Impact Story 24:
Infrastructure for Food Safety Improvement in Local Markets

THE OPPORTUNITY

Local food markets are vital nodes in the food systems, serving as the link between consumers and producers, especially in rural and peri-urban areas. This is where consumers interact with the food system for the purpose of acquiring food. In low-and-middle income countries, there are often common challenges of market waste management, inadequate water and sanitation, and aging, damaged or unsafe infrastructure, among other constraints. As these markets can enable (or deter) access to food for residents and offer many food-based livelihood opportunities, they are critical to both food safety and sustainable regional economic development. As such, infrastructure improvements can support food system transformation in critical ways.

Buguruni market is a traditional food market in Dar-es-Salaam, Tanzania with about 2,630 vendors selling their produce to about 70,000 consumers daily. In a rapid assessment conducted in 2020, almost a third of consumers reported concerns related to food safety when shopping in the market.

THE SOLUTION

Market reconstruction is, by definition, a significant step towards food system transformation. The project was designed to improve Buguruni market's infrastructure to enable wholesalers, retailers, and consumers to meet their needs in a better environment, where food losses are minimised and where food hygiene and safety are assured. Infrastructure for food vendors was built with a combination of innovative techniques, from an air circulation system, solar lighting, and cooking gas system to prevent the use of wood and charcoal. The new additions of constructed toilets made more equitable access for all types of consumers and vendors including handicapped persons.

All market stakeholder commitments (e.g. ministry, local government, food vendors management and individuals) were key to ensuring the success of this project.

THE IMPACT

In the market, significant improvements have been made to the hygiene facilities: for males, four new toilets were constructed, with one designed for the disabled. Alongside three new bathrooms, with showers and washing facilities five hand washing basins with water were installed to improve hygiene, plus the renovation of nine old toilets with upgraded amenities. For females, three new toilets were constructed - two standard and one catered for the handicapped – plus two new bathrooms, three hand washing basins, and an upgrade of six of the older toilets on site with modern facilities.

Building Back Better

Improving local food market infrastructure can help to reduce food loss and wastage due to poor storage environments. It could also increase food hygiene and food quality, reducing foodborne illnesses. Flushing toilets, running water tap improvements, and better air circulation would support a more hygienic environment that could attract more consumers and ensure both improved food safety and security while also reducing price volatility of products for retailers and wholesalers. Three years later, the project has facilitated better market committee governance. This improved governance ensures that all vendors contribute monthly fees for maintenance, cleanliness, and safety services required to keep the premises in good condition, ensuring the upkeep and cleanliness of the upgraded premises are maintained.

Choosing technologies and infrastructure improvements that lower the carbon footprint and other emissions for a local food market has the potential to improve environmental impact in several ways. For instance, using a cooking gas system instead of firewood and charcoal, can reduce extensive forest degradation and greenhouse gas emissions. In Buguruni, the market improvement enabled eighteen female food vendors with a gas stove and 15kg gas tanks. A shift towards an energy supply based on solar for lighting and/or air circulation could also reduce the costs related to electric energy. Ten installed 10 solar lights were installed to improve the product safety, increase operation time and reduce electricity operation costs. The project also provided a double plate gas stove and 30kg gas tank to a chicken slaughtering group (70% men and 30% women) with the capacity of processing 1500 fresh meat per day.

To ensure continuity of the project, a maintenance committee from the local authorities was established to oversee and ensure the ongoing maintenance of all improvements and adherence to cleanliness schedules.

Equity Outcome

Market infrastructure improvements can create a sustainable, safe and enabling environment for both food suppliers and consumers. The introduction of disability inclusive infrastructures in the market -- such as grab rails in the toilets, ramps, large format signage, high visibility markings -- could make the marketplace more accessible also for differently abled people.

The Way Forward

This type of intervention that GAIN has deployed in Tanzania was triggered as part of an emergency response to the COVID-19 pandemic. It was an institutional arrangement between GAIN, the local authorities, and the surrounding communities that are part and parcel of the marketplace ecosystem. It is an investment of time and resources to upgrade the market infrastructure to higher standards to meet people's need in the area. Ultimately, only with full local ownership, coupled with adoption of the adequate regulatory and investment policies to maintain such upgrades, can such endeavours be sustainable in the long run.

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