



# NAVINUT PROJECT



## TRANSDISCIPLINARY APPROACH TO COMBAT CHILD MALNUTRITION

**MOTHERS' CONTRIBUTION TO  
KNOWLEDGE CO-CREATION IN  
LOCAL DIAGNOSIS AND  
MANAGEMENT**

**POLICY  
BRIEF**



W. Amoussa Hounkpatin  
C. Issifou  
B. Kaufmann



**December  
2024**

With support from



**DITSU**  
where science meets people

With support from



by decision of the  
German Bundestag





# Executive Summary

This policy brief aims to inform about the potential of integrating local knowledge in addressing child malnutrition, advocating greater community involvement and participatory approaches in future nutrition programs.

In a context dominated by top-down approaches that give little consideration to the expertise of local communities, the approach implemented in the project NaviNut serves as a guide for future nutrition projects in Benin. It's also emphasizing the importance of increasing grassroots participation in order to effectively combat malnutrition, which has persisted for years.

NaviNut is a collaborative initiative aimed at tackling child malnutrition in Northern Benin. Over the course of three years, researchers, along with local women from the Gando, Baatonu, and Fulani ethnic groups, co-created sustainable and culturally relevant nutrition practices.

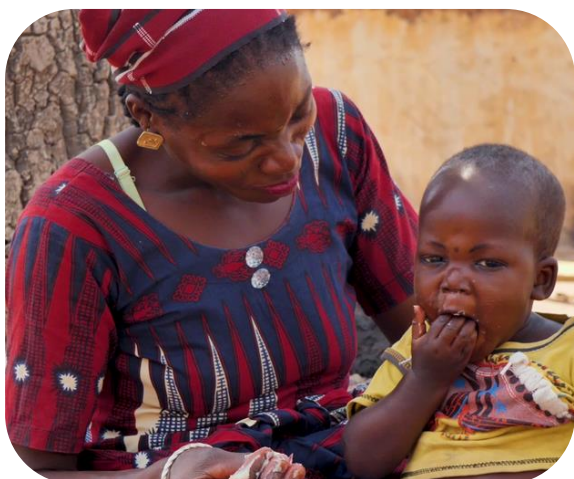
This collaborative research empowers local mothers and grandmothers to contribute to the development of nutrition solutions based on traditional knowledge, alongside scientific research. The findings reveal effective, locally adapted practices that can significantly improve the nutritional status of children under five.



## Outline

|                                |    |
|--------------------------------|----|
| Introduction                   | 01 |
| Research overview              | 02 |
| Findings                       | 03 |
| Participants' feedback         | 04 |
| Recommendations                | 05 |
| References and contact details | 06 |

# INTRODUCTION



Benin republic faces significant challenges to reach the commitment of 2030 Sustainable Development Goals, in particular SDG 2 targeting “End hunger, achieve food security and improved nutrition and promote sustainable agriculture” (Massa et al. 2024). This issue is especially critical in the Borgou and Alibori departments, where stunting prevalence reaches 38.6% and 48%, respectively (INStAD, 2023).

In terms of micronutrient deficiencies, more than 70% of children are anemic in the same departments (INStAD, 2019).

Malnutrition in Benin is driven by a variety of complex factors, including socioeconomic, cultural, and environmental determinants (INStAD, 2022). Its eradication, requires a participatory and holistic approach.

However, most of the research on food systems in sub-Saharan Africa relies on extractive, top-down methodologies, neglecting the rich local knowledge of target communities.

In rural areas where resources are limited, adopting international standards for infant nutrition is a challenge, especially when they are often inconsistent with the culture and preferences of the population. Furthermore, this situation is worsened by an inadequate healthcare system (Elhady et al., 2023; Nankumbi et al., 2015).

Transdisciplinary research, in which scientist of several disciplines collaborate closely with local actors, can harness diverse experience, knowledge and innovation capacity to solve a pressing societal problem. To operationalize this collaboration, the NaviNut project adopted a collaborative learning approach, involving researchers from multiple disciplines with local mothers to co-develop sustainable solutions.



The NaviNut project engaged women's groups (mothers and grandmothers) from the Gando, Baatonu and Fulani ethnic groups in northern Benin. The three-year collaboration followed a four-step collaborative learning approach: **Establishing cooperation, dialogue, discovery, and application.**

## 1 – Establishment of Cooperation



Open discussions were held with local stakeholders and women's groups about the purpose of the study. Subsequent **partnership agreements** were signed with the leaders of the women's group.

## 2 - Dialogue



Relevant child nutrition issues were identified through **literature reviews, focus group discussions and narrative interviews**. The focus was on learning about mothers' knowledge and practices related to child care and feeding.

## 3 - Discovery : Knowledge co-creation

The methodological approach of the discovery phase followed four steps (1,2,3 and 4) described in the figure below. The first step involved comparative assessments of children's nutritional status using mother's own methods and anthropometric measurements. In the second step, a team of women groups leaders and researchers conducted home visits to document positive deviant practices such as lactation stimulation, weaning techniques, appetite improvement strategies, and nutrient-rich recipes. During the third step, mothers from different ethnic groups shared knowledge and discussed on child feeding and malnutrition. Finally, a multi-stakeholder workshop was held to develop the behavior change communication messages.



1. Co-inquiry with caregivers

Co-Assessment of nutritional status



2. Co-inquiry with caregivers

Positive deviants practices



3. Peer-to-peer exchange session



4. Multi-stakeholder workshop

## 4 - Application

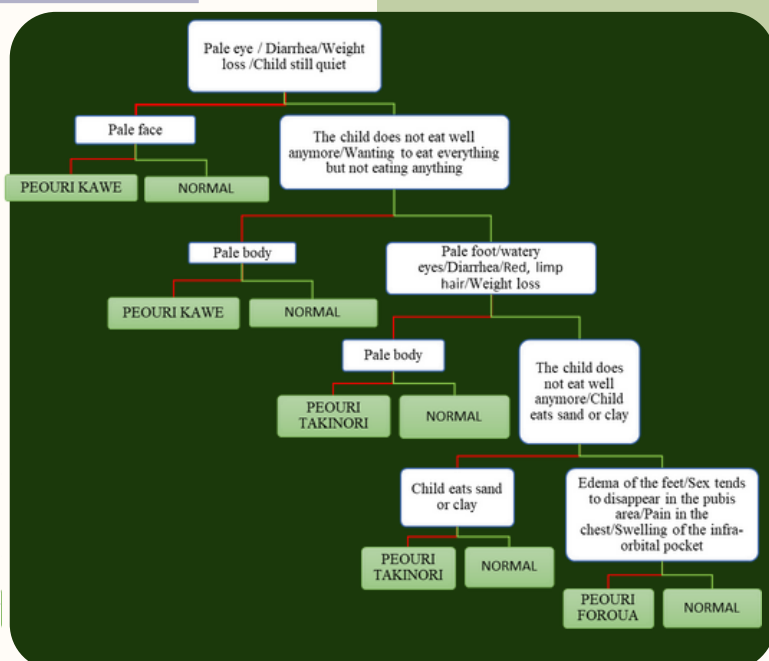
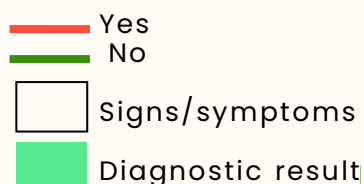
Mothers proposed and managed the installation of a local screening center for malnutrition. In this center, expert mothers screen children under five once a week.



# FINDINGS

## 1 - Local method of nutritional status assessment

The figure provides an example of a decision tree for assessing the nutritional status of children from the Gando ethnic group in the Nimbéré-Fulani village.

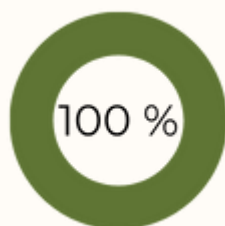


## 2 - Positive deviant recipes: High nutrient dense food with high micronutrients availability

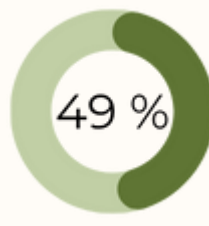


**Dambu : 167.7 g**

(Corn couscous + seasoned Senna obtusifolia leaves)



**Iron needs coverage**



**Protein needs coverage**



**Idouwarê: 178.40 g**

(Sorghum couscous + dehulled cowpeas + ground roasted peanuts, seasoned)



**Iron needs coverage**



**Zinc needs coverage**



**Diboukpésari: 137.8 g**

(Corn or sorghum flour paste + seasoned Urena Lobata leaves)



**Kobsa: 111.0 g**

(Sauce Okra leaf + dehulled cowpeas, seasoned)

## 3 - Positive deviance key practices

- Use of *Euphorbia Balsamifera* leaves to increase production of breast milk for breastfeeding.



Euphorbia Balsamifera

- Use of the "gentle method" (roasted cheese + breast milk) for stopping breastfeeding at weaning age to avoid any inconvenient on child health

- Use of *Arbus precatorius* leaves for lack of appetite in complementary feeding. This enhances child food consumption.



Arbus precatorius

## Participants' feedback



**Kadidja, mother, Alafiarou village**

*"We feel that you value us more than yourselves, and you don't treat us as inferior. I've learned a lot through these discussions."*

*"I appreciate the group discussions because we all share our knowledge, and everyone benefits from it."*



**Aissatou, mother, Alafiarou village**

*"When you came, you acted just like us, not as outsiders from the city. That's why we loved the sessions and kept coming. We feel comfortable because of the good atmosphere."*



**Ramatou, mother, Guinrou village**

*"Thanks to the activities, I realized my child could be sick without me knowing. The older women showed their expertise, and we all learned together."*

# RECOMMENDATIONS



## NGOs

- Increase the promotion of endogenous practices in community interventions.
- Include positive deviant foods in their cooking demonstration sessions.
- Support the training of mothers on the local method for assessing children's nutritional status.
- Integrate the NaviNut project communication materials for behavioral change into the nutrition education system.
- Support local malnutrition screening centers to improve malnutrition management.
- Develop community learning and nutritional rehabilitation centers, that integrate positive deviant practices and the local method for assessing children's nutritional status.
- Promote nutritional education programs for local facilitators and community leaders to ensure to combat malnutrition at the local level.



## Local governance

- Increase local populations' access to health services by improving the community health volunteer system.
- Strengthen the capacity of community health volunteers to identify and promote endogenous practices and knowledge.
- Integrate the local malnutrition assessment method and the centers into the nutrition surveillance system.
- Allocate specific funds for the promotion of local innovations.

# REFERENCES AND CONTACT DETAILS

## REFERENCES

INStAD, Rapport de l'analyse de l'enquête MICS Bénin 2021-2022, INStAD, Cotonou, 2023.

INStAD, ICF, Enquête Démographique et de Santé au Bénin, 2017–2018, INSAE and ICF Maryland, USA, Cotonou, 2019.

INStAD, PAM, Analyse Globale de la Vulnérabilité, de la Sécurité Alimentaire et de la Nutrition et Systèmes Alimentaires (AGVSAN-SA), INStAD& PAM, Cotonou, 2022.

I. Massa, S. Toure, G. Fuller, J. Eggoh, A. Assouto, Benin Sustainable Development Report 2024, Paris: SDSN, Cotonou: SDSN Benin, 2024.

J. Nankumbi, J.K. Muliira, Barriers to Infant and Child-feeding Practices: A Qualitative Study of Primary Caregivers in Rural Uganda, J Health Popul Nutr 33 (2015) 106–116.

G.W. Elhady, S. kamal Ibrahim, E.S. Abbas, A.M. Tawfik, S.E. Hussein, M.R. Salem, Barriers to adequate nutrition care for child malnutrition in a low-resource setting: Perspectives of health care providers, Front. Public Health 11 (2023).

## AUTHORS



**Waliou AMOUSSA HOUNKPATIN**

*Full Professor,  
Human Nutrition and Food  
Security  
UAC*



**Chérif ISSIFOU**

*PhD Student*



**Brigitte KAUFMANN**

*Full Professor,  
Social Ecology of Tropical and  
Subtropical Landuse Systems  
DITSL*

**NaviNut - Enhancing Women's Agency in Navigating Changing Food Environments to Improve Child Nutrition in African Drylands.**

**This research was funded by the German Federal Ministry of Food and Agriculture (BMEL), through the Federal Office of Agriculture and Food (BLE).**