



RESEARCH
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Livestock and Fish

More meat, milk and fish by and for the poor

Preliminary Capacity Assessment Uganda Smallholder Pig Value Chain

(reviewed) Draft

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Abbreviations

ADDIE	Analysis, Design, Development, Implementation and Evaluation
AFRISA	Africa Institute for Strategic Resource Services and Development
ASF	African Swine Fever
BMZ/GIZ	Bundesministerium für wirtschaftliche Zusammenarbeit und Entwicklung/Gesellschaft für Internationale Zusammenarbeit (Federal Ministry for Economic Cooperation and Development/ Agency for International Cooperation)
BRAC	A development organization from Bangladesh dedicated to alleviate poverty (formerly known as the Bangladesh Rehabilitation Assistance Committee and then as the Bangladesh Rural Advancement Committee)
CGIAR	An apex international research body made up of fifteen world renowned agriculture research institutes (formerly known as the Consultative Group on International Agricultural Research)
CRP	CGIAR Research Programme
DSIP	Development Strategy and Investment Plan
DVO	District Veterinary Officer
EC	European Commission
GDP	Gross Domestic Product
IDS	Instructional Systems Design
IFAD	International Fund for Agricultural Development
ILRI	International Livestock Research Institute
IMO	indigenous micro-organisms
INGO	International Non-Governmental Organization
KCCA	Kampala Capital City Authority
LAF	Livestock and Fish
MAAIF	Ministry of Agriculture Animal Industry and Fisheries
MTCS	Medium Term Competitiveness Strategy for the Private Sector
NAADS	National Agriculture Advisory Service
NAGRIC&DB	National Animal Genetic Resources Centre & Data Bank
NaLiRRI	National Livestock Research Institute
NARES	National Agricultural Research Systems
NGO	Non-Governmental Organization
ODI	Overseas Development Institute
PFA	Prosperity for All Programme
PMA	Plan for Modernization of Agriculture
SACCO	Savings and Credit Cooperative
SIDA	Swedish International Development Cooperation Agency
SNV	Netherlands Development Organization
TOR	Terms of Reference
ToT	Training of Trainers
UBOS	Ugandan Bureau of Statistics
UN	United Nations
UNDP	United Nations Development Programme
UNFAO	United Nations Food and Agriculture Organization
UPO	Uganda Piggery Organization
USAID	United States Agency for International Development
VEDCO	Volunteer Efforts for Development Concern
VSO	Voluntary Services Overseas

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Disclaimer

Providing capacity development (services) is only relevant if it assists the 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 three main Uganda pig value chain 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 four “Capacity Development” missions were conducted a Uganda pig value chain partner scoping study was not yet developed making it somewhat difficult to comprehend which organizations (government bodies, corporate private sector, donors, INGOs) are exactly involved at the different levels in the pig sector in Uganda. An “inventory” of (potential) partner (capacity development) service provider organizations was also not conducted. Without such baselines and as a result of the above, the mission was presented with challenges to identify and meet with the “right” stakeholders for (potential) national and local level capacity development interventions. However, the comprehensively developed situational analysis (2012) and a number of detailed research reports and presentations provided a very good background context to embark on.

The first missions focused initially on getting a better “picture” of the wider stakeholder environment; this was done through meeting separately with (new) stakeholders and by bringing together organizations and individuals at steering committee meetings of the Uganda Smallholder Pig Stakeholders Platform in September, October and November 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 ILRI's pig value chain program objectives.

Throughout the process quite a number of decisions were made in November/December 2013 which guides capacity development interventions planned for in 2014 including with government-, and development partners and UN agencies.

Introduction

As part of the global CGIAR Research Program on Livestock and Fish¹, ILRI is leading a major initiative to consolidate research and development efforts for a pro-poor transformation of the smallholder pig value chain in Uganda.

Through an in-depth screening process, ILRI identified the smallholder pig sector in Uganda as one of the livestock options where research investments are most likely to make a major difference to the livelihoods and diets of poor people, and since 2012 ILRI have been conducting research on the performance of the pig value chain, the challenges and opportunities for enhancing the pig/pork sector and identified promising best-bets for action

¹ CGIAR Research Program on Livestock and Fish, <http://livestockfish.cgiar.org/>

research and capacity development interventions which will both generate evidence for wider applicability and directly benefiting all actors involved in the value chain.

The program has begun engaging with research and development partners in Uganda, analyzing the pig value chain and its policy environment, and characterizing how smallholders currently raise and market pigs. These activities are part of a project entitled “Catalyzing the emerging smallholder pig value chains in Uganda to increase rural incomes and assets”, which is funded by the International Fund for Agricultural Development (IFAD), jointly with the European Commission (EU). The IFAD-EU project complements other on-going ILRI research in Uganda with public sector and university partners to address specific constraints related to African swine fever and food safety associated with informally-traded pork products (African swine fever Uganda project funded by SIDA and led by Swedish University of Agricultural Sciences in collaboration with ILRI; Safe Food Fair Food project, funded by BMZ/GIZ and led by ILRI). It also draws on ILRI’s track record in research on pig systems in Asia.

In recent years some localized efforts by the (national and local) government have been made, such as those of the National Agriculture Advisory Service (NAADS) as well as by NGOs such as Volunteer Efforts for Development Concern (VEDCO) and World Vision, to promote some degree of intensification, in order to increase productivity, control disease risks, reduce conflicts with neighbors, and mitigate negative environmental impacts, particularly in water sources. However, the coverage of those interventions were mainly concentrated “on farm level” and not other nodes of the value chain, and sometimes the applied approaches do not fully respond to market forces and farmers’ needs and expectations.

In Uganda, seventy-three percent of all households, of whom the majority is poor, depend directly on agriculture for their primary livelihood. Agricultural growth is an important instrument for poverty reduction and can be at least three times more effective in reducing poverty compared to growth from the rest of the economy. Recent studies show that access to productive assets, including all types of livestock, can provide rural households with a tremendous opportunity to generate income and to move out of poverty. Not only do livestock and livestock products play an important role in income generation, but they are also sources of high quality protein and micro-nutrients. While cattle are often controlled by men, poultry and pigs are commonly owned/managed by women, so supporting small-stock production naturally targets women with direct benefits to empowerment and to infant health and nutrition.

Over the past three decades the pig population has increased from 0.19 to 3.2 million. In 2011, Uganda had the highest per capita consumption of pork in Sub-Saharan Africa (3.4 kg person a year), a 10 times increase in the last 30 years, whereas beef is declining (UNFAO, 2011). More than 1.1 million poor households (18% of total in 2008) own pigs, mostly managed by women and children as a crop-livestock systems’ backyard activity².

The overall goal of the research program is to translate research into major interventions that stimulate pro-poor transformation in the smallholder pig value chains and to generate benefits at scale to improve food and nutritional security for poor households, improved livelihoods for value chain actors and better performance of smallholder pig value chain systems in selected areas in Uganda.

The overall goal to be achieved is to “Identify constraints and opportunities in the smallholder pig value chains”.

More specific goals are to:

- a) Developing, testing and evaluating best-bet options on improved pig husbandry and manure management practices, swine health, breeding management and improved diets to strengthen the pig value chain through improved productivity and environmentally sustainable practices at the farm level;

² The conditions within which the smallholder pig value chain operate in Uganda, An overview of past trends, current status, and likely future directions, ILRI, 2012

- b) Developing, testing and evaluating best-bet options on sustainable organizational marketing mechanisms and waste management practices to strengthen the pig value chain through improved pork safety and better access to inputs, services and output markets;
- c) Developing, testing and evaluating best-bet options to increase utilization of edible pig parts and increase consumer awareness about benefits of consumption of animal source foods;
- d) Informing policy to recognize and appropriately promote the role of pro-poor pig value chains in Uganda.

Long term impacts will be achieved through three main impact pathways³:

- 1) Innovative models for increasing farmers' access to quality and reliable inputs and services for improved pig productivity;
- 2) Strategies for improving supply and access to quality and safe pork products;
- 3) Innovations for improving farm management and disposal of pig waste.

Methodology

The (preliminary) capacity assessment was conducted by a team comprised of Dr. Danilo Pezo, ILRI's country representative in Uganda, Dr. Emily Ouma, Agricultural Economist – Livelihoods, Gender and Impact at ILRI/Uganda Dr. Michel Dione, Post-Doctoral Research Fellow – Animal Health/Epidemiology at ILRI/Uganda and 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 four (ILRI) missions to Uganda between September and December 2013; a desk review was conducted and relevant documents (prior to and during the missions) related to (past) capacity development initiatives were collected and analyzed.

During the last mission Ms. Diana Brandes – van Dorresteijn was accompanied by a consultant (Dr. Washington Ochola) who was recruited for an Instructional Training Designer assignment to guide consultants responsible for preparing technical modular content into a Trainer of Trainers (ToT) manual and field based training packages and to ensure the delivery of trainings.

CGIAR Livestock and Fish Research Program - Context

The CGIAR Livestock and Fish (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 signature for LAF success in Uganda is achievement of program development outcomes at scale (improvements in productivity, production, income, employment and household nutrition, reduction of environmental damage and better policies)⁴. This can happen if the program is successful in unleashing widespread development action and capability that transforms value chain functions along the three main Impact Pathways (see Annex 1).

³ The Uganda Pig Value Chain Impact Pathways Narrative, ILRI, September, 2013

⁴ These are the defined Intermediate Development Outcomes of LAF.

A Systems Approach to Capacity Development

A systems approach to capacity development accounts for contextual factors, such as individual constraints, organizational shortcomings, institutional interfaces and regulatory and cultural barriers, which may make efforts to develop capacities of value chain system actors⁵ ineffective.

An holistic and systematic approach is required for designing, implementing and measuring capacity development response strategies⁶ 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); and **the individual level** (the skills, experience, knowledge and motivation of people).

Under a systems perspective, transformation of research outputs into development outcomes and associated capacity development cannot be solely defined on the basis of a priori demand-driven goals or driven by very short term considerations. There is evidence that transformational innovations are often not demand-driven and scientists and innovators have 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.

The same logic applies to needs and opportunities for capacity development. Over time, enhanced competencies, skills and leadership of (pig) value chain system at the macro, meso and micro levels will increase understanding and attention to the multiple aspects, methods and tools of “capacity”, strengthen understanding of the systems approach, and enhance capacities to operate in complex organizational change processes that in turn will further support impact pathway processes.

Institutional development (as well as organizational change and strengthening processes) often begins with conducting an **institutional context analysis assessment** 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 markets operate, has a fundamental effect on the functioning on labor markets and the agricultural marketing system.**

Developing capacities in institutions and agribusiness markets in Uganda, like in any other country, is a subtle process in which partners are to engage in policy design, advocacy and reform processes, and to deliver advice (or create spaces for others to do so). This is particularly important in the case of the pig sector in Uganda, as it is not part of the priority commodities in the government development plans. This requires the stakeholders of the Uganda Smallholder Pig Stakeholders Platform to understand how they network and how they reach out to other actors in the local and global development landscape (through for example policy and knowledge networks); and how well they understand the settings they operate in (including the complex balance of formal and informal drivers of policy processes and the way these processes end up creating spaces for pro-poor change and impact).

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

⁵ 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 the national and local governments, private initiatives (businesses), Civil Society Organisations and NGOs and, which are embedded and can be considered permanent in those chains (Worsley, S., Development Partnerships Strategy, draft December, 2013).

⁶ Based on assessment methodologies and adaptive management.

require real-time data (systems), continuous monitoring, learning and 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 (based on an understanding of the continuous system change process), but also to revisit understanding what exactly is meant with “institutions”.

This “new” understanding requires that research as part of innovation processes, tools and data analysis have to be linked with longer term change processes foreseen in institutions, organizations, individuals, networks and so on. This demands sound understandings of the dynamics of innovative tools chosen and applied, what they capture and what not, how relevant research data is (and who decides on this), what kind of data (implicitly) induce and thus how they would need to be applied within the larger development process. The availability of research and innovative 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. Embedding research and facilitation of the multitude of tools and approaches in the larger development process are thus important aspects to be dealt with in capacity development approaches as well as in partnership development. Such an approach will need to be based on a continuous circulation of steps with re-assessment and fine-tuning, data collection and interpretation, re-evaluating strategy goals, direction and interventions etc.

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 the 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 in which s/he operates and the enabling environment. *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 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 which build:

- a) **Absorptive capacities:** LAF scientists are working to find solutions to critical value chain system constraints and opportunities within the three main impact pathways. 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. Value chain actors seek solutions to critical problems that block the functionality of their chains. According to these actors, are we doing the “right” research to tackle their issues in each of the three impact pathways? And are we truly developing national research capacities of value chain actors? Do we know what capacities are needed within national and local organizations to ensure research uptake?;
- b) **Adaptive capacities:** 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)⁷;
- c) **Foresight capacities:** These capacities are used to support strategic management, identify new business and increase the innovation capacity of individuals and organizations. Foresight is not the same as futures research or strategic planning. It encompasses a range of approaches that combine forecasting, forward thinking; planning (strategic analysis, priority setting) and; networking (participatory, dialogic) tools;
- d) **Collaborative capacities:** Organizations and networks need to have the capacity to work across sectors, to provide the leadership for development that is able to mobilize different stakeholder groups, to institutionalize stakeholder consultative mechanisms where key areas for action are identified, monitored

⁷ ODI, 2010, Towards a characterization of adaptive capacity: a framework for analyzing adaptive capacity at the local level.

and reported upon. Linked to this are data and information management that will support decision making for sustainability, accountability mechanisms that include citizen engagement, and which clearly identify commitments, roles and responsibilities, and are linked to the budgeting, policy making processes and overarching national poverty alleviation objectives.

Capacity Development Constraints

The stakeholders consultation held in 2011, the scoping missions and the value chain assessment conducted in Masaka, Mukono and Kamuli districts in 2012-2013⁸, the impact pathway workshop⁹ held in June 2013 and other meetings held revealed several capacity development constraints and opportunities associated with:

- **Smallholder pig production** and their engagement with **marketing systems**: Smallholder pig farmers struggle to get fair prices for their pigs, being the focus of pig production is either for local consumption or urban markets. This is caused by a significant **information asymmetry** between farmers and their associations (only 1 – 2 pig farmers were found to be organized groups in the three districts), the wider market and with distress selling which depresses prices¹⁰, and the need for cash to pay for urgent household needs induce pressure to sell pigs. Farmers do not practice **collective bargaining**, by the contrary deal independently with traders. Moreover, although traders are usually non-formally organized, they mostly agree together on how much they offer to farmers. Negotiation is undertaken in the moment that cash is needed, and pigs are sold forward to butchers or to traders. **Contract farming mechanisms** are not practiced in the Ugandan pig value chains. Transportation costs are relatively high because there are no **livestock storage facilities** at market places. Further, **value addition processes** to pork do not happen as much as they might because (in part) the knowledge of how to do make these products is not there, and most consumers do not demand for processed pork products.
- Women play a major role in pig micro enterprise development, especially at the production node. **Strengthening of women groups** and their ability to carry out collective marketing can help women protect their control of income from their enterprises. However, this will not assure that they will control income at the household level.

Strengthening the capacities of different actors through training of farmer and trader business groups and women producer groups, as well as women's **leadership training** in organizational development and management of business hubs, gender training for project staff and establishing institutional arrangements between the hubs and microfinance institutions to facilitate access to credit and services are components of future capacity development interventions to support the (economic) empowerment of women and to expand their capabilities and opportunities;

- **Lack of appropriate organizational models** for enhancing access to good quality and cheaper inputs, better services and pig markets¹¹: Pig farmers operate quite independently and are **not really organized**

⁸ The assessment was conducted in 35 villages of the 3 districts on a total of 1400 pig farmers; individual interviews were held with 53 veterinary service providers (veterinarians and para-vets), 85 traders of piglets and mature animals, 34 sellers of livestock feeds, 34 owners of agro-vet stores and 6 pork retailers. At the same time, the Safe Food, Fair Food project interviewed butchers and pork retailers and took pork samples for laboratory analysis.

⁹ Report on the Pig Value Chain Impact Pathway Workshop, ILRI, S. Worsley, June, 2013
(http://cgspace.cgiar.org/bitstream/handle/10568/33351/pigvc_June2013.pdf?sequence=2)

¹⁰ Pig prices are determined by eye-estimation of animal weight, whereas the real price is per kilogram of live or carcass weight.

¹¹ Most of the smallholder pig farmers lack voice and bargaining power as they individually sell their pigs to middlemen and transactions are based on visual estimates of weight, done mainly by the traders. This is often at the disadvantage to smallholder farmers, who are often women, and do not have the capacity to measure or estimate the weight of their animals. A high proportion of pig farmers sell their pigs individually to neighborhood butchers who often offer lower prices compared to other outlets. Often these are the only outlets available to the producers who may not be willing to look for alternative outlets due to low sales volume and the associated transaction costs. Enhancing producer bargaining power through organizational strengthening approaches, collective marketing and profitable market linkages should contribute to minimizing associated transaction costs and improving returns to the pig producers.

into collective associations so as to be able to exploit market potential. This means that their bargaining power on purchasing feeds and other inputs (as well as for selling live animals) is low, and consequently they pay higher prices than otherwise need be the case, particularly in the case of farmers in the rural areas. Within the chain, there appear to be no drivers or champions for such organization, nor any apparent incentive to get organized, moreover that local government representatives do not encourage to do so. There are no **national or local forums or platforms** whereby pig value chain actors can come together. Here, it is assumed that information does need to flow freely for effective organization to develop collaborative capacities among value chain stakeholders. There are significant opportunities to build sector resilience with the formation of national and/or regional platforms that could **advise on policies** and, at the longer term, encourage application of **local level public-private partnership models**;

- Most of the producers have **poor access to extension, animal health services, and finance facilities** (credit and insurance) needed to improve the pig enterprise. Access to such services is even more limited for women and their small enterprises¹². Smallholder farmers do not have acceptable access to decent livestock extension services because they are scattered over wider areas, the state has **no clear policy on providing agricultural extension services**, and suffers from **limited funding, skills and knowledge** required to build extension services that are operational. Frequently farmers engage with private extension and service providers, but very seldom with microfinance institutions and even the National Agricultural Advisory Services (NAADS). Here, it is assumed that these are poorly facilitated;

The aim of NAADS (established in 2001) is to empower economically active poor farmers in a sustainable manner. NAADS operates at the sub-county levels through local government extension staff, private service providers, and newly formed farmer institutions (village groups, community-based facilitators, farmer contact groups). NAADS facilitates the process of group formation, capacity development, and institutional innovations that are crucial in improving access to information and local demand for research and productivity-enhancing agricultural advisory services and technologies (MAAIF, 2008) but few pig farmers and enterprises (3-6) appear to be benefiting. MAAIF oversees the operation of NAADS but it is not directly involved in the implementation or monitoring of initiatives. The ministry of Finance and economic development provides support and funds to the NAADS Secretariat. Apart from NAADS there are a number of NGOs and projects such as VEDCO, World Vision, VSO, CARE and CARITAS that provide agricultural advisory services (including in areas where NAADS operate) and training on modern pig farming practices (ranging from the selection of breeds, feeding practices, disease control, and general pig husbandry) – see annex 2, 3 and 4 for more details.

Value chain actors - especially the smallholder farmers - struggle to **access decent financial services**, and lending services are not well distributed while agricultural insurance does not exist; this is underpinned by the assumed absence of local micro finance initiatives¹³. When it comes to the agricultural financing (both short and long-term loans), the agricultural sector is noted to receive only about 10 percent of the total lending capacity¹⁴. Transaction costs for financial services are very high and most loans from banks require collateral that is difficult for smallholders to come up with; consequently there is a disconnect between cash flow and loan terms. That said, BRAC (the Bangladesh-based international development organization dedicated to alleviate poverty) operates with 1,890 volunteer community mobilisers in 49 districts to offer

¹² The assessment revealed that there is better access by women to extension services in peri-urban sub-counties such as in Mukono-TC, Nyendo-Ssenyange and Katwe-Butego where they are organized into groups for accessing group-loan facilities or carrying out collective pig production activities.

¹³ A FinScope report on Uganda shows that about 70% of Ugandans had access to financial services in 2006, with a 57% level of financial inclusion among adult individuals (Agriterra-EKN, 2012); however, in the case of pig farmers, there is a low level of access to credit. There is need for detailed information on the proportion of pig producers, pig traders, and pig processors that use credit in their investment.

¹⁴ Situational analysis of small holder pig value chains in Uganda, ILRI, 2012, page 67.

short term lending by fostering local group organization for the purpose of providing loans, and this work offers a great impetus for group formation at local levels¹⁵;

Since the launching of the Uganda Rural Financial Services program, the number of Savings and Credit Cooperatives (SACCOs) has increased to over 2,800; membership of financial cooperatives has grown to 1,154,714 by the end of 2011; and the total savings have increased to Shs.83 billion. There are about 180 microfinance companies and financial services NGOs in Uganda.

- **Seasonality of feed supply and lack of capacity to develop nutritionally balanced feed rations:** The dependence on crop residues that are seasonally available, the lack of knowledge on **conservation strategies** and the limited capacity to buy and store cheap feeds when the supply is high are major limitations for the constant supply of feeds for pigs. The problem is enhanced because of the **high cost and poor quality of commercial feeds** (concentrates). The commercial feed industry basically focuses on the demand of the poultry and dairy sectors, with limited production of pig feeds; therefore, the production of concentrates for pigs is dominated by **small scale feed compounders** who face myriad problems including high cost of raw materials and seasonality in their availability. Feed processors and their input supply chains produce substandard feeds, and frequently use either extraneous bulking material (such as sawdust) or poor quality ingredients. Yet the prices charged remain high;
- **Poor husbandry practices and high mortality rates from diseases** such as African swine fever (ASF) due to poor implementation of biosecurity measures¹⁶. Currently, biosecurity measures are not properly implemented among the pig value chain actors due to **poor communication, lack of extension services** at the community level, **lack of knowledge** on piggery management, **lack of operational budget** for those institutions responsible for law enforcement and **lack of incentives** to improve biosecurity. Also, practices that could increase the **risk for foodborne and occupational (zoonotic pig) diseases** are posing possible risks to pork handlers. Next, there appears to be an **overwhelming demand** for veterinary services means that service levels are very limited. Drugs for effective treatment are available in the market, however, farmers perceive that drug stockist trade in substandard products (i.e. expired drugs), so farmers are not able to secure reliable medication for diseased stock. However, the problem could also be on the farmers' side for inadequate knowledge on proper medication (i.e. dosage, treatment administration);
- **Inbreeding and poor selection of breeding stock**¹⁷. The decline in the Uganda pig gene pool is underpinned by **high rates of inbreeding** (though more research evidence need to be collected on this), **limited access to** high quality genetic material and **inadequate breeding practices**. Farmers seem to have **little knowledge** about effective breeding. There are few breeding companies around, and the National Animal Genetic Resources Centre & Data Bank (NAGRIC&DB) of the Ministry of Agriculture, Animal Industry and Fisheries (MAAIF) **do not gather or keep pig progeny records**. The use of village boars is the most common practice among smallholders and artificial insemination services are unavailable¹⁸;

¹⁵ Other organisations include FINCA (Uganda), Centenary Development Bank (CERUDEB), and Finance Trust (Uganda). These institutions provide farmers with business start-up capital and sometimes small consumption loans. Access to credit in the rural areas is mostly through informal and lower tier micro-finance institutions such as the self-help associations and the SACCOs. In particular, SACCOs are reported to be transforming livelihoods in urban areas. The informal institutions or the lower tier micro finance institutions mostly provide relatively small loans to individuals, groups, and institutions. Besides these financial institutions, some non-governmental organizations including CREAM are extending credit to poor households.

¹⁶ The infectious nature and high mortality rates associated with ASF, along with the absence of a vaccine and the fact that the virus can survive in pork and pork products for a significant amount of time and hence stays infectious, has made ASF one of the most constraining diseases in pigs with a high potential for spread.

¹⁷ In the absence of artificial insemination programs, the main sources of pig breeding services are village boars which are often shared among pig farmers without proper selection and breeding management, and effective controls to prevent the spread of diseases.

¹⁸ It is believed that, in effect, negative genetic selection is practiced by farmers through the selling on of faster growing piglets. On farm breeding practices are not robust enough to prevent closely related pigs from mating. Our poor understanding of the actual genetic diversity of the Uganda pig population means that we do not have a sense how far germplasm has to move to

- **Non-structured pig meat inspection and lack of capacity by inspectors:** There is a lack of designated slaughter places in both urban and rural areas which results in pig slaughtering being dispersed, which makes it very difficult for the already **understaffed** (national and local) veterinary officers to inspect slaughtered pigs; moreover, **condemnation policies are not enforced**. Due to the high demand, a large proportion of the **meat is marketed informally** without any prior inspection. There is also lack of **inspection capacity** for pork due to **limited coverage of the subject in the Vet School curriculum**;
- **Poor household nutrition:** Results from the Uganda National Panel Survey (2013) show low household **dietary diversity** in some regions coupled with childhood stunting. There are considerable **social and cultural barriers** that affect consumption and ways in which pork products are accessed by women and children as they are effectively precluded from its consumption;
- **Poor waste management:** Pig rearing units discharge effluents (e.g. manure) that lead to environmental pollution. Around production units, bad smell creates conflict with local residents and neighbors. In and around farms, untreated waste gives rise to health risks and disease, including worm infestation. **Improper disposal** of pig carcasses¹⁹ can contribute to water quality problems. The level of manure utilization defines the amount of nutrients released into the environment which can contribute significantly to increased soil fertility when used appropriately. Evidence is lacking about **technologies** being promoted to minimize the negative environmental effects associated with pig production such as the use of indigenous micro-organisms (IMOs) and lagoons for waste collection²⁰. There are no **public regulations** to guide the disposal of pig waste and this means that poor waste management has effectively isolated butchers who slaughter on site. There are opportunities to address these issues through extension services, and through better local authority regulation.

NGOs that promote **green energy solutions** such as pig slurry biogas are seen to offer meaningful solutions. There is seen to be scope to develop skills and knowledge on the use of pig waste.

- **Policy Framework:** Although the livestock sector contributes to 15% of agricultural GDP (FAO, 2005), about 4.5 million households (70.8%) rear at least one kind of livestock/poultry and 1.1 million households (17.8%) raise pigs (MAAIF, 2009), the pig sector is not among the **priority areas** in the **Agricultural Sector Development Strategy and Investment Plan (DSIP)**. Efforts to achieve meat output targets are limited by livestock policies that focus more on cattle, goats and sheep and chicken enterprises²¹.

The privatization policy, the National Meat Policy (2003), the National Policy for the Delivery of Veterinary Services (2001) and the Decentralization Policy (1993) are being implemented to improve production, investment, meat processing, supply and level of domestic and export marketing of meat products but as said before, piggery is not yet considered a priority for enterprise development and investment allocation in the policy documents.

Grass roots information is not available to the Ministry (MAAIF) and to wider policy makers, and the Ugandan Bureau of Statistics (UBOS) maintains inadequate and unreliable data on the contribution of the pig sector to GDP (Gross Domestic Product) but it is assumed that they do have data from all stakeholders.

avoid inbreeding. Yet there is the sense that the breeding work that does occur focuses only on very few traits, and is leading to a reduction in overall genetic diversity. Moreover, health controls on animal movement effectively limit genetic movement. Right now, we do not know what new genetic material is needed, nor the genotypes that are suited to the various Ugandan production systems. There is potential to address this through government and non-government extension services, through input suppliers and with the support of training and research institutions.

¹⁹ In Uganda, there is no “culture” of fully utilizing the entire slaughtered pig, as is the case in Southeast Asia. At the slaughter node of the value chain, manure and many parts of the pigs including blood, stomach, intestines, and other organs are discarded due to lack of capacity on how to fully utilize them and knowledge gaps on nutritional value of the parts and by-products such as lard.

²⁰ <http://caes.mak.ac.ug/news-a-events/latest-news/717-imo-organic-piggery-technology-for-improved-yields-at-minimum-costs-no-smell-no-noise-no-treatment.html>

²¹ Importance of Pig Production in Uganda, a summary (PowerPoint presentation), ILRI, D., Pezo, 2012

It is widely believed that the low prioritization of the pig sector in the country's agricultural policy framework is a legacy problem of the unfavorable Idi Amin-era policies towards the sector with religious and cultural groups lobbying intensively against pigs. The **media** have promulgated a lot of negative publicity, have misused information, and seem to lack accurate information. However, it is assumed that they are impartial and they can hence be seen as a **force for change**. Within the private sector, government policy gives **priority to large investors** in other sectors, as opposed to national pig producers, like the ones who are members of the Uganda Piggery Association, who remain incipient, but could take up the case for greater strategic focus on pigs.

There are several rural development strategies such as the "Rural Development Strategy", "Prosperity for all", and the "National Development Plan" which at enhancing overall agricultural and rural development agenda through the provision of credit and micro-finance services. The Plan for Modernization of Agriculture (PMA) was developed as a holistic action strategy to facilitate the expansion of the rural economy through increased agricultural productivity, value addition and market access. In the same line, the Medium Term Competitiveness Strategy for the Private Sector (MTCS) was developed to target the areas of business environment and to facilitate the transformation of the private sector in terms of becoming competitive and functioning as an "engine of economic growth". Further, a new Rural Financial Services Strategy is implemented (since 2006). SACCO's were adopted to drive increased access to financial services in rural communities and are being used as instruments to achieve the fourth pillar of the Prosperity for All Programme (PFA) in Uganda to ensure that financial services reach the population in every sub-county.

Several policies and laws are in place to govern the processing and sale of compounded animal feeds, and they include: the National Animal Feeds Policy (2005) that aims at developing the animal feeds industry to further improve animal production and productivity. The policy emphasizes the importance of the private sector in spear-heading the supply of quality animal feeds. Nevertheless, there are still challenges related to the implementation as the Ministry of Agriculture, Animal Industries and Fisheries does not effectively implement the **Feed Standards policy**, consequently the feed processing sector is essentially unregulated. The Draft Bill (legal framework for implementation) of the policy has not been approved to provide a legal framework²² that is vital in guiding feed producers, traders, and regulators in the feed sector. Feed traders seem to be able to determine feed prices. Domestic research efforts do not focus on generating feed formulations that are appropriate for small holders. However, this analysis is seen as partial, because it focuses on the commercial feed sector, yet a large proportion of feed used in extensive pig production is fodder-based. There is therefore a need to explore ways and means to improve the **farm-grown feed base**.

Overall, it appears that the government does not understand the full scope and potential of current pig sector policy, informed as they may be by partial statistics. Because neither government nor influential development partners prioritize pigs and the pig sector is traditionally volatile, finance institutions and donors have not so far invested.

Two discussions were held with the UN(DP) management (incl. the UN Resident Coordinator and the UNDP Country Director) and it was agreed that a policy dialogue forum/event would be arranged early 2014 to bring together researchers, policymakers and INGO representatives to discuss about Uganda's agricultural sector and

²² Other related policies include the Food and Drugs Act that has been in operation since 1959 and requires that all premises of feed production be registered to allow for easy supervision by the authorities. The Public Health Act aims at minimizing poor hygiene in relation to premises used to process feeds and in all related activities. The involved personnel and feed handling procedures should uphold high level of hygiene. The National Trade Policy emphasise the importance of fair trade to enable traders to move out of poverty to prosperity and the Uganda Food and Nutrition Policy 2003 emphasize the importance of good feeding and food quality such as well produced pork. The Uganda National Bureau of Standards Act mandates the Uganda National Bureau of Standards to formulate national standard specifications for various commodities and codes of conduct and also to enforce standards, Situational analysis of small holder pig value chains in Uganda, ILRI, 2012, page 61.

food security issues. Such a forum will allow ILRI/partners to share research findings and address pertinent policy issues.

The Smallholder Pig Platform - A compelling rationale and a clear strategy

As mentioned before, Capacity Development (services) are only relevant if they assist LAF value chain actors to be (more) effective and efficient in their work, to be better performers, more stable, and to become more adaptable (resilient?) in addressing (sustainable) development challenges, and help them address their priorities.

Institutional arrangements like national or sub-national platforms can facilitate collaboration and help to identify and understand roles and responsibilities of the different stakeholders. Overlap and duplication of efforts, as several parties may do the same thing, to crucial tasks being left undone, can then be minimized. Having a vision, plan, or strategy that provides a compelling rationale for collaboration, clear direction, a timeframe for action, and measurable results is vital for successful collaboration. Collaboration is not an end in itself, and it has significant opportunity costs in terms of time, financial resources, and even emotional energy. Participants must feel that these costs are in the service of a worthwhile end. Collaboration tends to be most successful when stakeholders clearly see collaboration as critical to achieving their goals and feel a pressing need to do so as a way address an urgent threat.

Knowledge, or “literally” what people know, underpins capacities and hence capacity development. Knowledge has dual purposes before and throughout collaborative capacity development. First, effective approaches to knowledge promote collaborative development processes, and knowledge inevitably reveals interconnections and interdependencies that once recognized, lead to collaboration. Next, knowledge is a necessary driver of collaboration because without open sharing of assumptions, priorities, perspectives and plans, collaboration cannot deliver improved development results. Commitment to “collaborative knowledge” is particularly valuable in the form of research and scanning exercises that go beyond the status quo and include a wider scope of inputs, outreach and influence that is transparent and seeks to identify mutual opportunities, and collectively owned and operated mechanisms.

After an “impact pathways” workshop held in June 2013, the Uganda Smallholder Pig Platform (steering committee) was, initially somewhat loosely, set up. Its current members represent ILRI, VEDCO, Agro Empowerment Centre, DVO-Masaka and the DVO-Mukono and the Kampala Capital City Authority (KCCA). In November 2013, SNV and VSO joined the platform too²³.

Collaborative capacity development is fundamentally about facilitating change

In December, and as a result of the (preliminary) capacity assessment process, SNV agreed to take the leadership role to facilitate the platform and to initiate discussion about developing a clear Terms of References of the platform and its members, to discuss about a plan to expand new membership and to design an action plan and agenda for a larger meeting planned for March 2014.

Some pertinent challenges that will be considered in the next months include:

- How do particular national policies, institutional frameworks, investment decisions and related change processes help or hinder sub-national capacity development for the pig value chain stakeholders?;
- How to create links between national and sub-national institutions to plan, manage, and deliver better on policing, research and capacity development in the pig value chain?;
- How best design, utilize and disseminate both national knowledge (scientific and explicit) and local knowledge (traditional, experiential, and tacit) to address critical development challenges linked to the pig value chain (e.g. climate change adaptation, local economic development, gender empowerment etc.)?;
- Research to look into the similarities and differences of (setting up) pig business hubs and dairy hubs. It is believed that a hub model may be attractive to traders and attract farmers to collaborate, for example, on

²³ Potential key partners will include: the National Agricultural Research Systems (NARES) including the National Livestock Research Institute (NaLiRRI), MAAIF, NAADS, Local Governments, Makerere University, BRAC, UN(DP) agencies, farmer groups including Wambizzi Cooperative-Abattoirs, Buwanguzi Butaba Farmer groups, the Uganda Piggery Organization (UPO), Pig Production and Marketing Uganda (private business), input suppliers and private veterinary businesses.

finding better ways to current weighing systems to improve farm gate prices and to get organized in cooperatives. Such hubs can take the form of “feed banks”, slaughter slab/houses and/or auction markets. Many stakeholders feel that before setting up hubs (pig) farmers need to be better organized because at the moment strong farmer organizations and (pig) cooperatives are lacking.

Overall, the platform will consider the centrality of sub-national stakeholders and, in turn, the importance of strengthening local level capacity to enhance food security and reduce poverty. The fact remains that it is often at the local level where capacity is the weakest and real success will depend on actions at that level, therefore dedicated investments in local capacities are required, as well as a focus on strengthening local institutions and systems. However, such actions also depend on having supportive policies at the central level, and effective leadership and incentives at all levels. Capturing evidence regarding what works in terms of strengthening the "right" institutions at both local and national levels, in different contexts and countries, will thus be critical to define/polish the value chain (research) strategy.

(Priority) Capacity Development Interventions for 2014

As an outcome of the missions it was decided in November by the Uganda country team, the Smallholder Pig Platform steering committee and ILRI’s capacity development team that a specific capacity development assignment would be developed for 2014 with the aim to:

- Deliver appropriate training interventions to service provider organizations, farmers and other actors of the value chain within the three districts and counties and to prepare eight training modules pertinent to best-bets themes namely on: a) animal health; b) feeding; c) breeding and; d) economics: business management, enterprise development and finance;
- Develop lessons' plans on how to prepare training modules on components of pig production systems and develop a (ToT) training manual; and to deliver a ToT training to national and local partners which includes simulation exercises for participants. The modules will be contextualized to train local farmers; a training package for selected ToT trainees, who will be extensively coached, will also be developed.

The curricula that will be developed will be based on an Instructional Systems Design (ISD) model called ADDIE. The ADDIE model is a framework that lists generic process that instructional designers and training developers use, representing a guideline for building effective training and performance support tools in five phases as illustrated below (**A**nalysis; **D**esign; **D**evelopment; **I**mplementation and **E**valuation):



(Curricula) Design and Delivery Models

An “Instructional Training Designer” (consultant) was recruited in December and it is foreseen that 6 national consultants will be recruited by the end of January 2014. The national consultants will review existing (training) materials around best bets themes, contribute to content creation and adaptation of specific best-bets themes, and review, adjust and finalize the materials after field testing. Writeshop events and ToT training(s) are scheduled for February/March and field testing is planned for April and May.

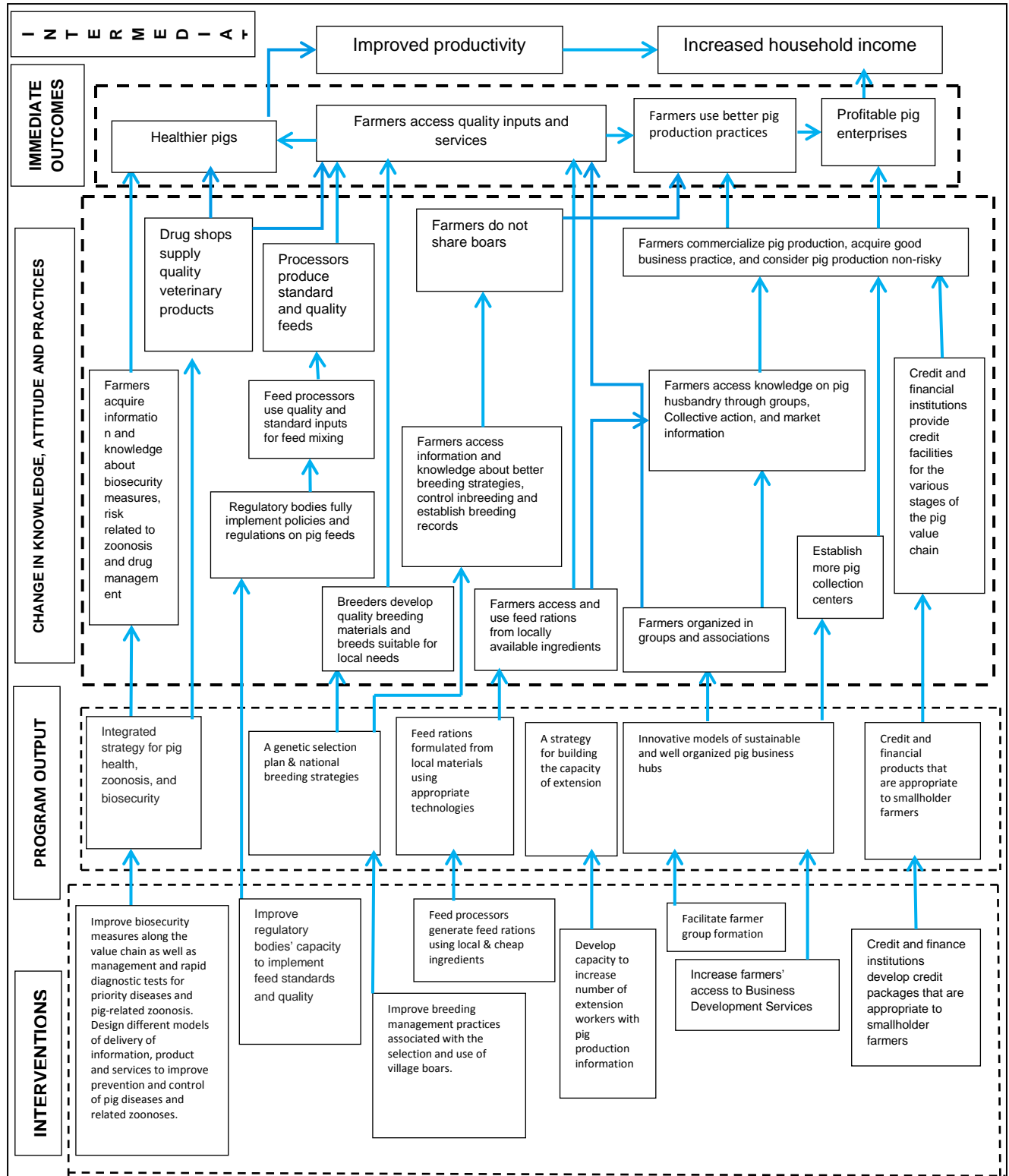
Although formal collaborative agreements are not yet in place, the training modules will be developed and delivered in close collaboration with NAADS, SNV, BRAC/Uganda, the Africa Institute for Strategic Resource Services and Development (AFRISA) from the Makerere University and Voluntary Services Overseas (VSO) Uganda to ensure, ahead of time, institutional take up.

A number of stakeholders operating along the pig value chain in Kamuli, Mukono and Masaka districts have already been identified (see Annexes 2 and 3) as they will be the primary beneficiaries of the trainings. So far though, it is not fully known yet which local organizations, besides the local NGO VEDCO, can act as (potential) local service provider organizations but this will be explored during the next few months.

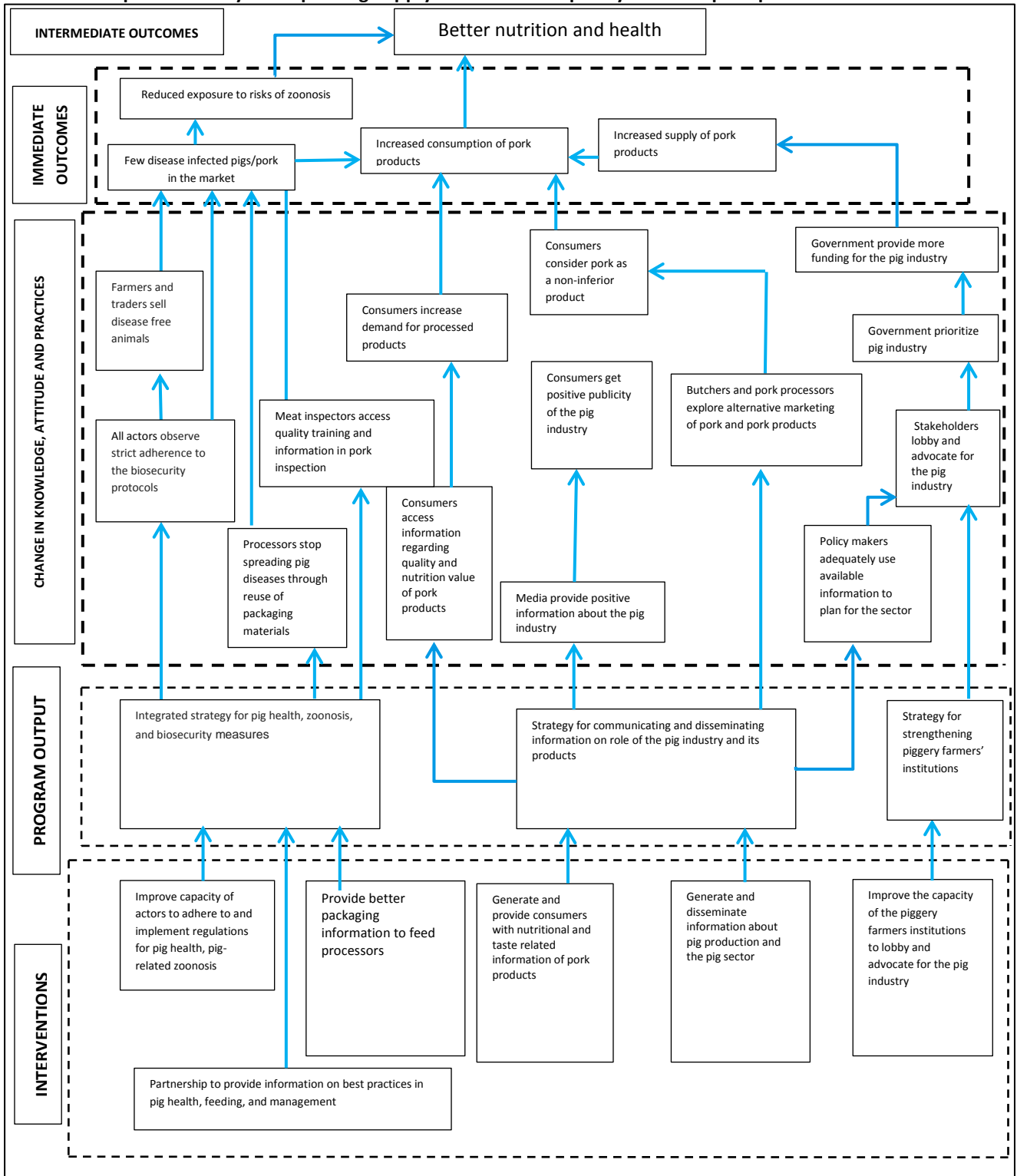
Annexes

Annex 1: Three Uganda pig value impact pathways

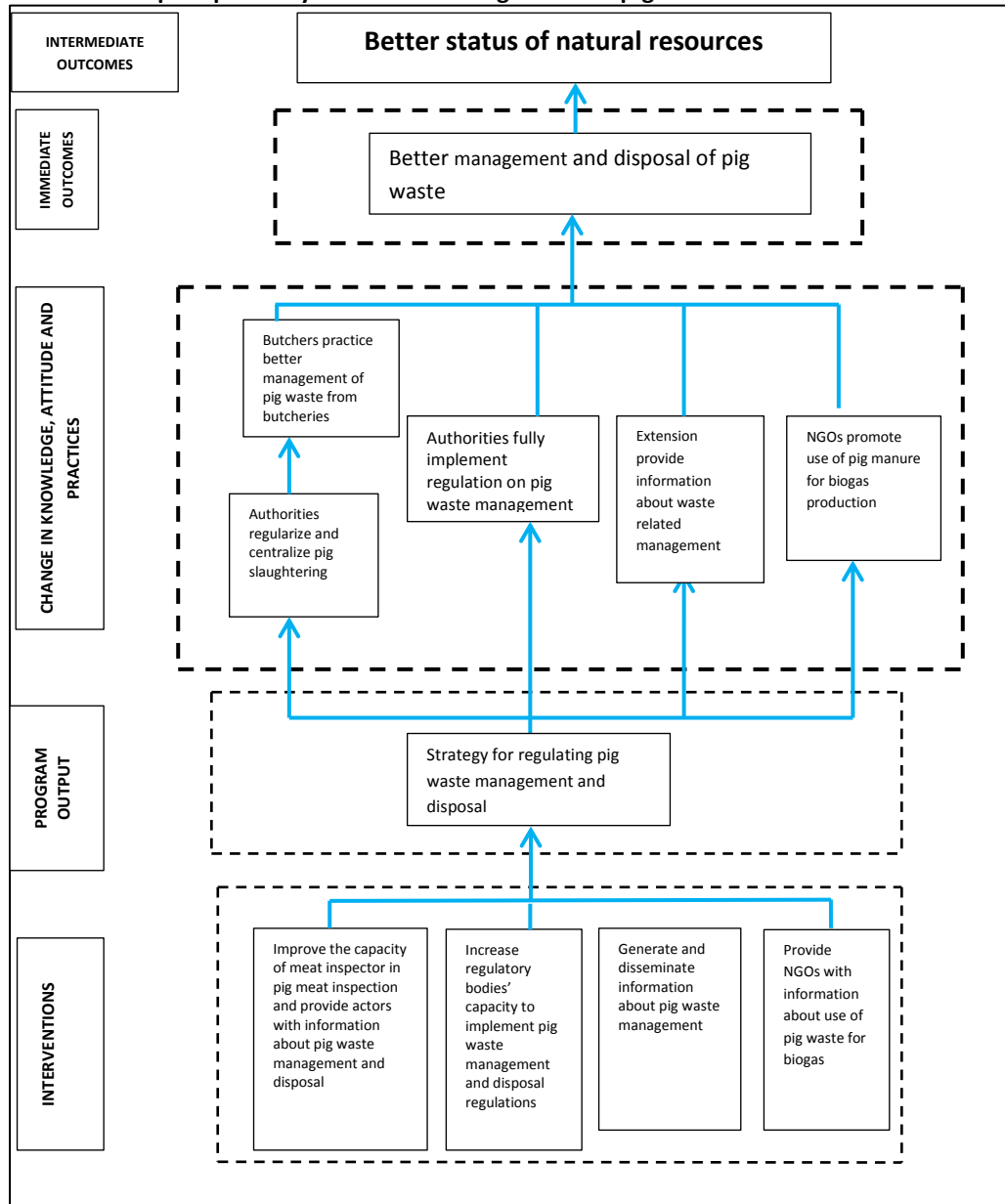
Annex 1a: Impact Pathway 1 - Improving access to quality and reliable inputs and services



Annex 1b: Impact Pathway 2 - Improving supply and access to quality and safe pork products



Annex 1c: Impact pathway 3 - Better management of pig waste



Annex 2: Organizations operating along the pig value chain in Kamuli, Mukono and Masaka districts

A. Input supply and services

Organisations	Type	Kamuli	Masaka	Mukono	Contacts
Food for the Hungry Uganda	INGO			X	N
Plan Uganda	INGO	X			Y
Vi-Agroforestry	INGO		X		N
CARITAS-MADDO	NGO		X	X	N
VEDCO	NGO	X			Y
World Vision	INGO		X	X	N
NAADS	National				Y
NAGRC&DB	National				Y
NADDEC	National				Y
Farmgain Africa	Private				Y
Agrinet	Private				N
Biyinzika Development Group	Private			X	N
KAYODA				X	N
Nserester Farm	Private		X		
RUCDO	Savings	X			N
CO-SAVE	Private		X		N
SSEKA	Private		X		N
UNAFSA	Private?	X			N
VSLA	Private?	X			N
Animal Health Service Providers	Paravets	X	X	X	N
Veterinarians		X	X	X	Y
Village SACCOs	Communal	X	X	X	N
Jinja Nile Breweries (for brewer's waste)	Private				N
NUVITA Feed Millers	Private				N
Nsaava Feed Millers	Private		X	X	N
Bulemezi Feeds	Private			X	N
Mukima Feeds	Private				N
FINCA	MFI				N
Faulu	MFI				N
BRAC	MFI/Devt		X	X	Y
Opportunity Bank	Bank				N
Centenary Bank	Bank				N
Katosi Women's Trust	MFI			X	N
PRIDE	MFI				N
Tujja SACCO	SACCO			X	N

B. Production

Institution	Type	Kamuli	Masaka	Mukono	Contacts
Agro Empowerment Centre	Private				
Local Government	District	X	X	X	Y
Kabonera-Kyanamukaaka Pig Farmers Association	Group		X		Y
Kamuzinda Farm	Private		X		
Akwata Empola Women Group	Group		X		
Buwunguzi Buntaba Farmer group	Group			X	
VEDCO Pig farmers associations	Group	X			
Kewerimidde group	Group		X		
Akaguba group	Group		X		
Uganda Piggery Organisation	Private				Y

C. Collection/Bulking/Transporting

PPM Ltd	Private				Y
Small scale traders	Private	X	X	X	N
Large scale traders	Private	X	X	X	Y

D. Slaughtering

Wambizzi Cooperative	Private				Y
Slaughter slabs	Private			X	Y
Backyard slaughters	Private	X	X	X	N

E. Processing

Fresh Cuts	Private				N
Quality Cuts	Private				N
Farmers' Choice	Private				N

F. Retailing

Local butcheries (we know some in each of the districts)	Private	X	X	X	Y
Supermarkets (Kampala)	Private				N

G. Consumption

Pork Joints	Private	X	X	X	Y
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Others: KCCA, Uganda Bureau of Standards

Annex 3: Organizations operating in Kamuli, Mukono and Masaka districts, sub counties and village level

District	Sub-county	Village	Organisations	Activities
Masaka	Nyendo-Ssenyange	Ssenyange A	BRAC Kitovu Mobile	Livelihood activities and microfinance Counseling HIV/AIDS
		Kitovu Nnume	BRAC CARITAS-MADDO	Livelihood and microfinance Promotion of dairying especially zero grazing
	Katwe-Butego	Kirumba-Katwe	NAADS Medical Research Council Centenary bank/Pride Akwata Empola Women Group	Agricultural advisory services + technology Medical research Financial services Women group engaged in pig farming.
		Butego	NAADS World Vision	Agricultural advisory services and inputs (piglets) Supports the needy.
	Kimanya-Kyabakuza	Kyabakuza A	World Vision CARITAS-MADDO Child Care International NAADS	Supports orphans and promotes IGA. Promotion of dairying, especially zero grazing. Supports orphans. Agricultural input provision and training.
		Kijjabwemi	Vi-Agroforestry Compassion International NAADS	Training and demo centre on agroforestry resources. Supports vulnerable children (scholastic materials) Agricultural advisory.
	Kabonera	Kabonera A	World Vision Kitovu Mobile Medical Research Council BRAC, FINCA, FAULU NAADS	Livestock inputs and breeding pigs. Counseling HIV/AIDS. Medical research. Loans to women in groups. Agricultural advisory + inputs (seeds/piglets)
		Kyamuyimbwa	World Vision Your neighbor MADDO Heifer International	Supports orphans and also provides farm inputs Provides farm inputs (maize and beans) and is also a prayer palace. Advisory services on farming and livestock keeping. Promotes dairying.
		Busagala-Kiziba	World Vision Kitovu Mobile BRAC NAADS	Supports orphans and promotes IGA. Counseling HIV/AIDS Loans to women in groups (and individuals – men) Agricultural advisory services
	Kkingo	Kisoso	MADDO VCCI	Training in farming. Tree planting, building wells.

			Get smart NAADS BRAC CO-SAVE	Prevention of domestic violence. Provides farm inputs. Provides micro credit to groups. Supported by VCCI – promotes savings
		Kabukolwa	CO-SAVE NAADS World Vision MADDO UCDA	Promotes savings. Agricultural advisory services, inputs. Supports the needy and promotes livelihood projects Supports the needy. Partners with NAADS to provide coffee planting materials to farmers.
		Ssenya	World Vision CBHC SSEKA	Support community based livelihood activities. Health based. Trains farmers.
	Kyanamukaaka	Kanoni-Bukunda	NAADS World Vision Kamuzinda farm?? Kyanamukaaka-Kabonera Pig farmers Association	Agricultural advisory services. Supports vulnerable children and livelihood projects. Pig farmer group
		Lukindu	CARITAS-MADDO AMPCAN NAADS	Promotion of dairying especially zero grazing Not indicated Agricultural advisory services
		Nkoma	Kitovu mobile NAADS	Counseling HIV/AIDS affected. Agricultural advisory services.
Kamuli	Namwendwa	Isingo A	UNAFSA BRAC VSLA	Advisory services on crops and livestock. Supplies vet drugs for sale to farmers in groups. Trainings on financial management.
		Isingo B	UNAFSA	Advisory services on crops and livestock.
	Kitayunjwa	Butabala	NAADS BRAC FETAS	Supplies farm inputs (seeds, poultry, pigs) and trainings. Training on livestock production – pigs, cattle and goats. Trainings on modern farming, marketing, record keeping.
		Kabukye	NAADS	Input provision, training and agricultural advisory services.
	Bugulumbya	Bukyonza B	NAADS VEDCO VSLA VHT	Training and advisory services. Input provision – poultry, pigs, crops. Promotes livestock and crop farming. Trains on village savings and loan management. Health-based.
		Baluboinewa	NAADS VSLA	Agricultural advisory services and input provision including pigs. Trains on village savings and loan management.

		Busubo	VEDCO VSLA	Trainings on crop and livestock enterprises, construction of pig sties Trainings on financial management.	
		Busuwa	NAADS RUCDO	Supplies inputs – coffee, maize, pigs, poultry, etc. Trainings on financial management.	
Mukono	Mukono Town Council	Ntawo parish	Biyinzika Development Group	Farmer group	
		Kitete	BRAC Opportunity Uganda/FINCA KAKAWA EADD/Send a Cow	Provision of loans. Financial services. Catholic-funded development agency – providing agricultural and microfinance services. Promoting dairy activities.	
	Goma	Misindye parish	AMCALL NAADS BRAC CARITAS	Health institution. Agricultural advisory services. Provision of loans. Agricultural related projects.	
		Kyoga	NAADS	Agricultural advisory services.	
	Kyampisi	Kasaayi	Tujja SACCO Arise and Shine	Loans and savings. Care for orphans.	
		Dundu	NAADS Tujja SACCO Arise and Shine	Provides inputs. Loans and savings. Care for orphans.	
		Buntaba	Food for the Hungry-UG CARITAS Buwanguzi Farmers Group	Provision of agricultural inputs, advisory services and health care. Agricultural support and microfinance. Large SACCO.	
		Bunakijja/Golomolo	KATOSI Women's Trust ANNPACAN	Gives out loans for construction of water tanks, toilets, etc. Promotes children's rights and domestic order.	
	Ntenjeru	Kazo/Kalagala	KATOSI Women's Trust	Provision of sanitary services.	
		Bugoye/Kabira	KATOSI Women's Trust KAYODA Kezimbira Farmers Group	Gives out loans, teach about sanitation. Savings association. Farmers' organization on agriculture.	
		Nsanja/Gonve	NAADS Ssasakawa	Agricultural advisory services. Provision of agricultural inputs esp. maize/beans, gnuts and soya	

Annex 4: Current partners involved in the Uganda smallholder pig value chain

	RESEARCH	DEVELOPMENT	OTHER	
		Irish Aid US Aid Banks (BRAC, FICA, Centenary Bank, VSLA, Financial Trust, Opportunity International) Uganda Pig Platform	AfDB IFAD BMGF World bank UN MBZ/GIZ BMF	
		NAADS VEDCO SNV CARE Heifer International VSO	AfDB IFAD BMGF World bank UN MBZ/GIZ	Implementing large-scale intervention in selected value chains
	National: NARO, NaLIRRI, NADDEC, Makerere Univ, NAGRIC&DB UBOS Private Sector: Uganda Industrial Research Institute International: ILRI, SLU Sweden, CSIRO, Iowa State, RTB CRP: CIP, IITA PIM CRP, A4NH CRP	National: NAADS Private Sector: Agro Empowerment Centre (I)NGOs: VEDCO, Grameen Foundation, Heifer International, SNV Sub-national levels: Local Government: Masaka, Mukono, Kamuli districts Associations: Uganda Piggery Organization Kabonera-Kyanamukaaka Pig Farmers Association Cooperatives: Wambizzi Cooperative	National: KCCA Private Sector: Fresh Cuts, PPM Ltd, Delamere Farms, Farmers choice, FarmGain, Agrinet (I)NGOs: Heifer International CARE, BRAC	In selected value chains: Assessing constraints and opportunities; testing best-bets; designing and piloting integrated upgrading strategy; policy engagement; strategic research on longer term constraints