



ATSAF Academy
Academy for International Agricultural Research for Development

Junior Scientists Tandems

Final Report

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Motivation, Start of the Journey, and First Stay in Nairobi

After completing my bachelor's in nutritional science, I chose to pursue food economics at the University of Giessen with a clear goal: understanding why decisions are made and how to optimize them for healthier, more sustainable food systems. The perception of studying either economics or nutritional science often involves solitary work – reviewing literature, analyzing methodologies, and understanding findings, e.g. determining whether a diet meets recommended intakes or how elastic the price of a given good is. However, food and economics are not just subjects to study but to experience. The ATSAF Junior Scientists Program offers the unique opportunity to combine academic work with hands-on experience.

My journey with ATSAF truly began when I discovered the opportunity to work with the International Livestock Research Institute (ILRI) in Nairobi, Kenya. Preparation for my stay started well in advance in Germany, including an online Swahili course, as no in-person courses were available in my area. In May, shortly after the long rainy season, I arrived in Nairobi. For many first-time visitors, Nairobi leaves a lasting impression – a vibrant, sometimes congested city where extreme wealth and poverty coexist, yet surrounded by incredible nature, such as Karura Forest. I was no exception to these astounding impressions. My first weeks were filled with experiences across different parts of the city and at the institute, including a trip to Lake Naivasha for a workshop. These early days were invaluable for networking and refining details of my research in Kajiado, Southern Kenya. The KAZNET Project under the Livestock, Climate, and Environment program, which integrates a nutrition module, proved particularly helpful. Through Nancy Rapando, the lead for the African Food Future Initiative at WWF Kenya, I was able to fine-tune my research plans.



Figure 1: View from the Institute



Figure 2: Githeri (Maize & Beans)

Traveling South and Conducting Research

Arriving in Kajiado and meeting with project officers on the ground was an enriching experience. Kajiado is home to the Maasai, a well-known pastoralist community. I stayed in Loitokitok, a town near the foothills of Mount Kilimanjaro, where diverse agroclimatic zones range from arid and semi-arid grazing lands to fertile highlands suitable for crop production. The drive from Kimana to Loitokitok

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really showcases these changes, as the altitude rises by several hundred meters, causing temperatures to drop. I often joked that it felt like traveling from the savannah to the German Black Forest in just 30 minutes.



Figure 3: Traditional Maasai Homestead



Figure 4: Elephant inside Amboseli National Park



Figure 5: Waterfall near Loitokitok

Arriving just after the long rains in May, food availability was relatively high. The weekly Kimana Food Market plays a vital role in the region, coinciding with the local livestock market – a key economic driver, as livestock accounts for roughly 30% of the county's economy. Vendors offer a diverse range of food items, including cereals, tubers, pulses, vegetables, fruits, condiments, spices, tea leaves, oils, sugar, and salt, most of which are locally sourced. The market also provides insight into key micronutrient sources in the region. Nutritious staples like sorghum and millet remain undervalued due to their perception as “poor people’s foods.” Leafy vegetables such as kale, spinach, amaranth leaves, and spider plant supply essential minerals like calcium and iron, along with vitamins A and C. While tubers and roots, such as sweet potatoes and carrots, are often sourced from outside the region, they contribute significantly to vitamin A intake. Legumes play a dual role – supporting intercropping and soil health while serving as a critical source of nutrition for both livestock and humans. Despite common perceptions of the Maasai as heavy meat consumers, research (including this study) has shown that meat is generally reserved for special occasions rather than daily consumption. Milk, on the other hand, is a dietary staple, providing essential calcium, vitamin A, and B12. However, nutritional deficiencies remain a pressing issue in the region, particularly iron deficiency (leading to anemia) and vitamin A and C deficiencies.

For data collection, I conducted interviews with both sellers and buyers using various methodologies. I am especially grateful to Bryan Mbego and Mwanaisha Emily Achieng from WWF and CARE for organizing the buyer interviews and to Baka Ogalo for facilitating contact with local officials, allowing me to conduct research at the market. Over time, I built relationships with vendors through weekly interactions. To foster engagement, I printed out and shared market price trends, which are currently not covered by Kenya’s KAMIS system. This exchange transformed simple data collection into meaningful discussions about market dynamics.

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Figure 7: Cattle at the Livestock Auction



Figure 8: Retail stand at Kimana Food Market



Figure 9: Retail stand at Kimana Food Market



Figure 10: Retail stand at Kimana Food Market

Reflections

Experiencing a new culture and country is an incredible privilege, but it also comes with challenges. Standing out as a foreigner, especially from a more privileged background, brought moments of reflection and conflicting thoughts about my role, my research, and my presence in Kenya. It is natural to feel these emotions, and I deeply appreciate Robert Kötter's advice during an online meeting on how to navigate such reflections and feelings of isolation. Despite these challenges, conducting this research and engaging with people on the ground has been both an immense privilege and a rewarding experience. I am especially grateful to the entire WWF Kenya Loitokitok Office and the ILRI staff for their invaluable support, guidance, and hospitality throughout my journey. My sincere thanks also extend to ATSAF for the scholarship, which made this experience possible. Their dedication and collaboration made this experience truly meaningful.



Figure 11: Kilimanjaro in the background of Loitokitok town



Figure 12: Waterfall close to the Tanzanian border