



## Speaker Summary Note

**Session:** Learning from Program Interventions

**Grace Marquis**

**Speaker:** Associate Professor, Department of Agricultural and Environmental Sciences  
McGill University, Canada

**Title:** Role of Animal Source Foods: ENAM experience in Ghana

### Rationale for the ENAM project

Multiple barriers limit the availability, accessibility, and use of animal sources foods (ASF) in the diets of young children in rural Ghana. Without micronutrient-rich foods in their diet, children will not meet their nutrient requirements and childhood malnutrition rates will remain high. To improve the quality of the diet and decrease the rates of anemia and stunting among young children, interventions simultaneously need to address income-generating and food purchasing power, nutrition knowledge, and women's empowerment to make feeding decisions.<sup>1</sup>

### Description of the Project

The ENAM project was a quasi-experimental, community-based intervention to increase the use of ASF in young children's diets in rural Ghana. The planning and execution of the intervention was in collaboration with health and agriculture partners in universities (Iowa State University, University of Ghana, McGill University), governmental (Ministry of Food and Agriculture, Ghana Health Services) and non-governmental agencies (Heifer International-Ghana, Freedom from Hunger-Ghana), and the private sector (rural banks). It was carried out in six rural communities (181 caregivers of 2- to 5-year-old children) across three agro-ecological zones (Guinea Savannah, Forest-Transitional and Coastal Savannah) of Ghana. Six matched communities (with 287 women and children) were selected for the comparison group. The 16-month intervention consisted of four sequential 16-week microcredit loans (~ US\$50 per caregiver, group guaranteed) to support individual income-generating activities, and weekly group meetings for entrepreneurship training, young child nutrition education, and collection of money for loan repayment and individual savings. Project data were collected quarterly for the intervention and comparison households on income-generating activities, food expenditures, food security, and children's dietary intakes and anthropometric measurements. Qualitative methods were used to understand the variation in success of the participants.

---

<sup>1</sup> E. Colecraft, G.S. Marquis, R. Aryeetey, O. Sakyi-Dawson, A. Lartey, B. Ahunu, E. Canacoo, L.M. Butler, M.B. Reddy, H.H. Jensen, E. Huff-Lonergan (2006), "Constraints on the Use of Animal Source Foods for Young Children in Ghana: A Participatory Rapid Appraisal Approach. *Ecology of Food Nutrition* 45: 351-377.

This integrated ENAM intervention demonstrated that poor households can improve the quality of their children's diets. By increasing the profitability of small businesses, rural women increased their purchasing power, and with more money and expanded nutrition knowledge, they decreased household food insecurity (endline OR =0.50; p<0.001) and improved the quality of their children's diets (increased protein, calcium, zinc; p<0.05) and their children's nutritional status (weight-for-age; +0.26 Z-score; P<0.001).

## Key Features and innovations

1. **Research evidence guided the development of the ENAM intervention.** The ENAM project built on scientific evidence, including that from previous Global Livestock–CRSP research: a randomized controlled experiment that added meat or milk to school-children's diets and demonstrated improved cognitive scores, improved growth, physical activity and behaviour, and decreased morbidity.<sup>2</sup> The ENAM project activities focused on increasing children's consumption of ASF products.
2. **Local best practices also guided the ENAM intervention.** The ENAM project developed its microcredit program based on the best practices of other local programs: individual loans for individual income-generation activities, group approval and group guarantee, and additional grants and/or training as required (e.g., chicks and feed). There was a 100% repayment of loans and substantial individual savings.
3. **Sustaining the ENAM program required early integration of local institutions.** Integration of the partners to develop the intervention activities helped create commitment, shown in part as seconded staff, office space, and sustainability of the project activities. Today, local rural banks provide resources to continue the nutrition and entrepreneurial education as an integral component of their on-going microcredit loan program to rural women's groups, rapidly expanding beyond the areas that were part of the ENAM project.

## Conclusion

The ENAM project<sup>3</sup> provided evidence that an integrated package—that offers both knowledge and the means by which one can act on new knowledge—in rural Ghana can improve household food security and the diet and growth of young children. This integrated intervention is a viable approach that can be used in the private financial sector to reach isolated poor households and improve child nutrition throughout Ghana.

## Funding

The ENAM Project was funded through the Global Livestock–CRSP, funded in part by USAID Grant No. PCE-G-00-98-00036-00 and Women in Development Office of USAID.

---

<sup>2</sup> L.H. Allen (2003), "Interventions for Micronutrient Deficiency Control in Developing Countries: Past, Present and Future." *Journal of Nutrition* 133: 3875S–3878S.

<sup>3</sup> R. Caputo, *Hidden Hunger* (documentary on ENAM) <http://www.vimeo.com/14063199>.