

NutriLink

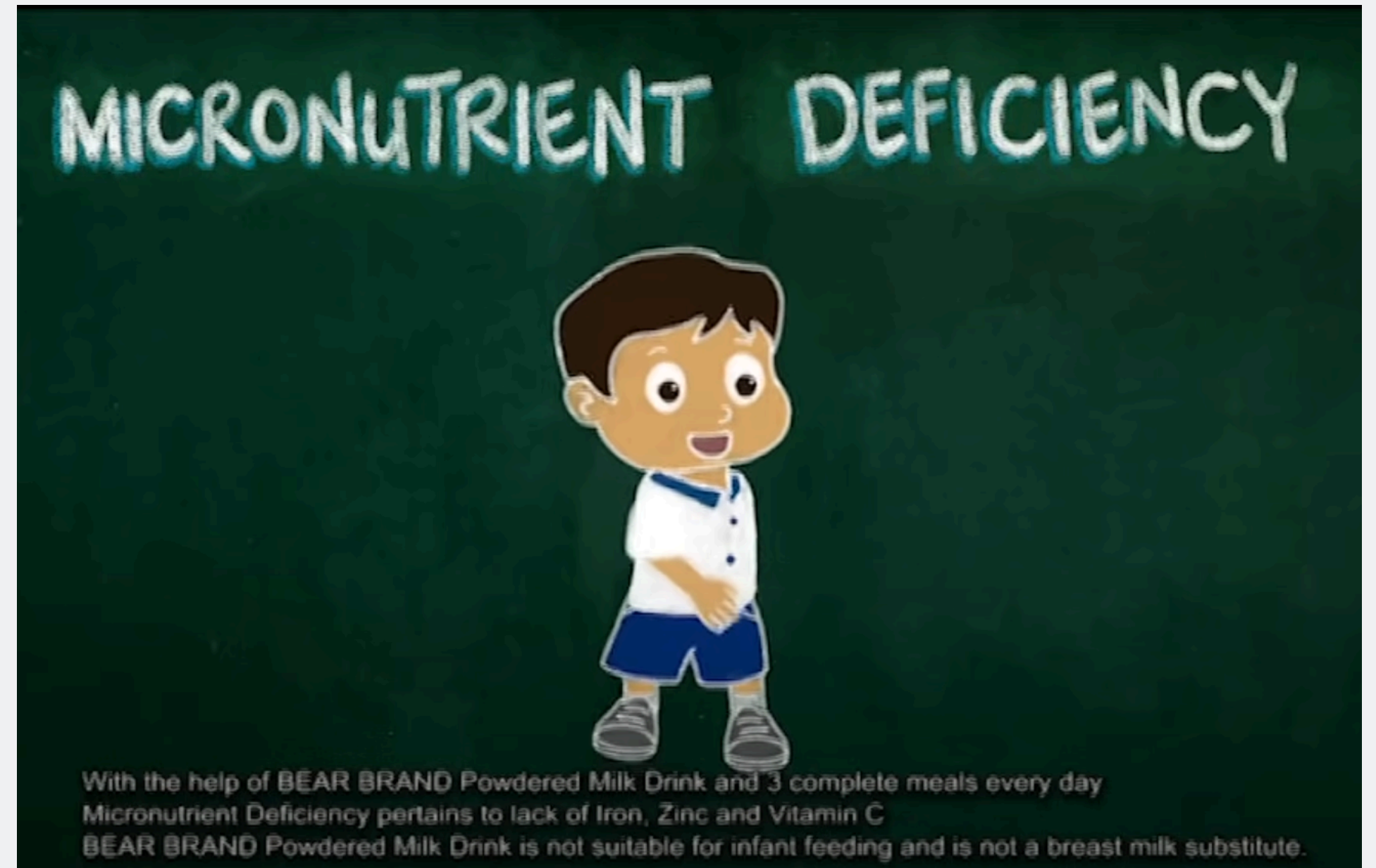
Dietary Guidance to Combat the Effects of the Hidden Hunger



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Are you familiar with this advertisement by Nestle last 2015 in the Philippines which talks about a different kind of hunger?





← → 🔍 Brief Description

This is the Hidden Hunger. What is it?

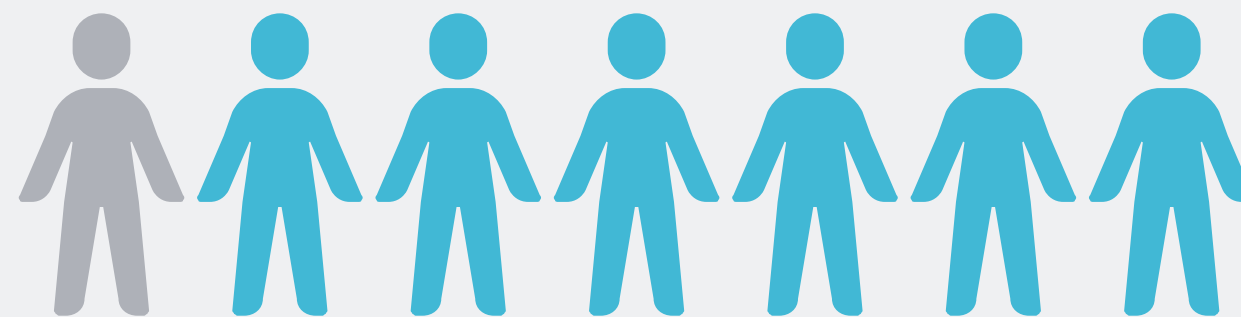
Also known as micronutrient deficiency, it is the lack of essential vitamins and minerals that are required in small amounts by the body for proper growth and development.

According to the World Health Organization (WHO)
and Our World in Data (OWID)



← → 🔍 Introduction

In the Philippines last 2019...



1 out of 7 has Vitamin A Deficiency



1 out of 4 has Iron Deficiency



1 out of 4 has Zinc Deficiency

According to 2019 Expanded National Nutrition Survey, FNRI-DOST

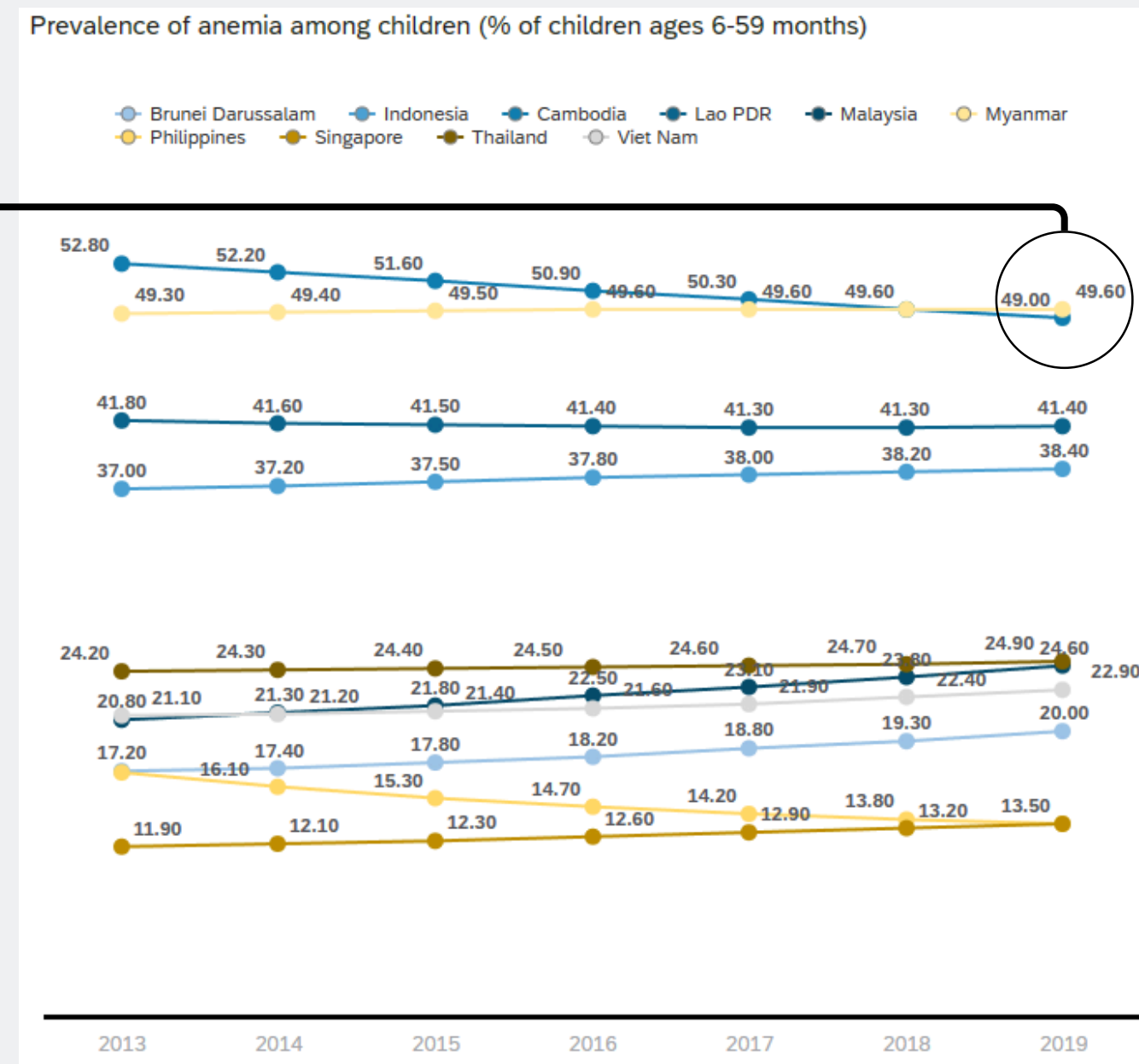


Impacts of the Hidden Hunger

Children can develop Anemia

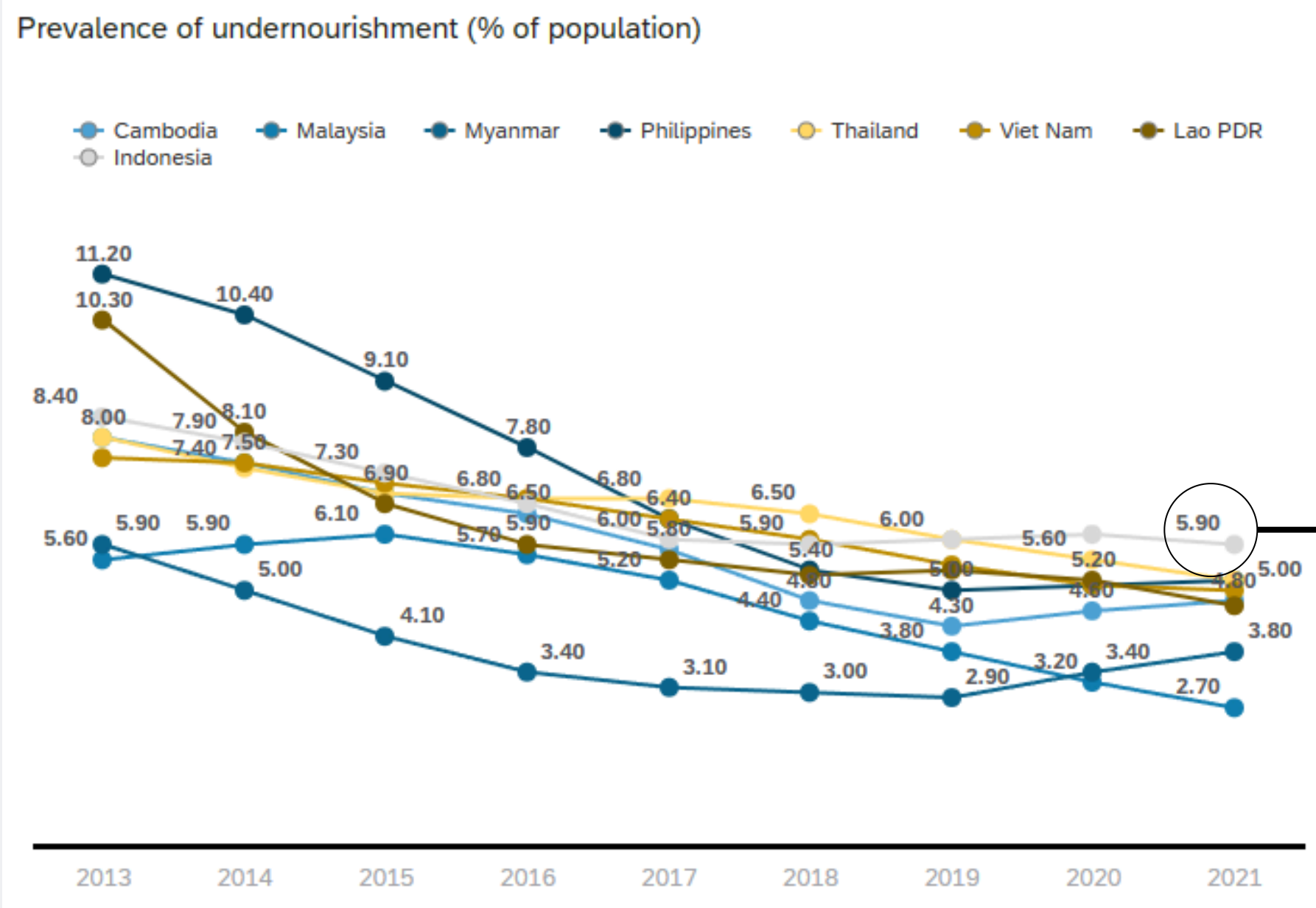
Philippines has the highest prevalence of anemia among children ages 5 below in 2019

Data from World Bank Open Data





Impacts of the Hidden Hunger



Become Undernourished

Indonesia has the highest prevalence of undernourished people among the population

Data from World Bank Open Data



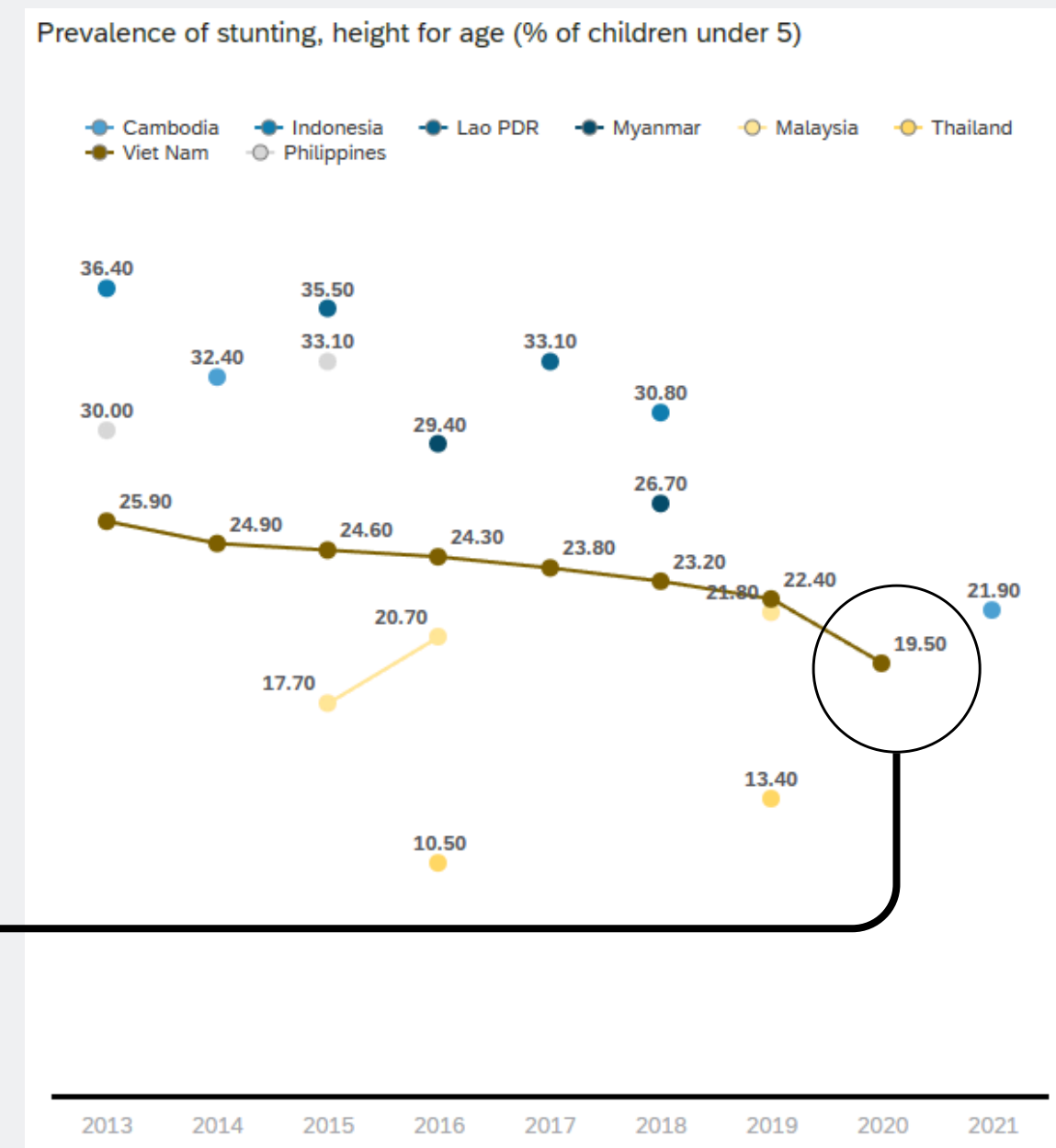
← → 🔍 ASEAN Data

Impacts of the Hidden Hunger

And ultimately stunt their growth

From all the available data, only Viet Nam has a consistent track on the prevalence of stunting on children

Data from World Bank Open Data





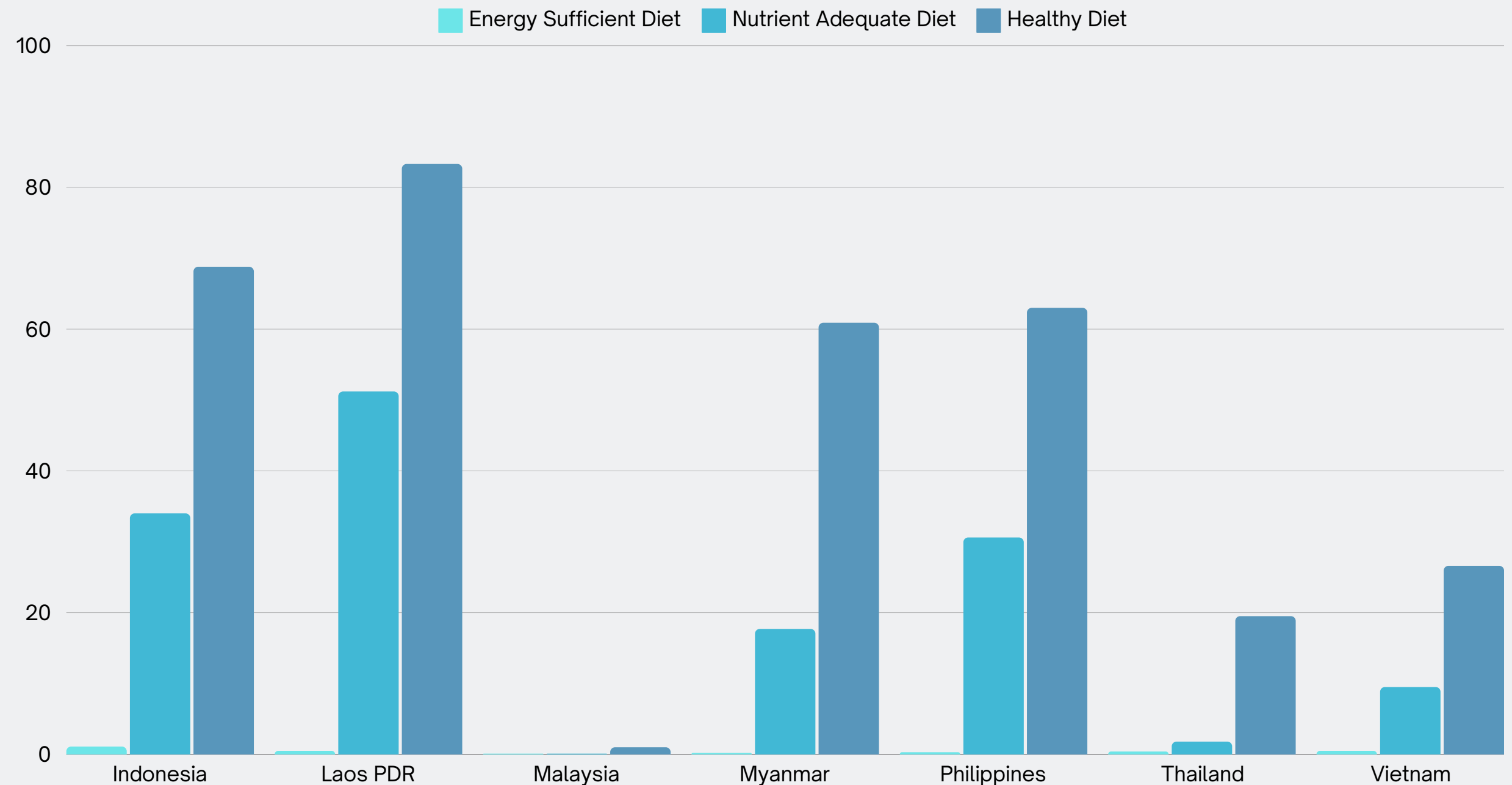
Q Reason

Main reason for
micronutrient
deficiency:

MONEY!

According to Ritchie and Roser (2024), a healthy, nutritious diet is **much more expensive** than a calorie-sufficient one.

Percentage of People Unable to Afford Healthy Diets



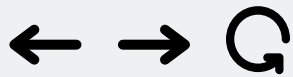
Data from ASEAN Food and Nutrition Security Report 2021



Recommendation

NutriLink, a software application that **identifies the user's micronutrient deficiency** based on demographic data, then provides a meal plan filled with foods **that can supplement the said deficiency while adhering to the daily expenditure** that is specified by the user.





NutriLink Application (Layout Design Idea)

NutriLink

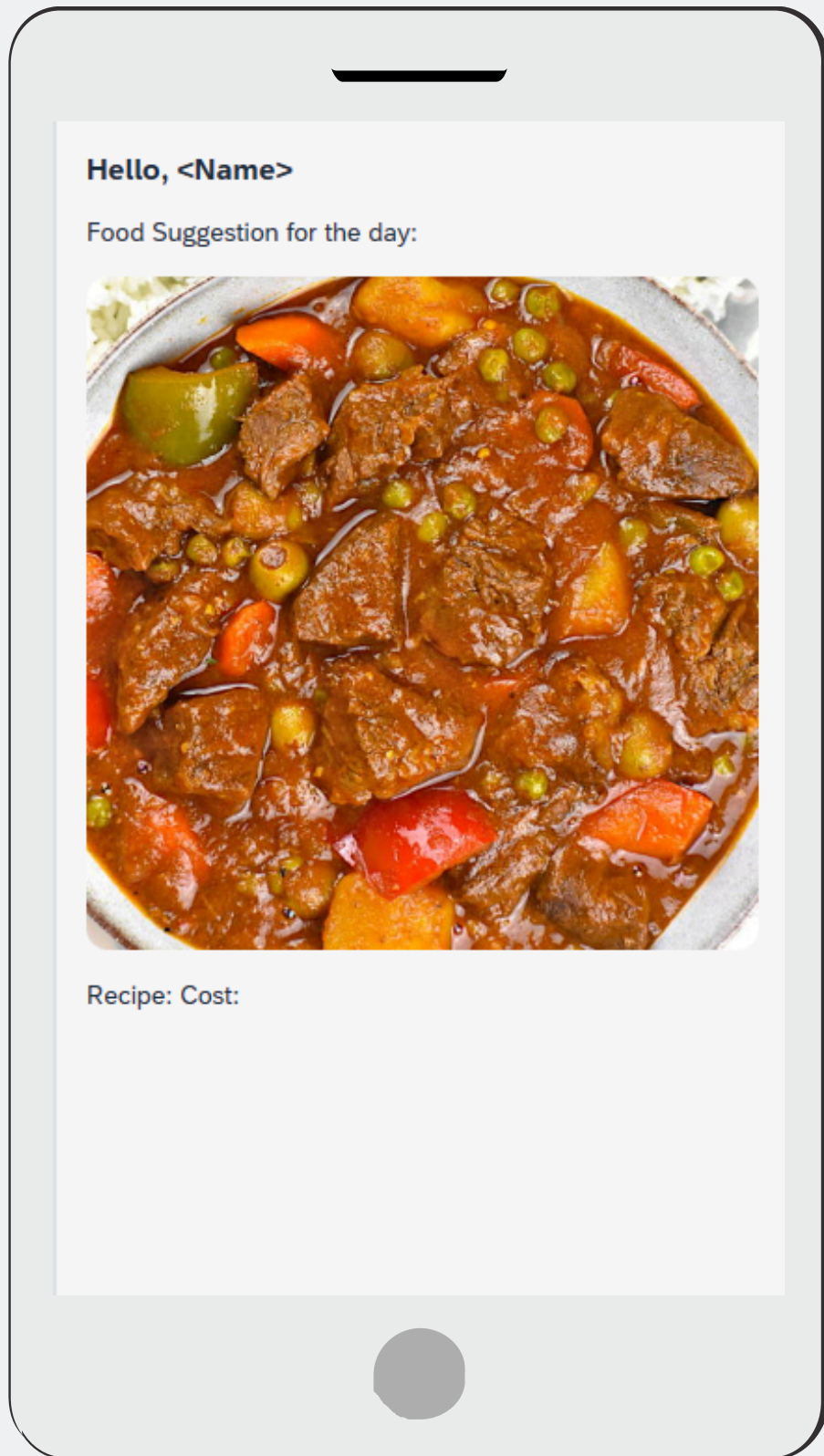
Select Information

Name

Age

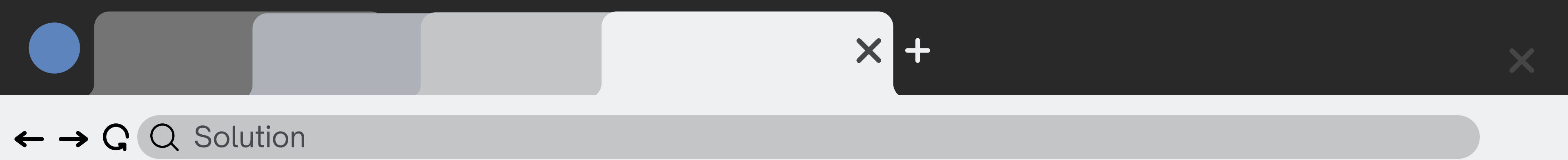
Select option

Submit



Link to app (.mtar)



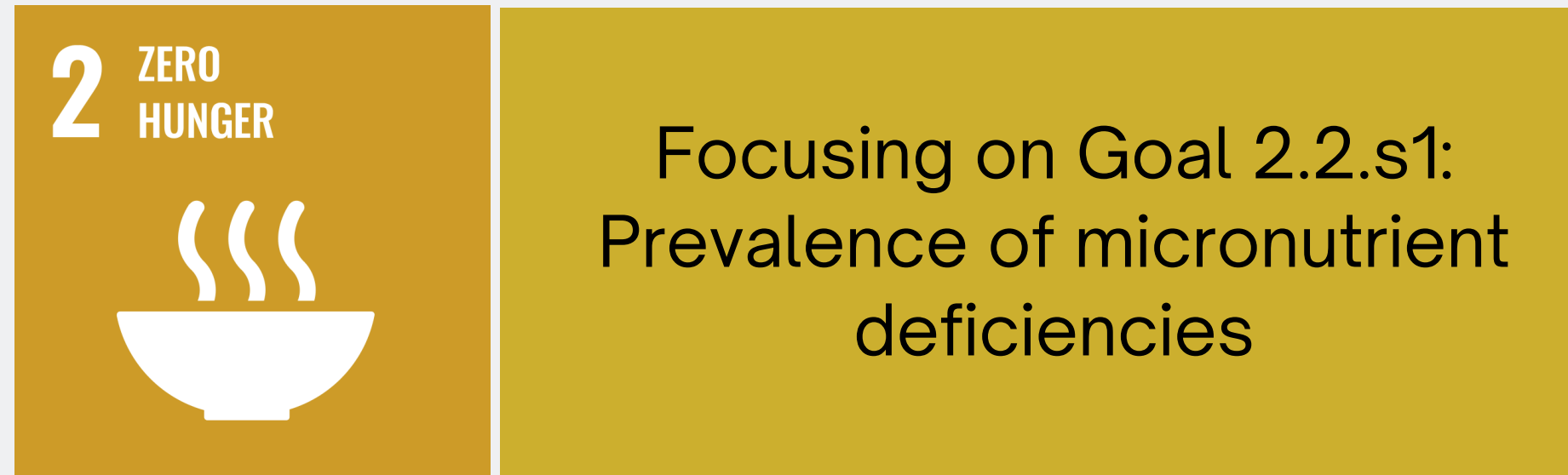


Is this Method Effective?

YES!

According to Armitage (2021) from Stanford Medicine, about **75%** of their test participants who **tracked their progress with digital health tools** were **more successful** in reaching their goals than those that do not.

Our Recommendation is Aligned With

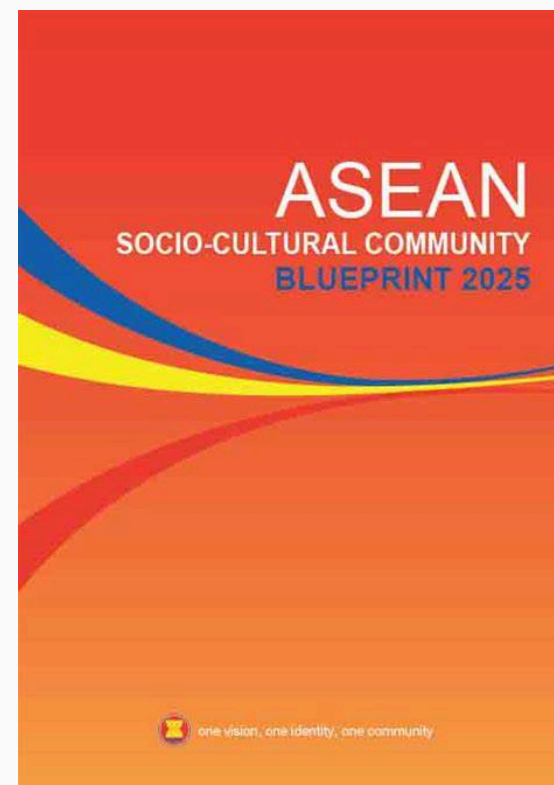


ASEAN Blueprint for 2025

ASEAN Socio-Cultural Community Blueprint 2025

D.5.i: Enhance ability to cope with food price by developing adaptive mechanisms and strategies

Source: ASEAN Socio-Cultural Community
Blueprint 2025



ASEAN Economic Community Blueprint 2025

C.5.56: Contribute prosperity in the ASEAN community by ensuring food security, food safety, and better nutrition.

Source: ASEAN Economic Community
Blueprint 2025



Implementation Roadmap

Year 1

Consultation with Licensed Nutritionists and National Food Security Councils



Years 5-6

App testing then deployment along with publicity campaigns



Years 2-4

App Development



Year 7 onward

Getting continuous user feedback for further improvements, along with maintenance





← → ↺ 🔍 References

ASEAN Food and Nutrition Security Report 2021 (Vol. 1). (2022). ASEAN Secretariat. <https://asean.org/book/asean-food-and-nutrition-security-report-2021-volume-1-the-asean-secretariat-jakarta/>

Mbuya, N. V., Demombynes, G., Piza, S. F., & Adona, A. J. V. (2021). *Undernutrition in the Philippines*. <https://doi.org/10.1596/978-1-4648-1701-4>

Nestlé Philippines. (2015, September 15). *Micronutrient deficiency edutainment Video| BEAR BRAND Powdered Milk Drink | Nestlé PH [Video]*. YouTube. https://www.youtube.com/watch?v=E_ua03zGppc

Palanog, A. D., Calayugan, M. I. C., Descalsota-Empleo, G. I., Amparado, A., Inabangan-Asilo, M. A., Arocena, E. C., Cruz, P. C. S., Borrromeo, T. H., Lalusin, A. G., Hernandez, J. E., Acuin, C., Reinke, R., & Swamy, B. P. M. (2019). *Zinc and iron nutrition status in the Philippines population and local soils*. *Frontiers in Nutrition*, 6. <https://doi.org/10.3389/fnut.2019.00081>

What are the common micronutrient deficiencies in the Philippines? (2022, September 17). <https://www.nnc.gov.ph/regional-offices/mindanao/region-ix-zamboanga-peninsula/8778-what-are-the-common-micronutrient-deficiencies-in-the-philippines>

World Bank Open Data. (n.d.). World Bank Open Data. <https://data.worldbank.org/indicator>

World Health Organization: WHO. (2019, December 20). *Micronutrients*. https://www.who.int/health-topics/micronutrients#tab=tab_1

Ritchie, H., & Roser, M. (2024, February 29). Micronutrient deficiency. Our World in Data. <https://ourworldindata.org/micronutrient-deficiency>

Ritchie, H., & Roser, M. (2024b, March 18). Three billion people cannot afford a healthy diet. Our World in Data. <https://ourworldindata.org/diet-affordability>

Digital health tracking tools help individuals lose weight, study finds. (2021, February 24). News Center. <https://med.stanford.edu/news/all-news/2021/02/digital-health-tracking-tools-help-individuals-lose-weight-study-finds.html>

Hunger in Asia. (n.d.). Compassion International. <https://www.compassion.com/poverty/hunger-in-asia.htm>