Who We Are:
The Alliance of Bioversity International and CIAT: Today’s global challenges of poverty, malnutrition, climate change, and biodiversity loss call for new research, creative solutions, and stronger partnerships. To respond to these challenges, Bioversity International and the International Center for Tropical Agriculture (CIAT) have joined forces to create The Alliance. The Alliance has a vision is to shape food systems and landscapes that sustain the planet, drive prosperity, and nourish people.

Our Approach
The Healthy Diets from Sustainable Food Systems Initiative is using a participatory, community-led approach to improve farm, market, and diet diversity for better nutrition. This approach emphasizes local authorship and ownership of projects.

The Challenge: Malnutrition
The triple burden of malnutrition - undernutrition, over-nutrition, and micronutrient deficiencies - has economic and social implications that can span up to three generations. For example, among children, micronutrient deficiencies impact cognitive development, which is linked to lower work productivity and lower life-time incomes. Simultaneously, over-nutrition and obesity, and their associated non-communicable diseases (such as diabetes), are threatening livelihoods and straining healthcare systems. Interventions that increase dietary diversity are associated with improved nutrition outcomes.

Interventions that increase dietary diversity are associated with improved nutrition outcomes. Tapping into the wealth of locally available, cultivated and wild fruits, vegetables, insects, and animals can enrich diets by improving micronutrient intake. Vihiga County is rich in local food biodiversity (67 cultivated and 38 wild edible plant species). However, this local biodiversity does not always translate to dietary diversity and micronutrient uptake. There is an opportunity to improve the well-being of the community in Vihiga County by increasing their dietary diversity.

The Project
In 2014, Bioversity International conducted a project in Vihiga County to assess the effectiveness of a participatory approach on micronutrient intake. Five intervention groups received trainings on agriculture, nutrition, and group dynamics. Next, each group developed community action plans (CAPs) to use local biodiversity for improved diet diversity. All five groups pursued kitchen gardening (with a focus on planting traditional vegetables and legumes) and poultry farming.

This project was conducted in collaboration with Vihiga County’s Ministries of Health - Department of Nutrition and Agriculture, as well as SOFDI, WeRATE, and Biovision. Our local supported the CAPs by providing trainings in climate smart technologies and poultry farming.
Results:

One year after the intervention:
- The percentage of children reaching minimum dietary diversity increased from 50.9% to 88.7%.
- The percent of children that consume Vitamin A-rich fruits and vegetables increased from 86.2% to 97.0%, while that of other fruits and vegetables increased from 71.1% to 89.6%.
- The percentage of women reaching minimum dietary diversity increase from 31.7% to 85.5%.
- The percent of women that consume vitamin A-rich dark green leafy vegetables increased from 57.9% to 78.9%, other vegetables from 63.4% to 92.5%, and other fruits from 9.1% to 21.1%.
- During the intervention year, it is estimated that 2,516 people - 1,985 of which are women - were reached by at least one of Bioversity’s interventions (Door-to-door nutrition education, community workshops, etc.).

Increased dietary diversity was attributed to increased knowledge of nutrition, as well as the development of subsistence farming and income-generating pathways. In 2019, Bioversity International conducted focus groups to evaluate participants’ perceptions of the project.

Participants said that the project increased their consumption of fruits, vegetables, poultry, and eggs. Moreover, they gained additional sources of income by selling their excess produce and poultry. Bioversity International was thanked for the project’s positive impact this project has had on their lives.

“We have improved eating at home thanks to the workshops. We never ate fruits. As we did not know the importance of fruits we did not buy them in the market. Now we eat at least two types of fruits a day.”

To this day, the farming groups continue to collaborate. Their meetings now serve as a forum to discuss farming techniques, share nutrition-related information, and organize saving/loan activities (such as merry-go-rounds).

Ongoing Work

Following these achievements, the project was scaled up to include five more groups (initially control groups). The 10 groups (5 original groups, 5 new) have joined forces to register as unified community based organization (CBO). The CBO is setting up a community seed bank, which will enable farmers to identify, document, conserve, and exchange seeds.

Our team is examining potential additional spillover effects of our participatory approach, which may include increased community cohesion, increased self-efficacy, increased life satisfaction, and women’s empowerment.

Our team is partnering with two Master’s candidates, from Masinde Muliro University of Science and Technology, who are writing their master’s theses on Vihiga’s food system. This research will inform our lessons learned.

Our team is currently developing a series of stakeholder workshops to 1) help community members identify relevant programs and funding opportunities, and 2) strengthen connections, and enhance synergy among various stakeholders.

Conclusion

Since 2014, Bioversity International has used community-led, participatory approaches to enhance dietary diversity among communities in Vihiga County. The results of this project include increased dietary diversity among women and children, additional sources of income for families, and new opportunities to participate in community-based projects. Bioversity International is currently examining potential spill-over effects of this approach, such as enhanced community cohesion, increased self-efficacy, and women’s empowerment. We hope that our results will inspire other projects to utilize participatory approaches, and/or local agrobiodiversity to improve livelihoods.

Bioversity International’s next steps include supporting the farmer groups further organize, establishing a community seed bank, organizing a series of stakeholder workshops, building capacity for community leaders to take over established projects, and investigate opportunities for scaling. We appreciate your continued support in this endeavor.