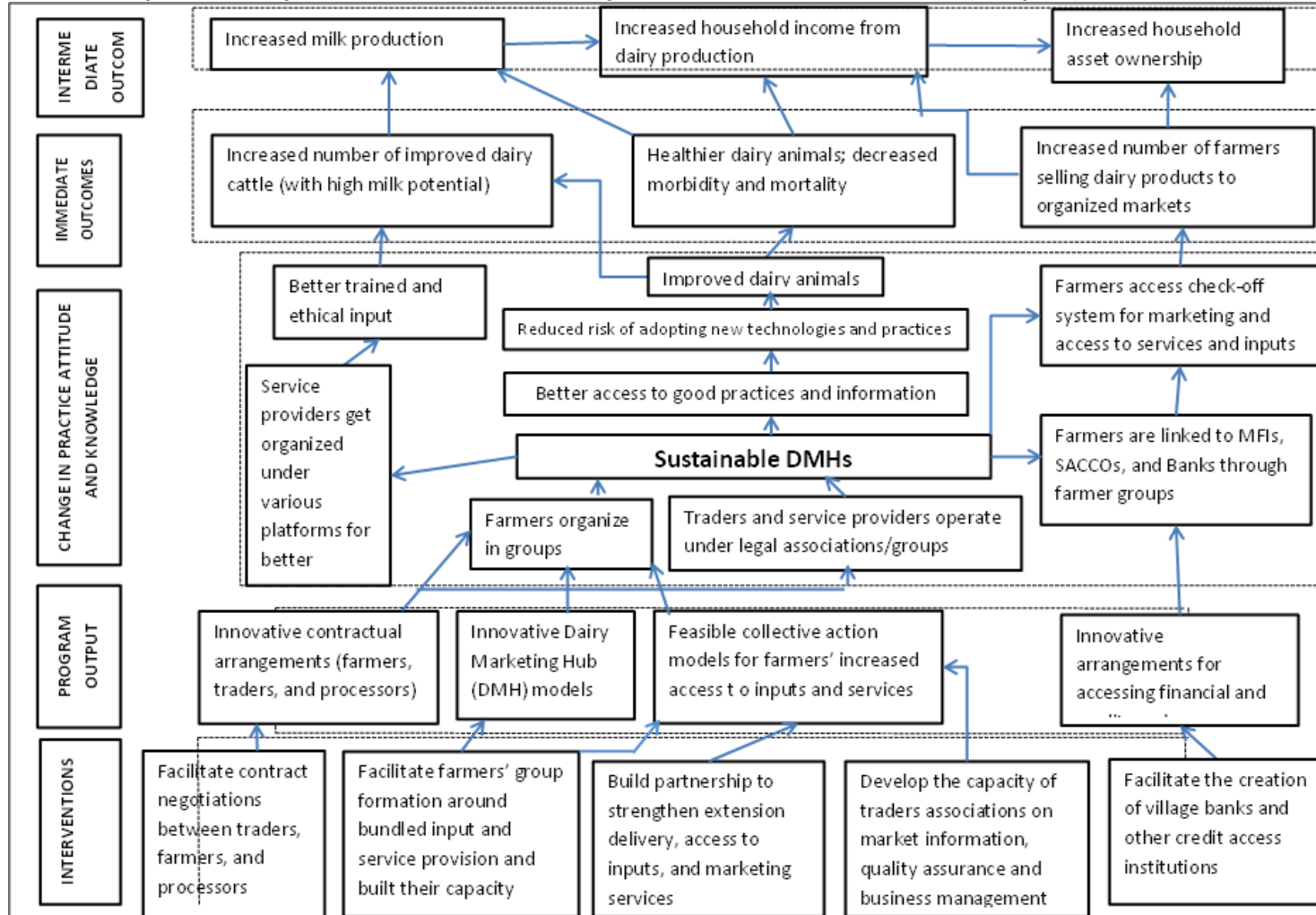
17. Has your organization budgeted adequate financial resources to support its gender integration work?

- not at all
- to a limited extent
- to a moderate extent
- to the fullest extent

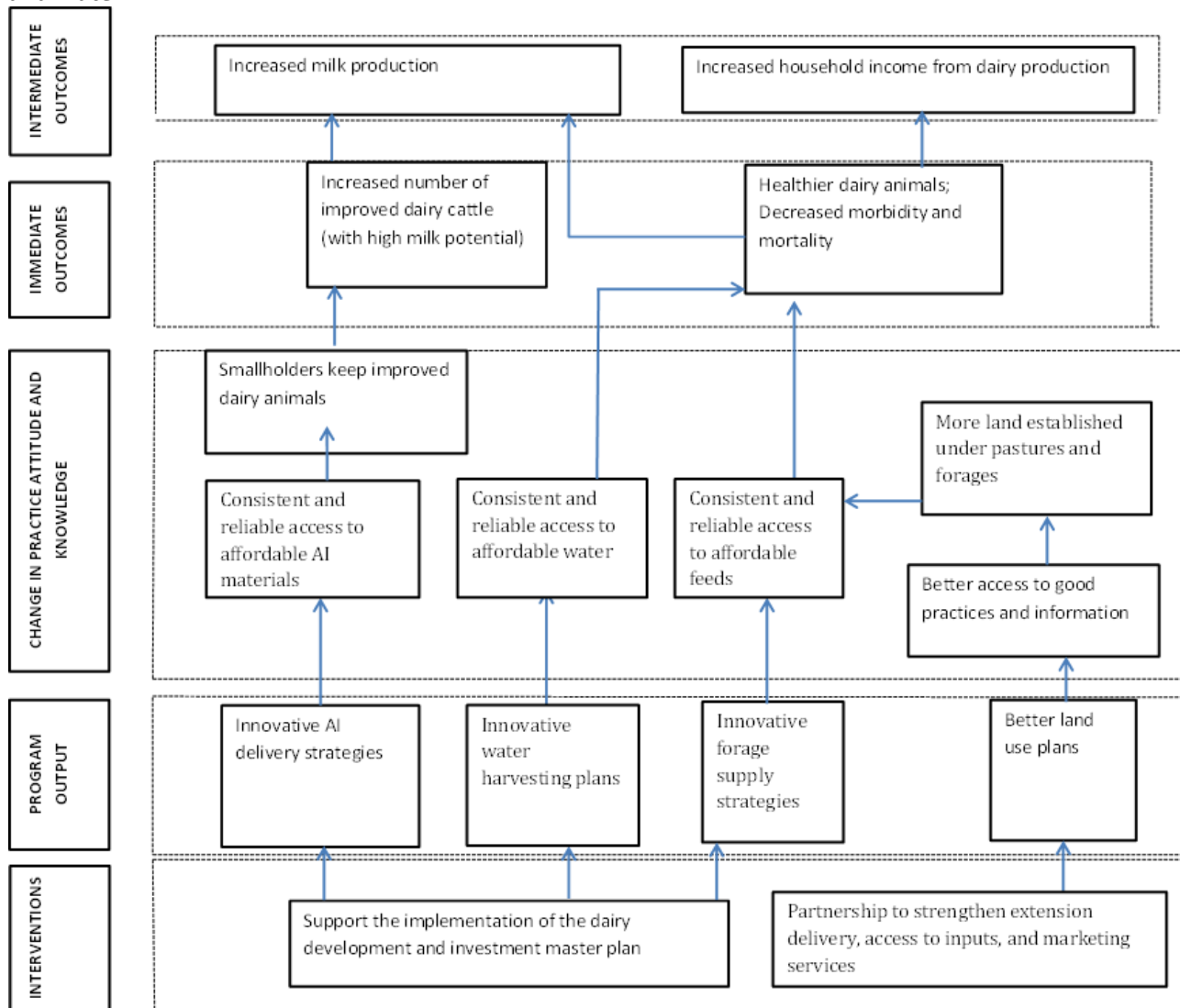
Annex III: Tanzania Maziwa Zaidi project sites



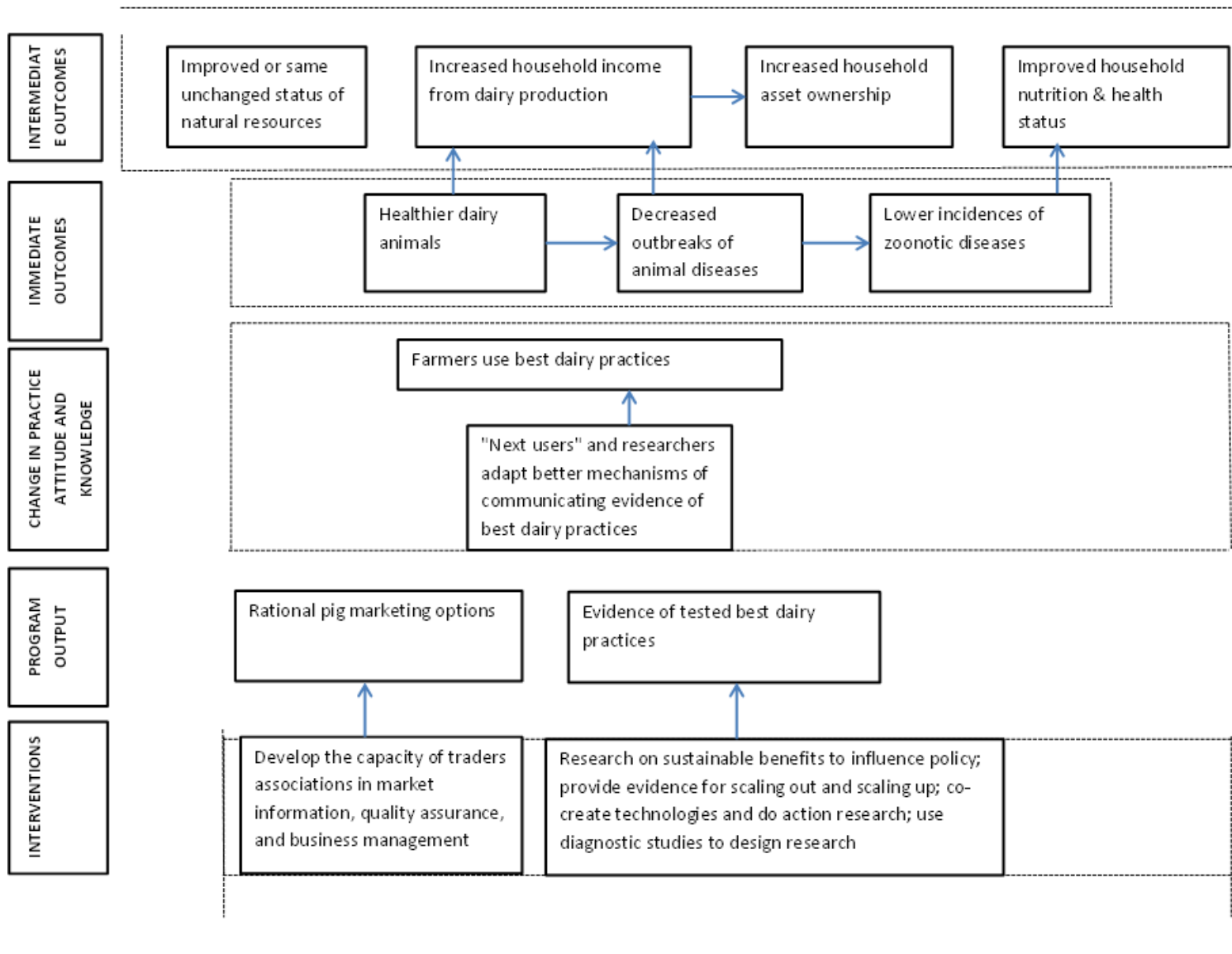
Annex IV: Impact Pathway 1 - Institutional innovations for reliable and consistent access to inputs and services



Annex V: Impact Pathway 2 - Innovative strategies for consistent and reliable access to Artificial Insemination materials and services, forage, and water



Annex VI: Impact Pathway 3 - Generation of evidence for achieving impact at scale and influencing policy



Annex VII: Impact Pathway 4 - Innovative strategies to increase consumption of dairy products

