

From growing food to growing cash: the impact of agrarian transitions on diets and nutrition in rural Indonesia

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ANH Academy, Hyderabad, 26 June 2019



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RESEARCH PROGRAM ON
Forests, Trees and
Agroforestry

Drivers of Food Choice Grant



- Donors:
 - UK Government's Department for International Development
 - Bill & Melinda Gates Foundation
- Grant Managed by:
 - University of South Carolina, Arnold School of Public Health, USA

Project Partners:

- CIFOR
- University of Brawijaya
- Penn State University
- Poltekkes Pontianak
- Poltekkes Jayapura

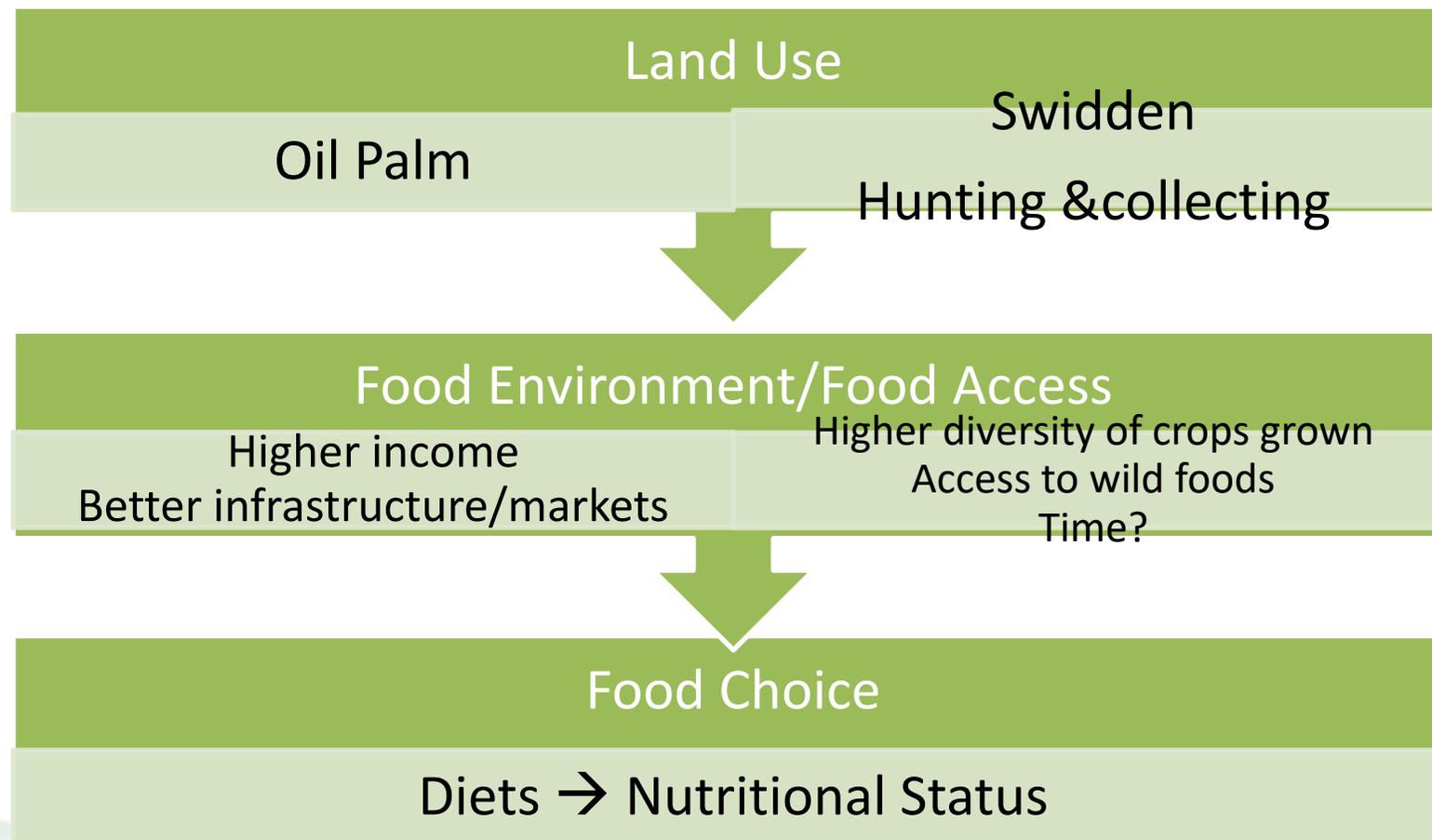




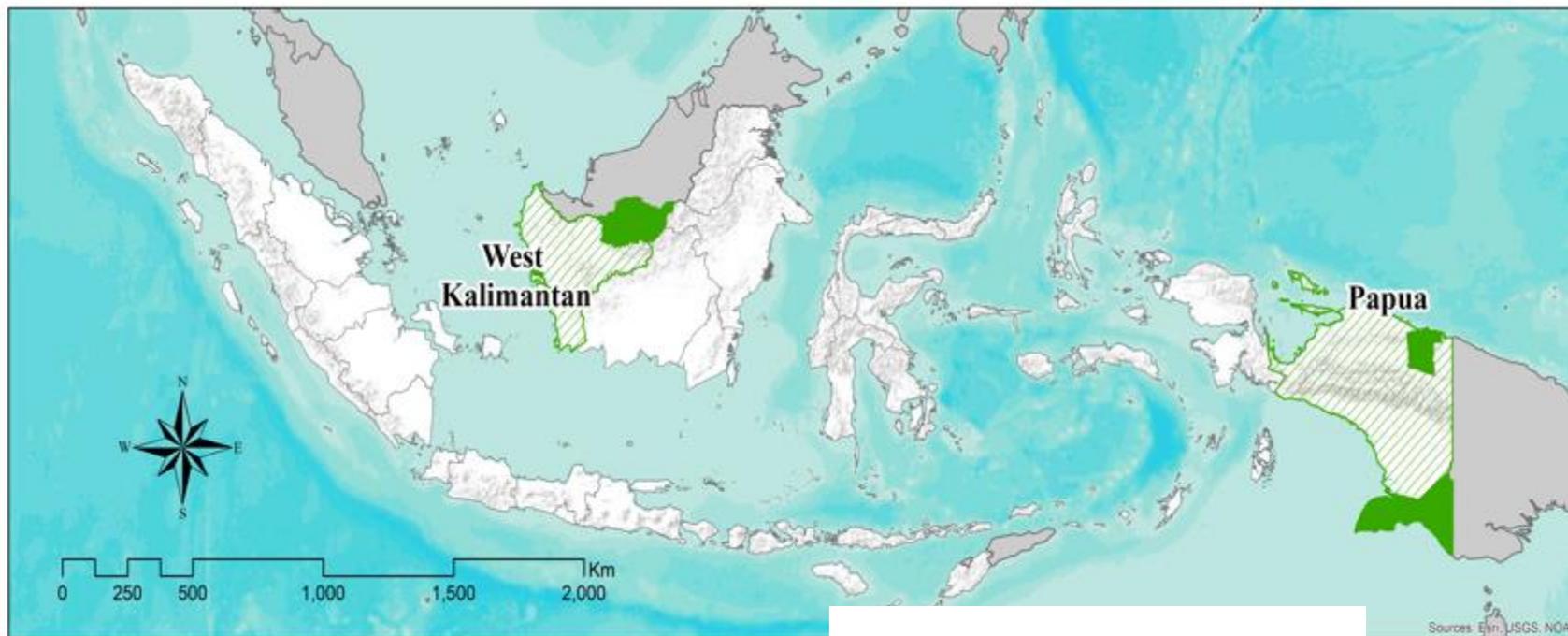
Project Background

- Indonesian nutritional context
 - High stunting; nutrition transition; major increases in diabetes & CVD
- Rapid landscape change
- Idea: shift from mixed smallholder landscapes could impact rural food environment and food choice
 - Investigate role of land conversion to oil palm (OP) as an underlying driver of food choice in rural Indonesia.

How might change of land use to OP affect diets?



Study Sites: Kapuas Hulu, West Kalimantan Merauke & Jayapura, Papua



Legend

-  DFC Study Sites
-  Province AOI
-  Indonesia Province Boundary
-  Other Country

Methods & Design

- Sample selection:
 - In each site indigenous residents with half mother-child pairs (250) traditional lifestyle & half (250) oil palm
- Total sample
 - Approx 500 pairs per site and 1000 in total
- FGDs men & women
- 24 hr recall for pair; pre-harvest & post-harvest in WK ; one season only in Papua (2017 & 2018)
- Anthropometry & hemoglobin assessments

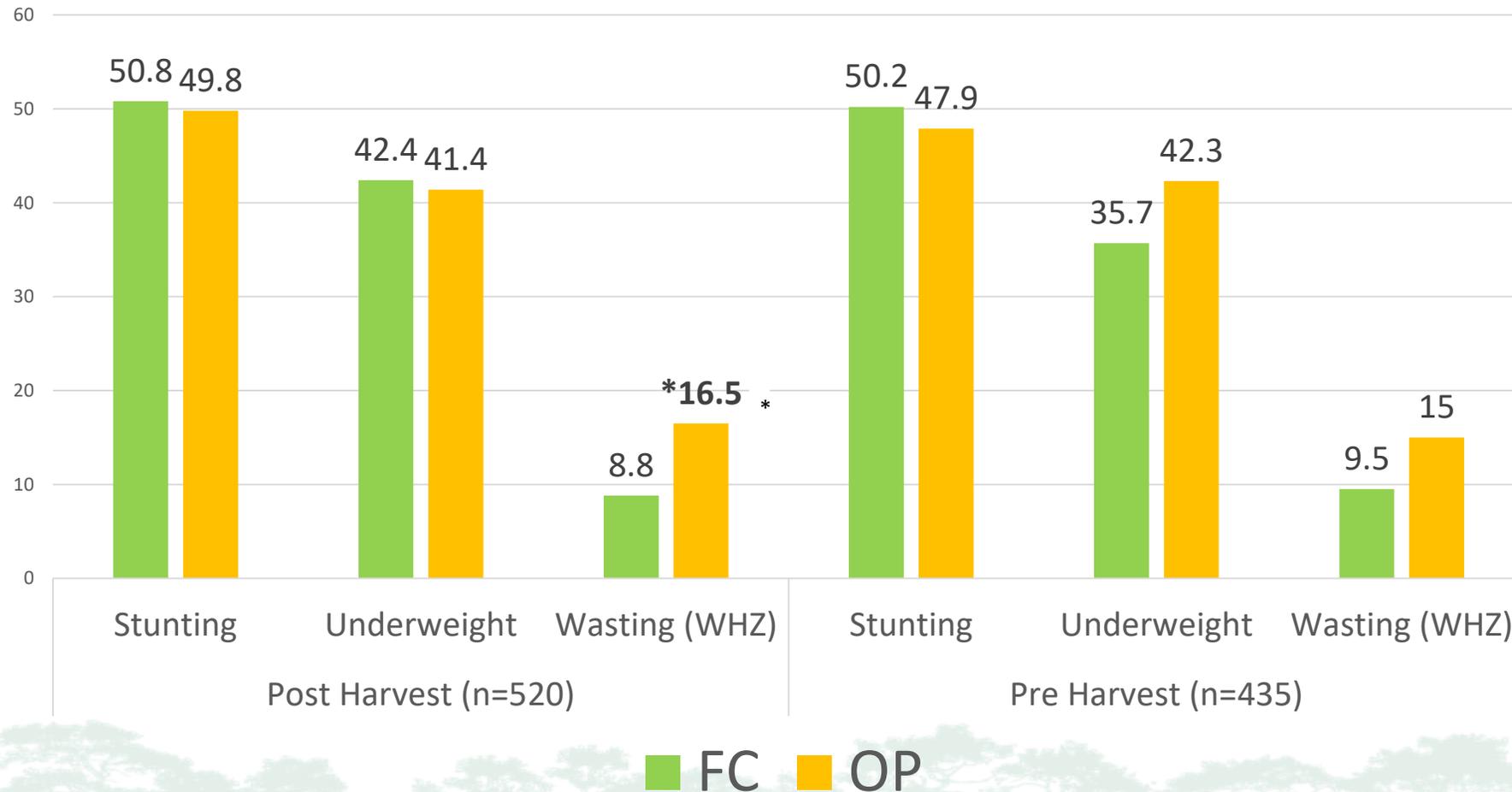
Photo by Nenang Sujana/CIFOR

A landscape photograph showing a grassy field in the foreground, a dense forest of green trees in the middle ground, and a large, forested mountain range in the background under a cloudy sky. The word "Findings" is written in white, sans-serif font across the center of the image. In the lower right of the grassy field, a group of people is sitting on the ground. A dark teal decorative border is at the bottom of the image.

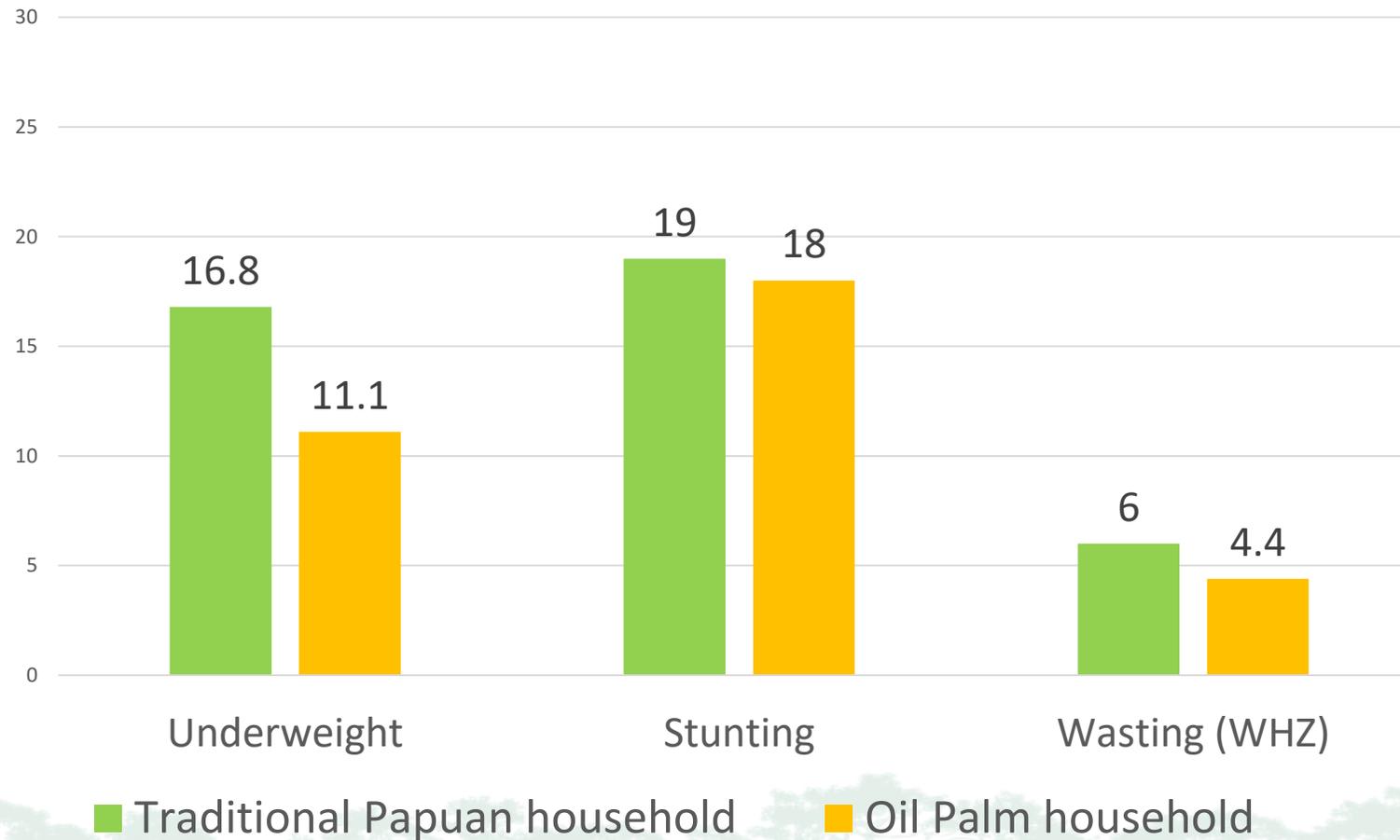
Findings

West Kalimantan Children Under 5 (pre & post harvest seasons) nutritional status

* indicates statistical significance

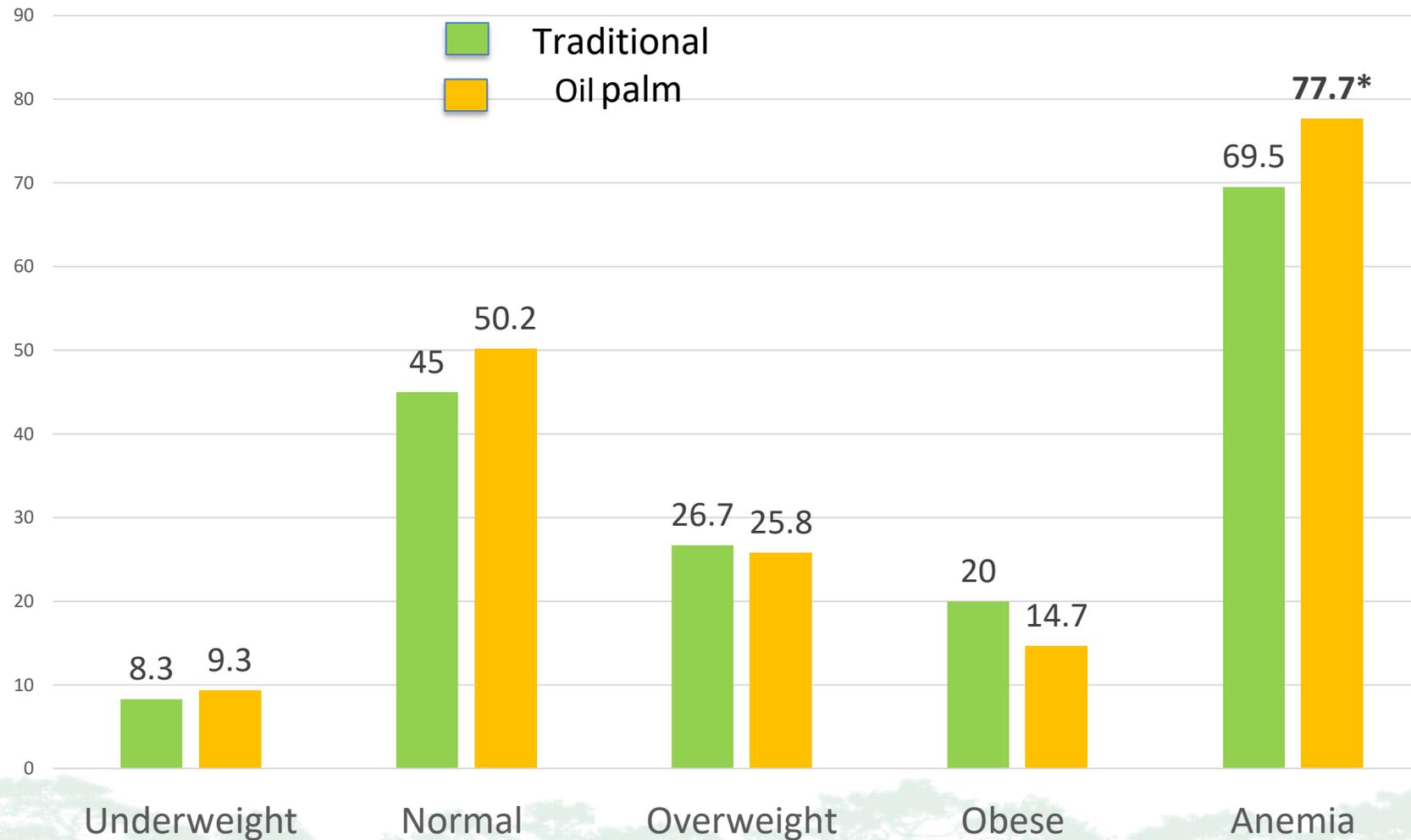


Findings: Nutritional Status of children under 5 in Papuan sites



Findings: Papuan women

(* : statistically significant)



Food Group Intake Differences for Children under 5 across sites

West Kalimantan			Papua
	Post-Harvest	Pre-harvest	
Traditional > OP	Greens; fruit; fish; cereals	Greens; fruit; fish; 'other veg'; cereals	Tubers, fruit, fish, meat
OP > Traditional	Dairy, eggs, sweets; Highly processed; meat; 'other veg'	Dairy; eggs; sweets; Highly processed;	Cereals, highly processed, eggs. 'other veg'

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Other Differences

- OP households in both sites were wealthier
- Not just food groups, but foods within groups differ
 - In WK site, traditional hhs ate more wild meats; OP hhs ate mostly chicken & sausage
- Staples differed in Papua
 - Traditional hhs ate much more sago; OP hhs mostly ate rice



Photo by Waning Sujana/CIFOR



Photo by N. Nana Sujana/CIFOR

Wrap Up

- Oil Palm/cash crop production is associated with both negative and positive dietary changes
 - But not nutritional status in our sample;
- Donors, projects, governments, communities need to be aware of both sides to limit the unintended negative consequences of policies/projects



The Big Question

How to maintain the positive aspects of traditional diets and take advantage of opportunities brought by commercialization?

Acknowledgments: This research was funded by the Drivers of Food Choice (DFC) Competitive Grants Programs, which is funded by the UK Government's Department for International Development and the Bill & Melinda Gates Foundation, and managed by the University of South Carolina, Arnold School of Public Health

THANKS VERY MUCH!



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