

# FINAL TECHNICAL REPORT / RAPPORT TECHNIQUE FINAL

## ANNEX 15B - GLOBAL AQUACULTURE WORKSHOP

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# Enhanced Homestead Food Production model, including household pond aquaculture, contributes to improved production, food consumption and food security in Cambodia



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## Background

Two-thirds of the rural Cambodian population face seasonal food shortages each year and one in three Cambodians are food-deprived. Cambodia annually imports approximately 100,000 tons of fresh vegetables worth roughly US\$200 million from Vietnam, Laos and Thailand for consumption. The Enhanced Homestead Food Production (EHFP) model provides farmers with the means to overcome these issues.

## Objective

To explore the extent to which EHFP program improved food production, food consumption, food security, and how the income was used.

## Methods

The investigation used a three-arm control trial of 90 clusters, consisting of one village model farm and ten female farmers per cluster (n=900), all with children aged 0-5 years of age. Clusters were randomly assigned to one of three groups: (i) EHFP, (ii) EHFP plus Fish, and (iii) Control.

Baseline and endline surveys were conducted to assess the impacts. Self-reported data was collected from farmers on food production, consumption, and income. Difference in differences analysis was used to identify the effect of the two intervention models when compared with the control population.

## Results

### Production

We saw an increase in the total estimated mass of vegetables and fish produced in both of the intervention groups between baseline and endline. These differences were significant when compared with the control group, and applied to the production of both fish and vegetables. (Figure 1).

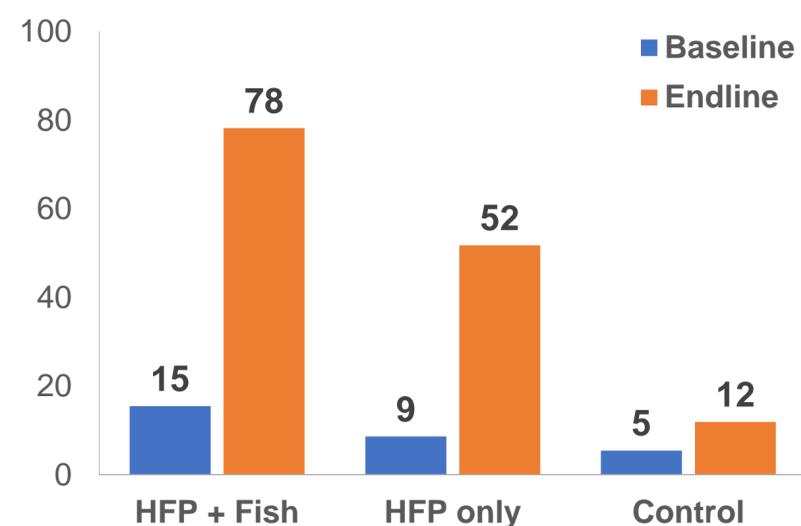


Figure 1. Mass of fish and vegetable produced in the last two months among the three study groups (kg)

## Consumption

At endline, 90% of households from EHFP+fish intervention group cited their own production as the main source of vegetables for household consumption, and only 1% of households in this group purchased vegetables from a market, while 55% of households from the control group purchased vegetables from a market. Fifty-two percent of households from the EHFP+fish intervention group reported consumption of fish harvested from their own ponds while only 1% of control households reported consumption. Seventy-two percent of households in the control group reported they purchased fish from the market.

Food Production	EHFP	EHFP + Fish	Control
Own production	86%	94%	22%
Market	5%	1%	55%
Collected from outside	8.0	4%	23%
Gift	1%	1%	1%

Table 1: Main source of vegetables for household consumption in the last three days at endline

### Utilization of income earned from EHFP

We found positive and significant changes in the proportion of households in the two intervention groups that reported spending money on food, clothes, medicine and education in the past two months, when compared with controls.

	EHFP+Fish		EHFP		Control	
	Base	End	Base	End	Base	End
	N=300	N=258	N=300	N=260	N=300	N=236
Food	8.3%	40.7%	7.7	45.4%	5%	9.8%
Clothes	0.7%	8.9%	0.3	3.9%	0%	0.4%
Medicine	2%	17.4%	1.7	8.9%	2%	2.5%
Education	3%	24.8%	2.3	27.7%	1.3%	3.4%

Table 2. Expenditure by category and study group

### Food security

Households in the EHFP + fish intervention group were 42% less likely to be moderately food insecure compared to households in the control group; and households in EHFP+ fish intervention group were 29% less likely to be severely food insecure than food secure as compared to respondents in the control group

## Conclusions

By equipping farmers with inputs and educational resources, technical assistance, and knowledge, they are able to produce vegetables and fish for household consumption thereby improving food security and nutrition.