



## SAMAKI SALAMA: SECURING SMALL-SCALE FISHERIES IN KENYA FOR HEALTHY NUTRITION AND ECOSYSTEMS

The Samaki Salama activity aimed to promote sustainable fisheries practices and improve the nutritional status of young children. The intervention study was conducted in Kilifi County among small-fisher households with children less than 5 years of age. The objective was to test the effectiveness of a bundled intervention to address human health and malnutrition in small-scale fisher households and its interaction with nutrition security and fisheries sustainability.

The study was a longitudinal, cluster-design trial with three groups: 1) control; 2) social marketing for nutrition education; 3) social marketing for nutrition education and modified fishing traps for fisheries health. Data was collected from households in all three groups at two points, which were baseline (before the implementation of the intervention) and endline (at the close of the 1-year intervention period). Fishers were interviewed on their fishing practices, fish catch, revenue, and total fish catch they took home, while caregivers were interviewed concerning feeding and care of the young children aged 6-59 months, and child growth was measured.



Baseline data collection. Photo by Francis Mbogholi.

### KEY FINDINGS

Fishers using gated (experimental) traps caught larger fish that were worth more money than those using non-gated (control) traps, and the most commonly caught species were rabbitfishes and parrotfishes. The fishers that participated in the study had yields that were 10% greater (kg) than those fishers in the control group using non-gated traps, and the catches were worth 13% more in price. Two fish species were particularly impacted by the gated traps: Blackspotted sweetlips (*Plectorhinchus gaterinus*) and Blackspot emperor (*Lethrinus harak*). These fish are often captured as juveniles in the non-gated traps, but because of the modified trap design, the length of fish were greater, suggesting more adult fish caught instead. Fishers took fish home with them to feed their family more than half of the time; however, fishers who received gated traps and social marketing took home significantly more fish (12% of catch) than those who did not (7% of catch).

Stunted growth was highly prevalent in this sample affecting 20% of children at baseline and increasing to 27.9% by endline. Acute diarrhea also was extremely high in the three study groups at baseline, 24% compared to the national average of 14% in Kenya. The Samaki Salama intervention showed positive findings across multiple



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nutrition and health outcomes. Data show that the Samaki Salama intervention significantly increased child growth in height, significantly increased child fish consumption, and improved child dietary diversity score (number of food groups consumed).

## ACCOMPLISHMENTS

The Samaki Salama activity supplied 100 fishers with 400 modified basket traps. This enabled the fishers to have the same or more catch compared with the old traps, and the fish were worth more money because of their increased size. Fishers also caught fewer juvenile fish with the modified basket traps, thus, decreasing their impact on fish stocks. Fishers, also targeted with social marketing elements of the intervention, were willing to use the modified traps to protect the marine ecosystem and as well, take home more catch for child nutrition. In the intervention group that combined social marketing with modified traps, children consumed more fish and a greater variety of foods, likely leading to improved health outcomes in the long-term.

Changes in the caregiver health behaviors were evident in the two groups receiving social marketing messaging from home visits, cooking demonstrations, fisher workshops, and community healthcare workers. These behaviors were linked to improved dietary, health, and hygiene practices ultimately leading to reduced illness in the young children.

## CONCLUSIONS AND RECOMMENDATIONS

- The Samaki Salama activity recommends that social marketing with nutrition-based education is needed to engage individual caregivers to persuade and show them how to make positive behavior changes.
- There is a need to support small-scale fishers with appropriate fishing gear that can preserve the ecosystem, such as the gated traps, and incorporate the same gear in national fisheries regulation requirements. Fishers should also be trained on how to use such gear and how to sustain the practices.
- Male caregivers/fathers should be involved in child feeding and care, as this increases the likelihood that the nutritional status of children will be improved and the behavior change sustained in the household.
- More efforts are needed to enhance nutrition knowledge about the benefits of fish among fishing households to increase their intake and consequently improve the nutritional status and health of young children.
- Collaborations between community partners such as community health volunteers and representatives from Beach Management Units should be strengthened for intervention sustainability and adoption of appropriate practices.

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## ABOUT THE FISH INNOVATION LAB

The Fish Innovation Lab supports the United States Agency for International Development's agricultural research and capacity building work under Feed the Future, the U.S. Government's global hunger and food security initiative. Mississippi State University is the program's management entity. The University of Rhode Island, Texas State University, Washington University in St. Louis, and RTI International serve as management partners.

[www.fishinnovationlab.msstate.edu](http://www.fishinnovationlab.msstate.edu)

*This executive summary was made possible by the generous support of the American people through the U.S. Agency for International Development (USAID) under the Feed the Future initiative. The contents are the responsibility of the Feed the Future Innovation Lab for Fish and do not necessarily reflect the views of USAID or the United States Government.*