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Food Security and Food Safety in Somaliland: Project Activities Implementing the One Health Approach

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Abstract

Using the transdisciplinary One Health concept is crucial to effectively tackle global priorities like food security and food safety. Vétérinaires sans Frontières Germany (VSFG) has implemented various projects in collaboration with local private and public stakeholders in East Africa for 27 years, by applying what is gaining recognition in the last years as the One Health approach. Under this concept, the health of humans, animals and the environment are inextricable, and thus there is a need to bring together multiple disciplines like veterinary and human health sciences, social and environmental sciences from the public and the private sector, academia and international development organizations.

In Somaliland, small amounts of animal source high-quality proteins and micronutrients are essential for growth and health of the population, whose demand is increasing. In this region, livestock related activities account for 60-70 % of the gross domestic product, employ 80 % of the workforce and contribute not only to the national economy but also to the food security of the region. Yet the market availability of local animal products remains unreliable due to climate conditions, low production and quality, poor marketing conditions and inadequate regulatory systems in the dairy and meat sector, among others.

The aim of this project is to improve food security and living conditions by enhancing access of consumers to local and high quality animal protein and stabilizing the livelihood of all members of the milk and meat value chain including producers, processors, vendors and Community Animal Health Workers (CAHWs).

To accomplish this, a holistic strategy has been implemented to promote the collaboration between all stakeholders. One of the key components of the project is capacity-building, in which the members of the milk and meat value chain, especially women, CAHWs and private veterinary drug suppliers received technical trainings and equipment. Another component covers construction and rehabilitation of basic infrastructures like Village Milk Centers and markets. In addition, a capacity assessment and training of relevant stakeholders in the public sector was conducted, to identify deficits in the public health regulation frameworks and contribute to policy development and implementation.

As a result of these activities, the quality of local animal source products has improved, hence increasing the income of producers, vendors and processors and the access of the population to hygienically improved animal protein. Moreover, the capacity to regulate and provide services by governmental institutions in the milk and meat sectors is enhanced ensuring quality and safety of food products.

Keywords: One Health, Food Safety, Food Security, milk and meat sector.

Introduction

In order to tackle the global priorities that are food security and food safety, a transdisciplinary holistic approach is needed. The One Health approach considers the health of humans, animals and the environment as inextricable, and thus multiple disciplines like veterinary and human health sciences, social and environmental sciences from the public and the private sector, academia and international development organizations should collaborate.

In pastoral communities, the interface between people, their livestock, wildlife and the environment is very intimate, and undernutrition, food borne hazards and zoonotic diseases represent a huge risk for health. On the other hand, these communities depend nearly exclusively on their livestock for nutritional needs, thus animal products provide essential high-quality proteins and micronutrients for the growth and health of the population^{1,2}. Vétérinaires sans Frontières Germany (VSFG) has implemented the One Health approach in various projects in collaboration with local private and public stakeholders in East Africa for the last 27 years. The Republic of Somaliland is a self-declared state in northwestern Somalia, which lacks of political recognition as an independent country and has been deeply affected by the civil war that lasted for more than two decades. Food security is today once again under threat due to consecutive seasons of poor rainfall, with the consequent shortage of drinking water, increased livestock deaths and crop failure³. Apart from these conflicts, Somalia ranks at the fourth highest global position of gender inequality⁴.

Milk, especially fresh (raw) milk, and meat are traditionally staple foods of the Somali population, yet the local production remains insufficient and these gaps must be covered with imports of ultra-heated milk and milk powder. Likewise, milk and meat products have also often low quality and are spoiled before reaching the consumer. Reasons for this are: actors of the milk and meat sectors, including producers, processors, vendors and CAWHs have poor knowledge on hygiene practices, poor storage conditions, minimal access to high quality inputs, services, infrastructure or technology. In addition, inadequate regulatory and quality assurance systems in dairy and meat sector provided by the responsible public sector institutions like the ministry of livestock and local government authorities represent a major threat to food safety.

Despite the above named numerous challenges, the livestock sector is still the main source of livelihood, with over 65 % of the population engaged in the industry in any matter⁵.

The main objective of this project is to improve food security and living conditions of consumers to local quality animal protein and stabilizing the livelihood of all members of the milk and meat value chain including producers, processors, vendors and Community Animal Health Workers (CAHWs).

In connection with this main objective, the project focuses on achieving following specific goals:

- To increase the total volume and quality of milk and meat marketed, which will be sold at better prices and improve the livelihood of the members of the food chain.
- To support the private sector and develop infrastructure
- To strengthen the capacities of the public sector to assume his crucial role in the food security and safety of the population

Material and Methods

Based on the results found by an initial situation assessment performed by external consultants, VSFG designed a holistic One Health action plan with interventions at all levels of the local milk and meat value chain.

Capacity Building and Strengthening

The producers (pastoralists selling milk and live animals), processors and vendors received consecutive technical trainings on hygienic standards and good practices that meet their specific training needs. These skills intended to enhance the quality and safety standards of milk and meat

products, thus increase also the actors' income through better selling prices and reduced milk and meat spoilage.

Moreover, they learnt simple processing techniques to add value to their products and extend the shelf life. The basic necessary equipment to convert fresh milk into more durable products, like ghee and yoghurt were provided to the beneficiaries.

The beneficiaries were supplied with hygiene materials, appropriate aluminum milk cans, processing equipment, stainless steel wheelbarrows and trades for meat handling, among others. Vendors/processors received trainings in business management, marketing and group governance, to monitor and increase capital and so expand the business and potential sources. Moreover, since most of the vendors/processors are women living under traditional patriarchal gender-roles, business association groups were formed as an empowerment strategy. The groups were granted with loans in order to increase their access to resources, generate income and build a stronger social status.

Twenty Community Animals Health Workers (CAHWs) received training to provide basic animal health care as well as disease report and surveillance service in remote places where the regular veterinary services are absent. Every worker received a kit with veterinary equipment and veterinary drugs.

Infrastructure construction and rehabilitation:

Four Village Milk Center, three milk sales posts, slaughterhouses and three meat stalls in urban centers are being built in the target districts with electricity, water, processing equipment and cooling systems to improve the processing and marketing conditions.

Capacity enhancement to regulate and provide services in dairy and meat sectors:

The public institutions responsible for the project area lack of consistent regulatory framework and implementation capacity. For this reason, staff members of the Ministry of Livestock (in charge of dairy and meat operations) and of the district municipalities level was trained on development and implementation of policies which will serve as guidance for the private dairy and meat sector. Awareness media campaigns helped to transmit the new framework to all levels of the chain, strengthening in this way the Public - Private Partnership, which is essential for the long-term success and sustainability of the project.

Results and Discussion

This project has helped to reconstruct and improve the local milk and meat sector in the intervened areas in a holistic way. As result of this project, the quality and safety of animal food products has been increased, improving the selling prices (0,8 dollar to 1,25 dollar per Liter of Milk). This translates into better livelihoods for producers, processors and vendors. Moreover, 15 women Income Generating Groups were formed and have received grants to carry out their business proposals, and so gain independence and social recognition.

On the other hand, old infrastructure has been reconditioned and new has been built to ensure appropriate processing and selling points, with access to water, basic processing equipment and cooling systems.

Newly trained CAHWs were provided with equipment to provide veterinary services and so improve health and general state of the local herds, bringing together more and safer animal products.

26 staff members from Ministry of Livestock and 75 members from the project districts were trained on policy formulation, implementation and evaluation. Moreover, two national level workshops/ debates on Livestock Development Strategy were jointly organized and conducted by VSFG, the GIZ (German Corporation for International Cooperation, deutsche Gesellschaft für Internationale Zusammenarbeit), World Vision International (WVI) and the Ministry of Livestock in the capital Hargeisa. The workshops were participated by public, private and development actors working in livestock sector and fulfilled the purpose of produced a five-year

strategic plan (2018-2022) for livestock production development and to clarify the roles of each actor and intensify the interrelations between them. Various radio and TV programs were aired, reaching the widest listeners of local stations and (over 1.5 million Somali audience), to enhance awareness and facilitate the participation of all stakeholders.

Conclusions and Outlook

Overall, the project contributed to better resilience to man-made or climatic shocks as livestock is made more resilient and the economic situation of producers, processors, vendors, CAWHs and drug suppliers is improved which makes them more flexible in responding to crises, including food crises.

Furthermore, the availability of local safe animal products to consumers has been improved by enhancing animal health and production levels and strengthening group governance (including the formation of cooperatives), business management and marketing capacities of the processors and vendors. Thus, higher quantities of hygienically improved animal protein are available in rural and urban markets. Those local products are affordable by more people as opposed to the imported alternatives. In addition, people's health has generally improved as a consequence of a richer and healthier diet.

Overall, it can be said that this project contributed to the following United Nation's Sustainable Development Goals:

- SDG 1 - No poverty: by increasing income-generating activities of various members of the milk and meat value chain.
- SDG 2 - Zero hunger: by improving quality and quantity of animal protein accessible to the population in the target region.
- SDG 3 - Good health and well-being: by increasing hygienic standards in the milk and meat value chain that reduces dangers to health and life
- SDG 4 - Gender-equality: by gender-sensitive implementation of the project and by specifically targeting disadvantaged women empowering them to become economically and socially more self-reliant
- SDG 8 - Decent work and economic growth: by increasing number and output of income-generating activities along the milk and meat value chain.
- SDG 13 - Climate action: by supporting agro-pastoralists in continuing extensive livestock keeping on rangelands that act as carbon sink mitigating greenhouse gas-induced climate change
- SDG 15 - Life on land: by supporting agro-pastoralist in continuing their mode of life, based on extensive livestock keeping

References

- 1) Zinsstag, J., Schelling, E., Daoud, S., Schierle, J., Diguimbaye, C., Moto Daugla, D., Ndoutamia, G., Knopf, L., Vounatsou, P., Tanner, M. (2002). Serum Retinol of Chadian Nomadic Pastoralist Women in Relation to their Livestocks' Milk Retinol and beta-Carotene Content. *International Journal for Vitamin and Nutrition Research*. 72, pp. 221-228.
- 2) Bechir, M., Schelling, E., Kraemer, K., Schweigert, F., Bonfoh, B., Crump, L., Zinsstag, J. (2012). Retinol Assessment among Women and Children in Sahelian Mobile Pastoralists. *Ecohealth*, 9(2), 113–121.
- 3) World Food Programme (UN) <http://www1.wfp.org/countries/somalia>
- 4) UN Development Programm. http://www.undp.org/content/dam/rbas/doc/Women's%20Empowerment/Gender_Somalia.pdf
- 5) FAO. <http://www.fao.org/somalia/programmes-and-projects/livestock/en/>