



# Feeding Asean



ASEAN's Path to Sustainable Food Systems

2 ZERO  
HUNGER



Team Appetite Coders  
Ding Yuan Xing  
Tan Wan Xuen



## Objective

## Problem

## Recommendation

## Implementation

## Conclusion

FOOD SECURITY. AN ASEAN'S PRIORITY

By Kementerian Kominfo | 22 May 2023



# Food Loss and Waste in Southeast Asia



There are things to note on the current landscape, challenges, and pathways to reduce food loss and waste.

## We aim to:

### CHILDREN AND POVERTY

- reduce food insecurity and minimize food waste in the ASEAN region that aligns with SDG 2-Zero Hunger.
- build a sustainable and resilient food distribution network.
- foster community engagement through transforming surplus food into a resource for those in need.



FOOD SECURITY AND SUSTAINABLE AGRICULTURE

unger,  
hang  
outh  
east ASia

LISHED 11 AUG 2022

## Objective

## Problem

## Recommendation

## Implementation

## Conclusion

# Nowadays, food Inflation rate is getting higher



Percentage of Food Inflation Rate Increased from 2021 to 2022

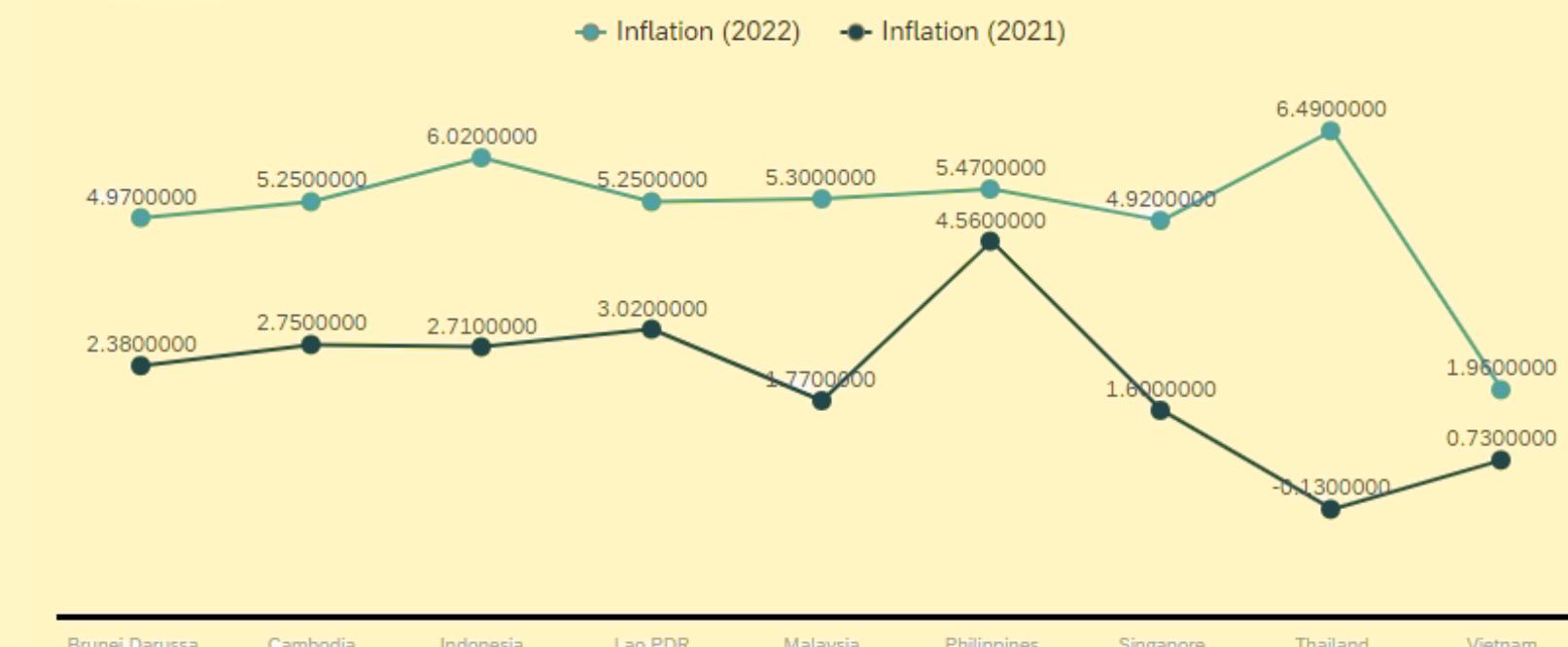
# 45.21%

## Food Inflation Rate

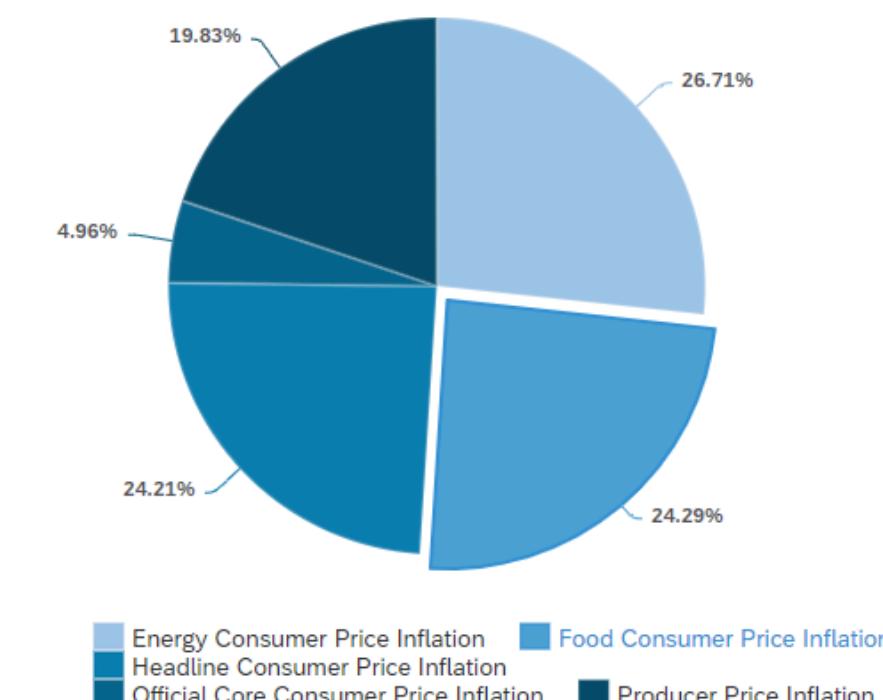
As inflation rate increase, monthly expenses increases. However, people have fixed monthly expenses for rent and petrol. The only way they can **reduce their monthly expenses** is by **cutting down their food portions and limiting their meals to two or even one per day.**



Food Inflation rate of ASEAN Countries in 2021 and 2022



Inflation in 2022 per Series Name for Actual



## Objective

## Problem

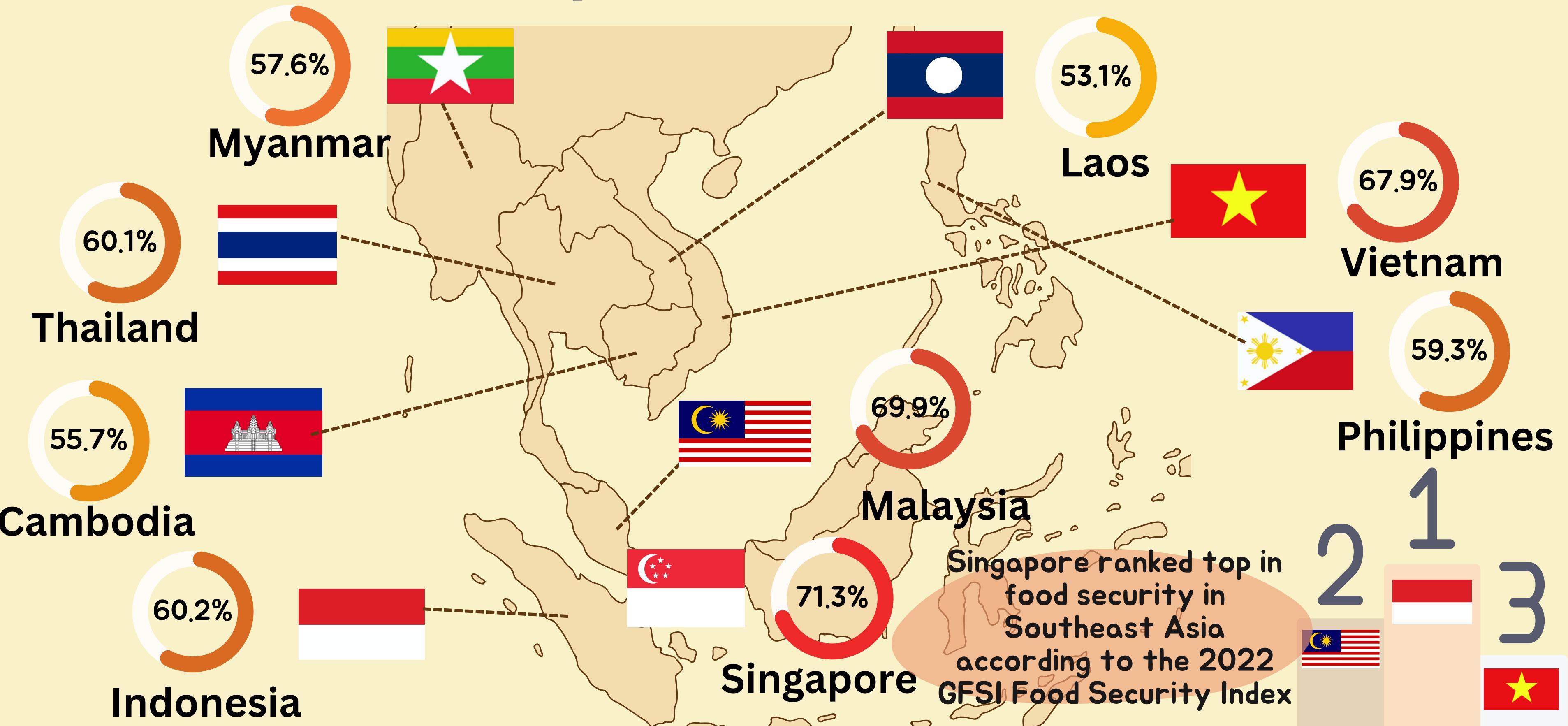
## Recommendation

## Implementation

## Conclusion

(asean2023.id, n.d.)

# Food Security Index of Southeast Asia in 2022



## Objective

## Problem

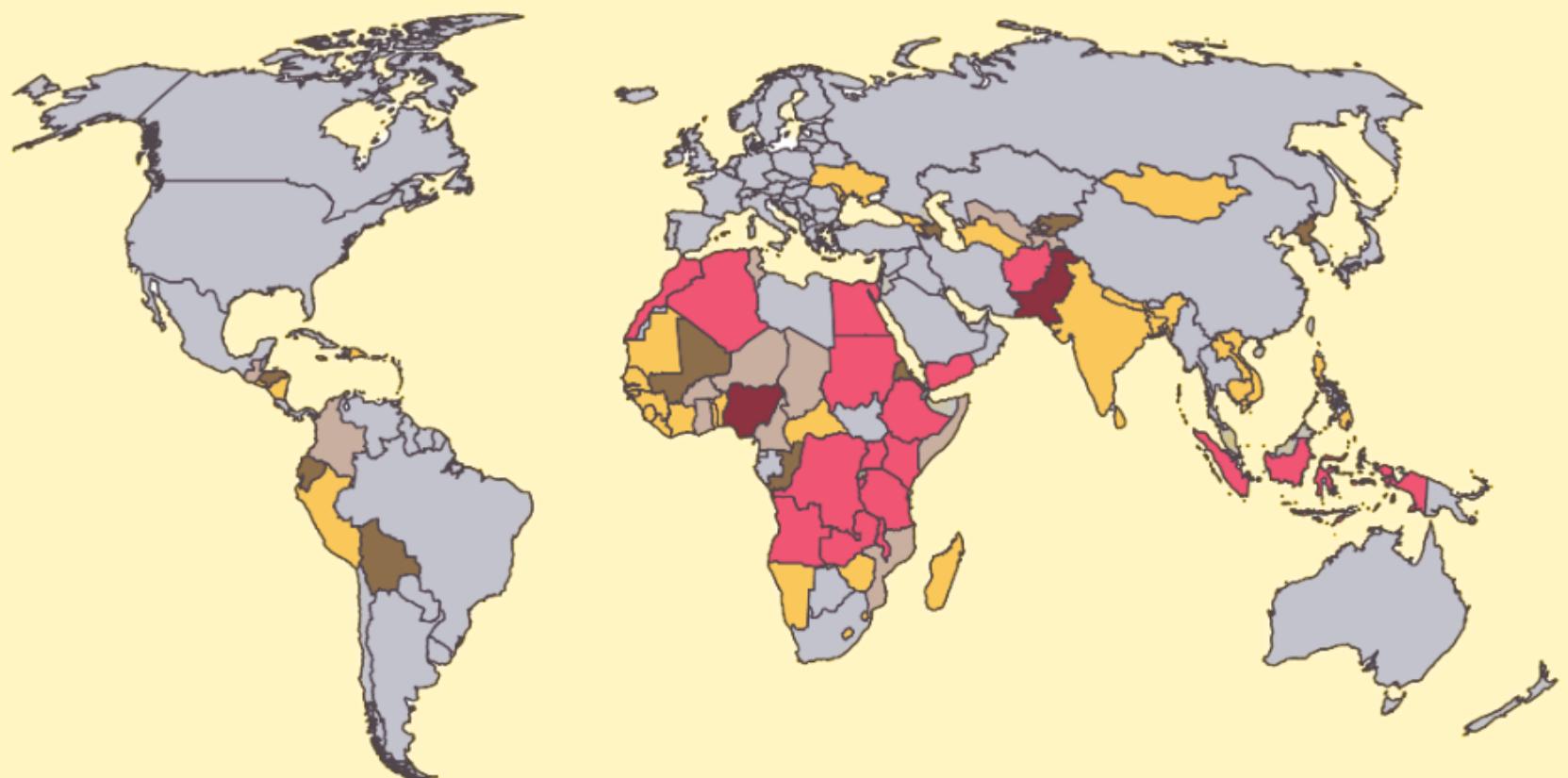
## Recommendation

## Implementation

## Conclusion

**Even so, people from all over the world are still suffering from food insecurity, especially ASEAN countries.**

The number of people in low- and middle-income countries experiencing food insecurity increased by a total 118.7 million in 2022 from 2021



### Number of additional food-insecure people in 2022

- More than 5 million
- 1.01 million to 5 million
- 501,000 to 1 million
- 251,000 to 500,000
- Fewer than 250,000
- Non-IFSA country

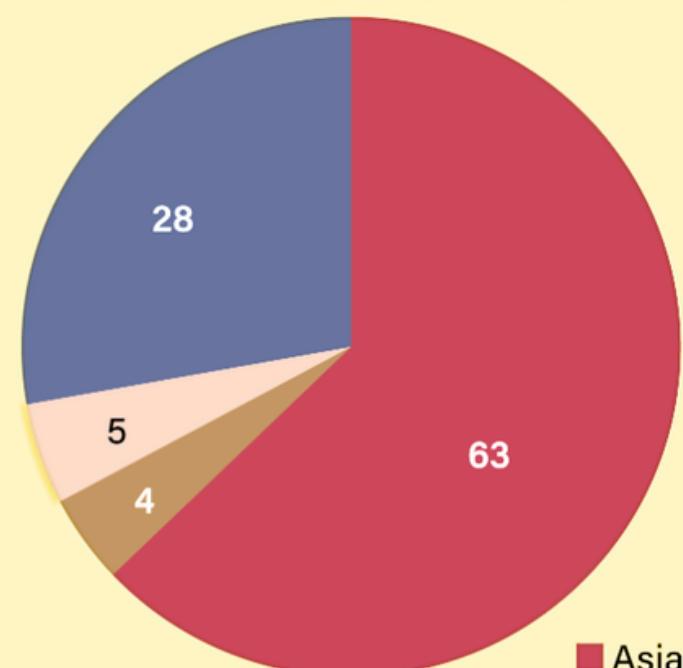
Notes: IFSA = International Food Security Assessment report. The report analyzes food security in 77 low- and medium-income countries.

Source: USDA, Economic Research Service.

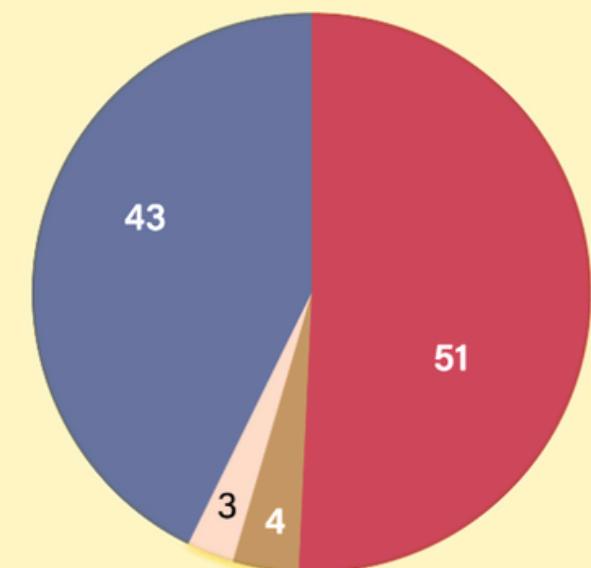


Asia accounts for 63 percent of the population of the 77 countries studied and 51 percent of total food-insecure population in 2022

Total population (percent)



Population food insecure (percent)



Source: USDA, Economic Research Service.

**In 2023, Southeast Asia has...**

**15.6%**

prevalence of undernourishment

**>809  
million**

prevalence of moderately or severely food insecure

(Newsroom, n.d.; Zereyesus and Cardell, 2022)

## Objective

## Problem

## Recommendation

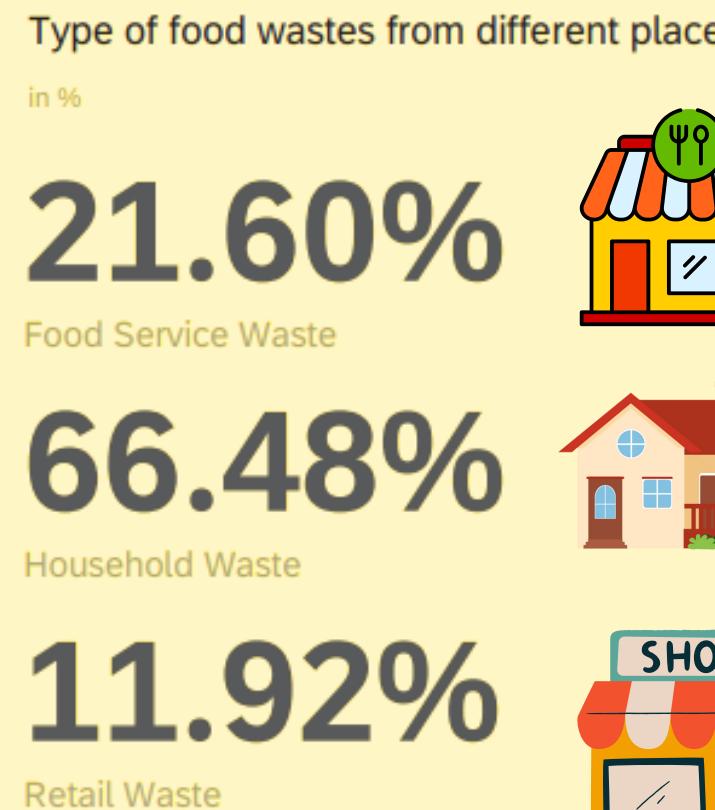
## Implementation

## Conclusion

(www.kaggle.com, n.d.; Food Cycle Science, n.d.)

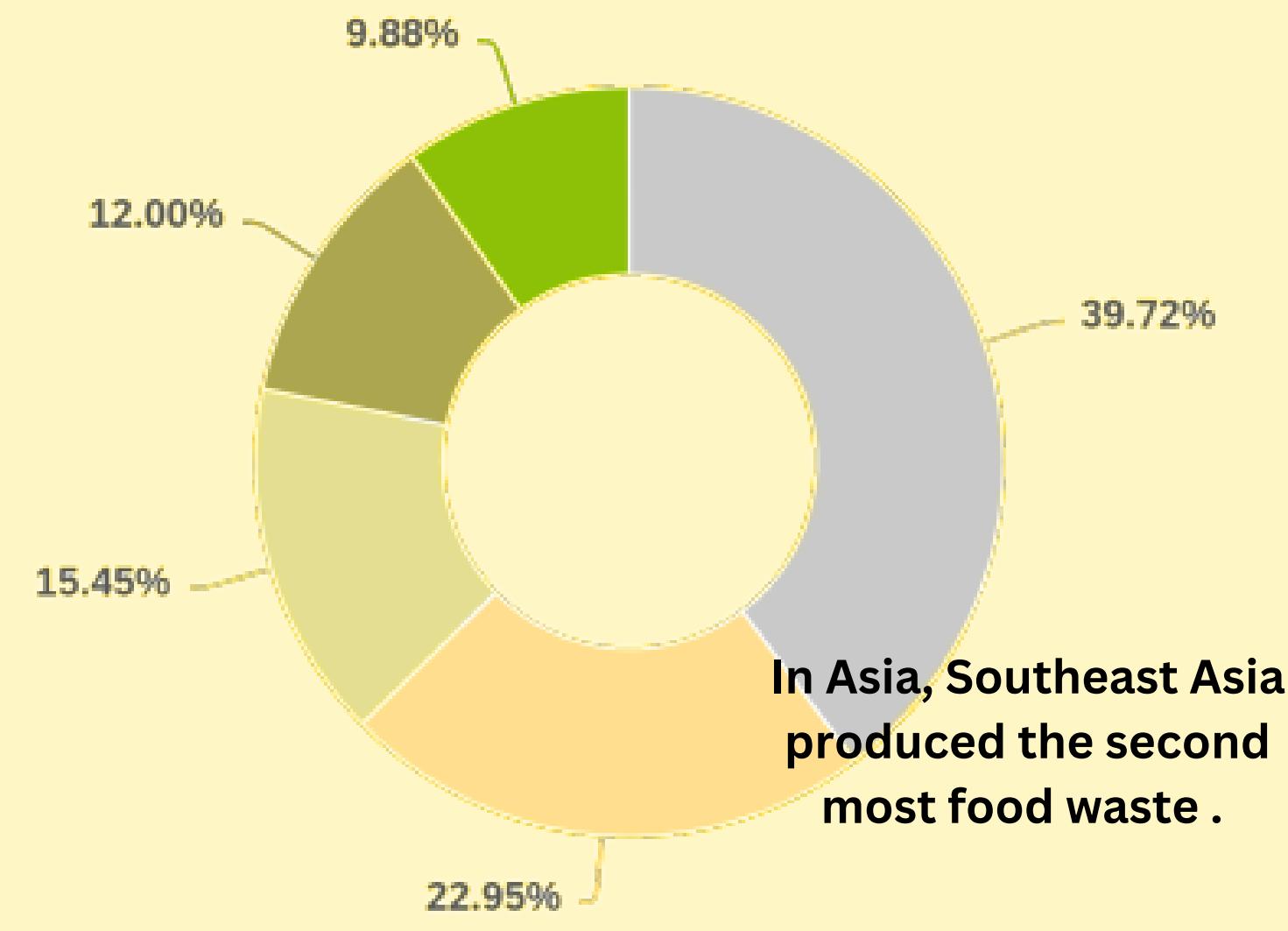
# Moreover, food waste problem is getting serious

Southeast Asia has more than 50% wastes is food waste.



Total Food Waste (kg/capita/year) per Region for Actual

Western Asia  
Eastern Asia  
South-eastern Asia  
Central Asia  
Southern Asia



## Objective

## Problem

## Recommendation

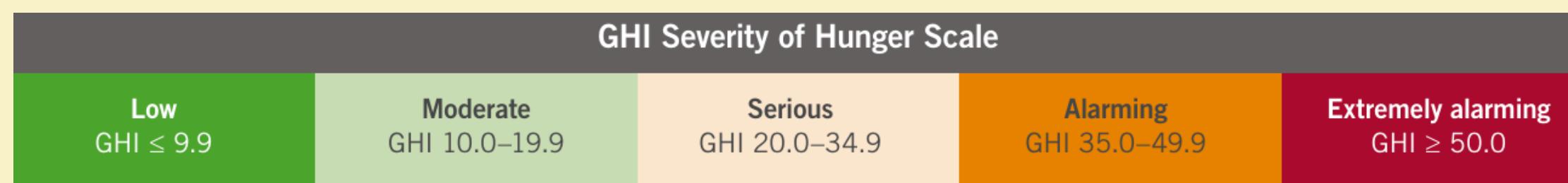
## Implementation

## Conclusion

(Seasia.co, n.d.; Global Hunger Index, 2023)

We can see that almost all of them fall in the moderate category.

Although not in critical state, they may still suffering from food insecurity and undernutrition.



Hence, hunger problem should be solved by reducing food waste.



## Objective

## Problem

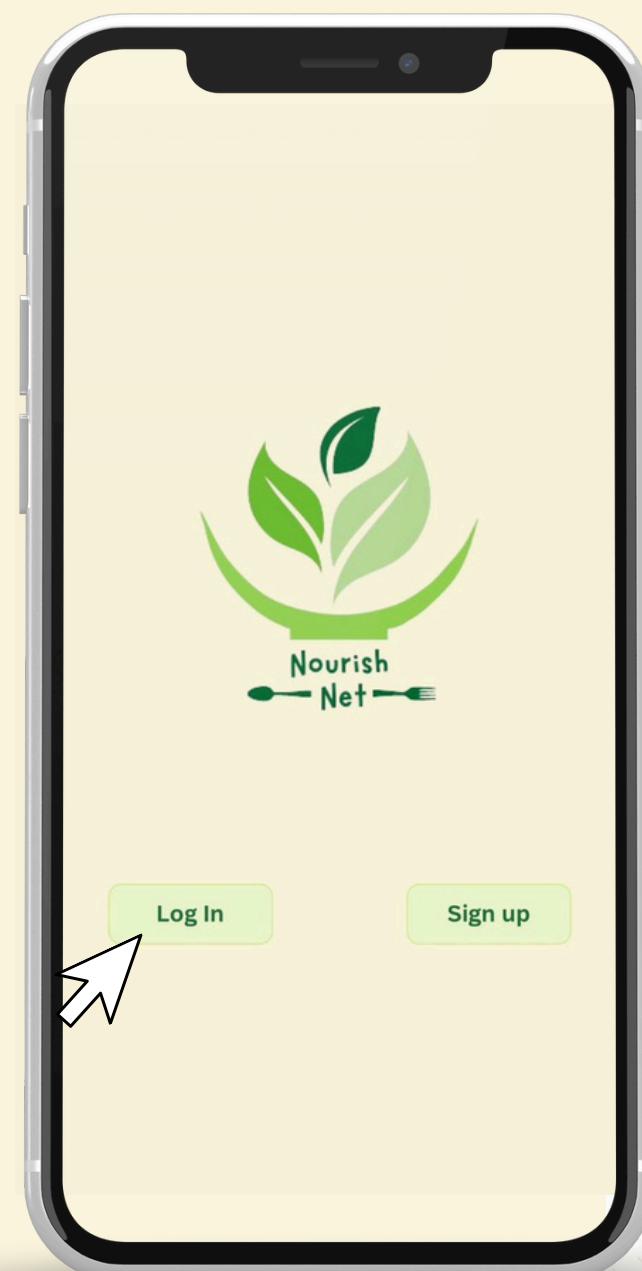
## Recommendation

## Implementation

## Conclusion

# Our Recommendation:

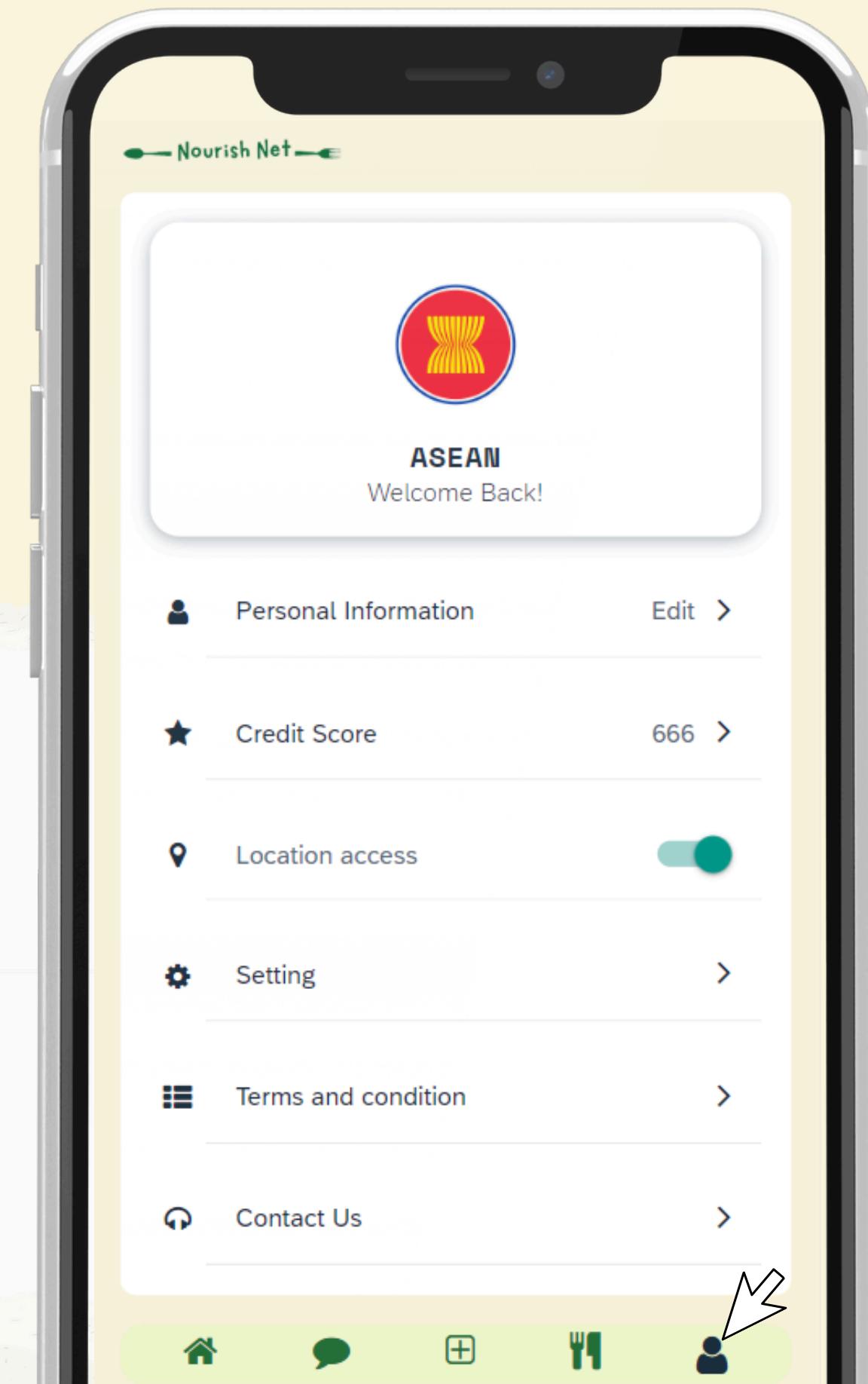
## Nourish Net



*Nourish Net*,  
a mobile application designed to combat  
food insecurity and waste in ASEAN  
countries.

### Functions:

- facilitates the exchange of unwanted food
- supports food donations to community members in need
- offers educational resources on efficient ingredient use and self-cooking.



## Objective

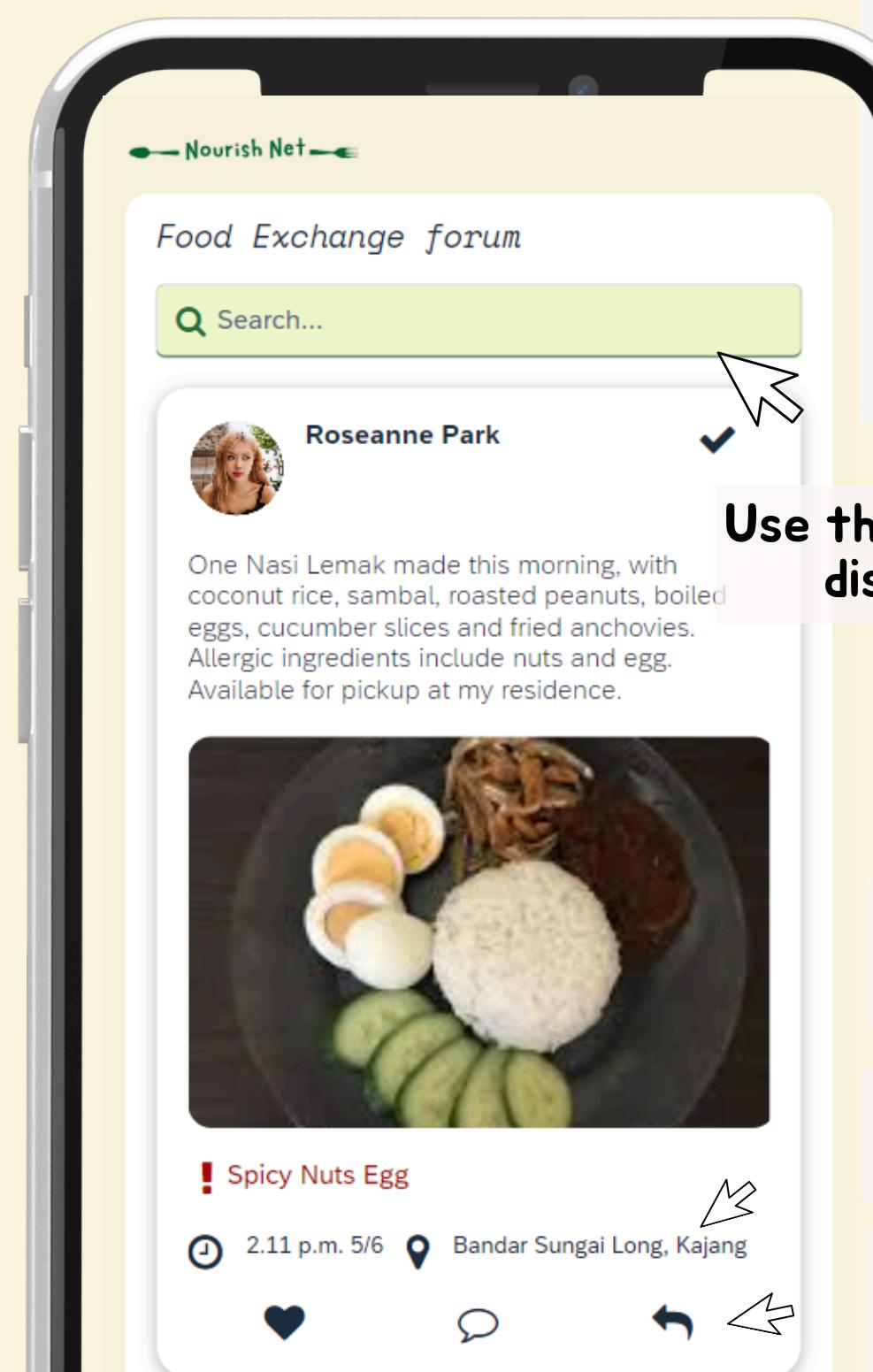
## Problem

## Recommendation

## Implementation

## Conclusion

# Recommendation 1: Food Exchange Forum



- Create a network of food donors and recipients to ensure efficient distribution of excess food.
- Promote the donation of excess food from households, restaurants, and supermarkets.

Use the search bar to find specific discussions or filter posts

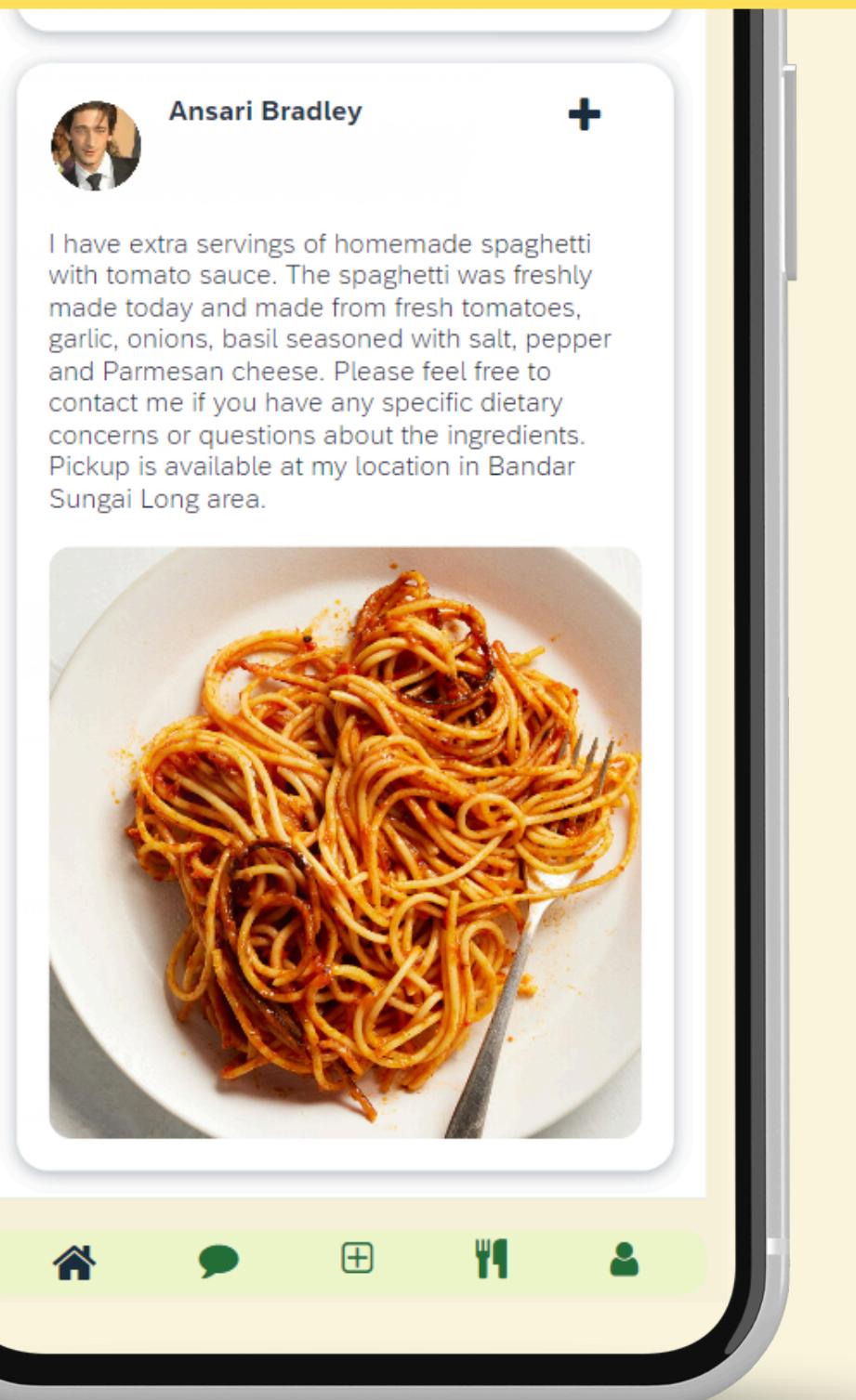
Posts from nearby locations and with similar preferences will be recommended for the user to view

Detailed information and specific allergens provided.

Approximate location shared.

Interactive features for users to interact and communicate.

Follow the user to receive future updates and posts.



Users can list unwanted food items or extra food for others to claim.

## Objective

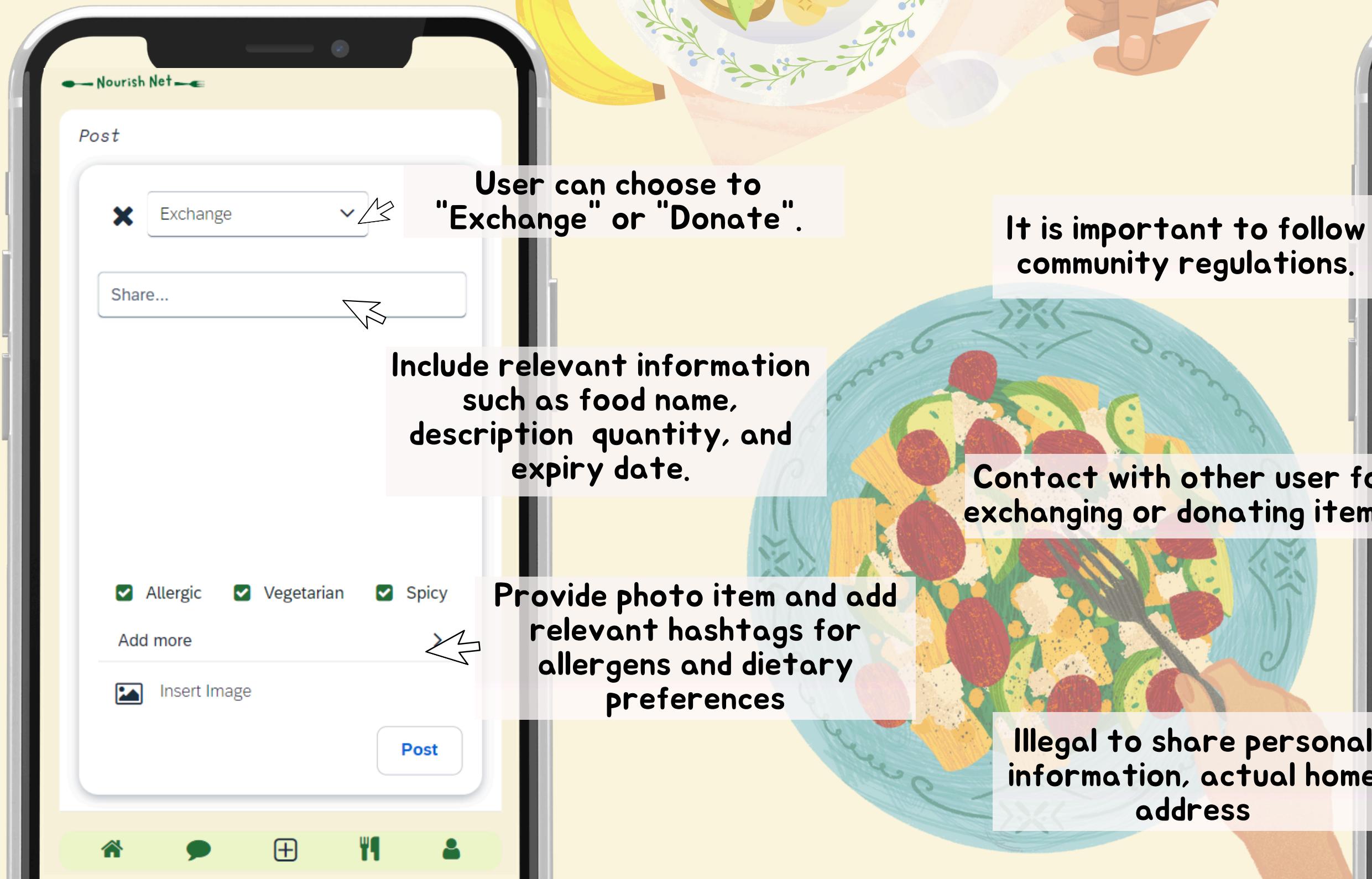
## Problem

## Recommendation

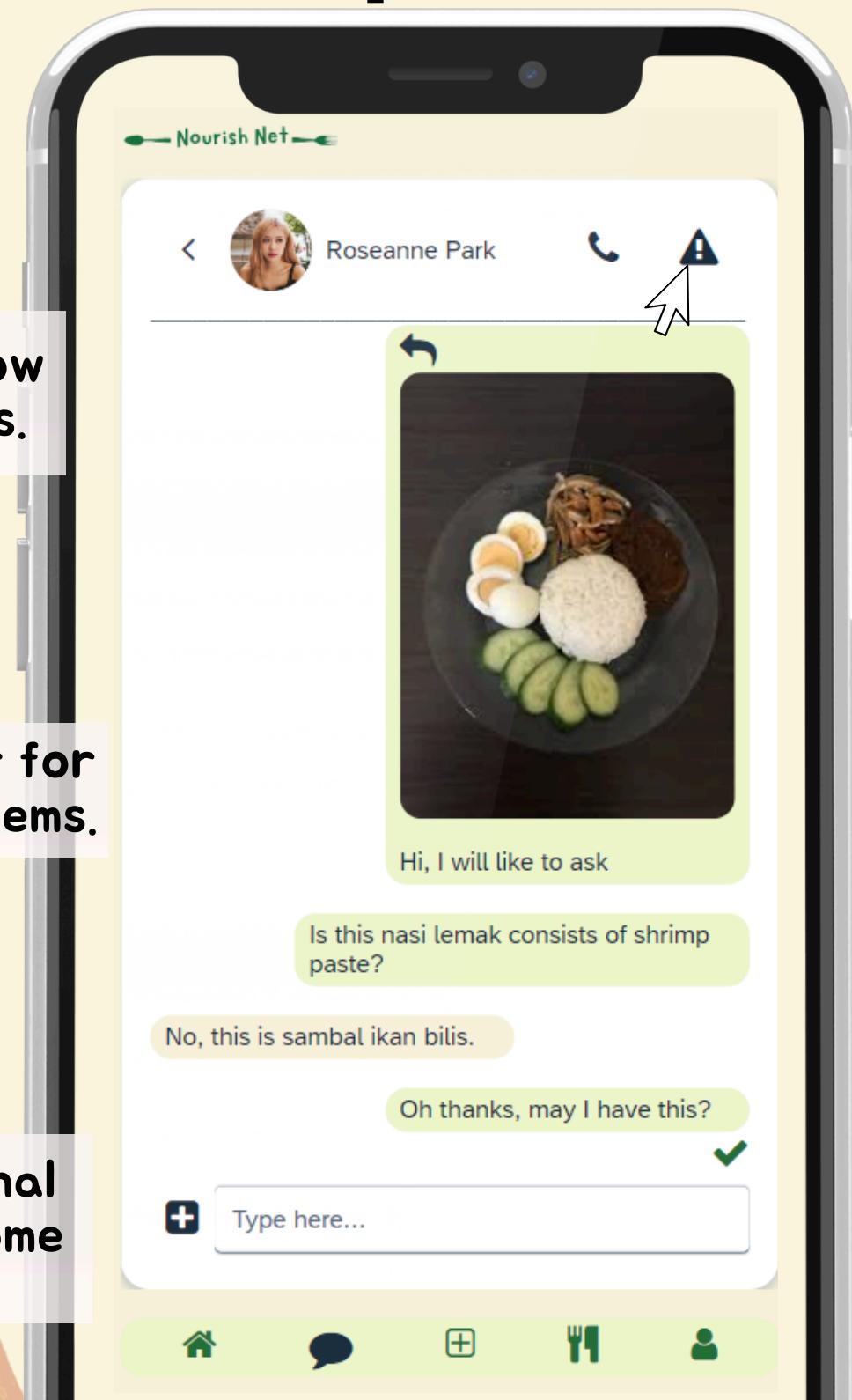
## Implementation

## Conclusion

### Posting food item



### Chat between donors and recipients



## Objective

## Problem

## Recommendation

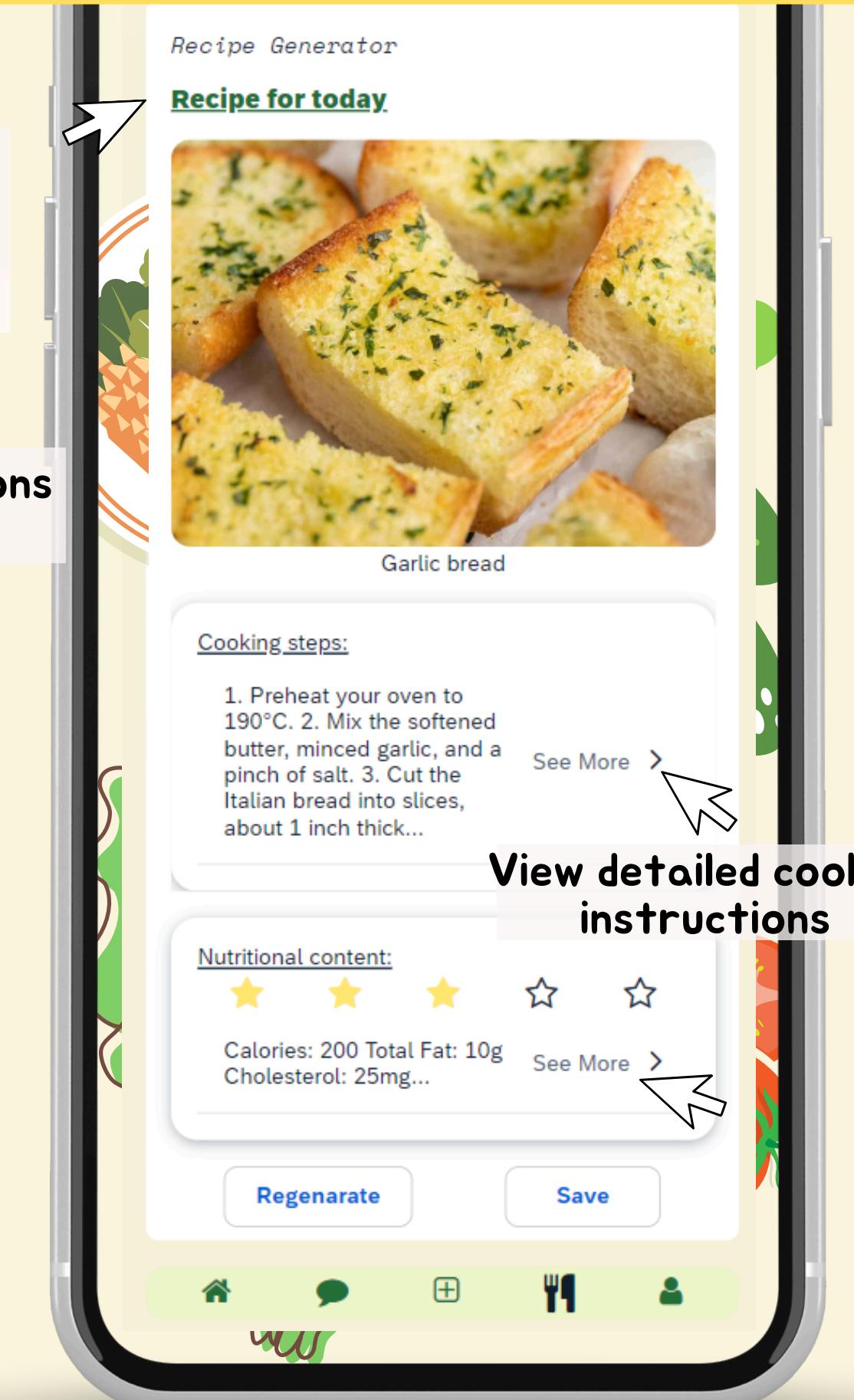
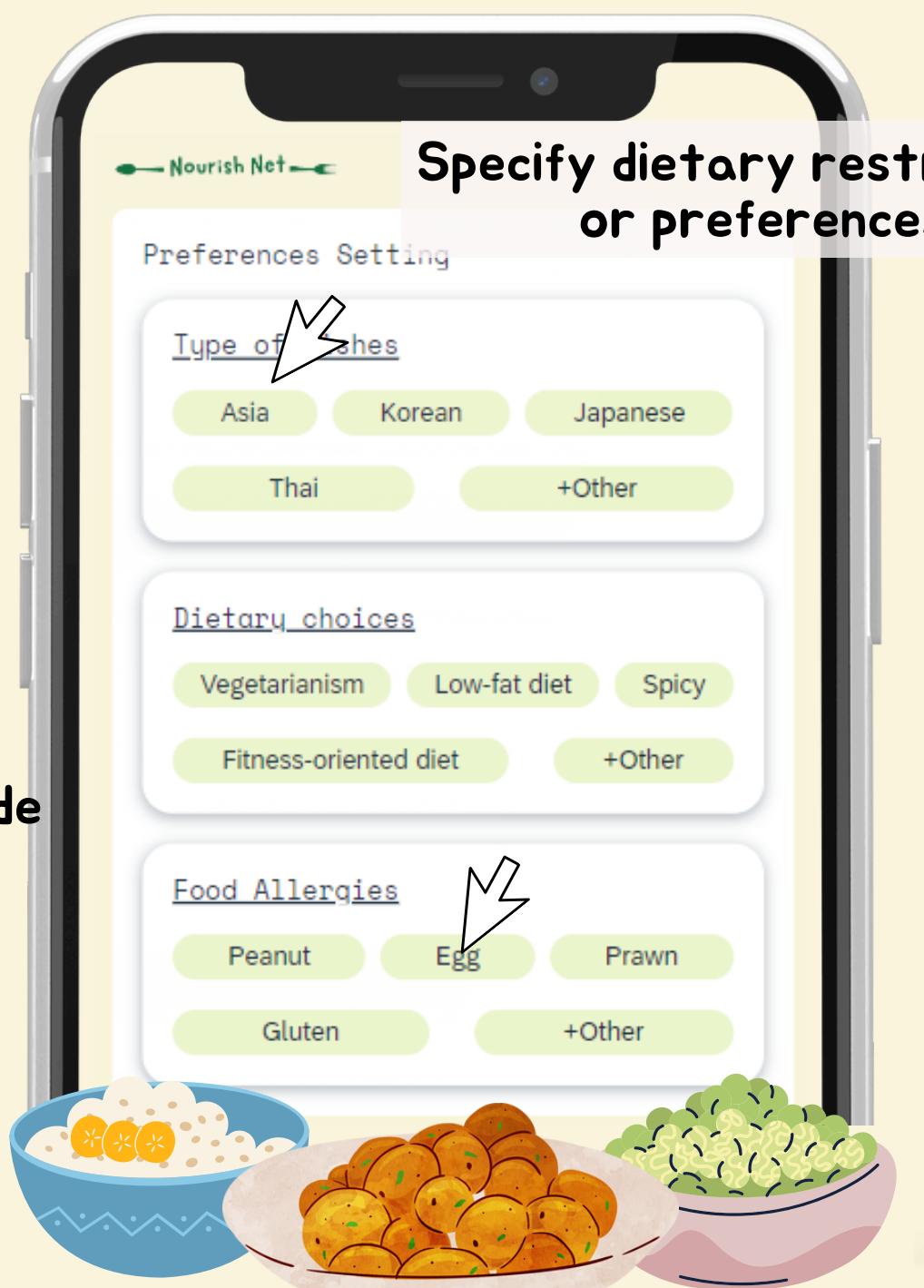
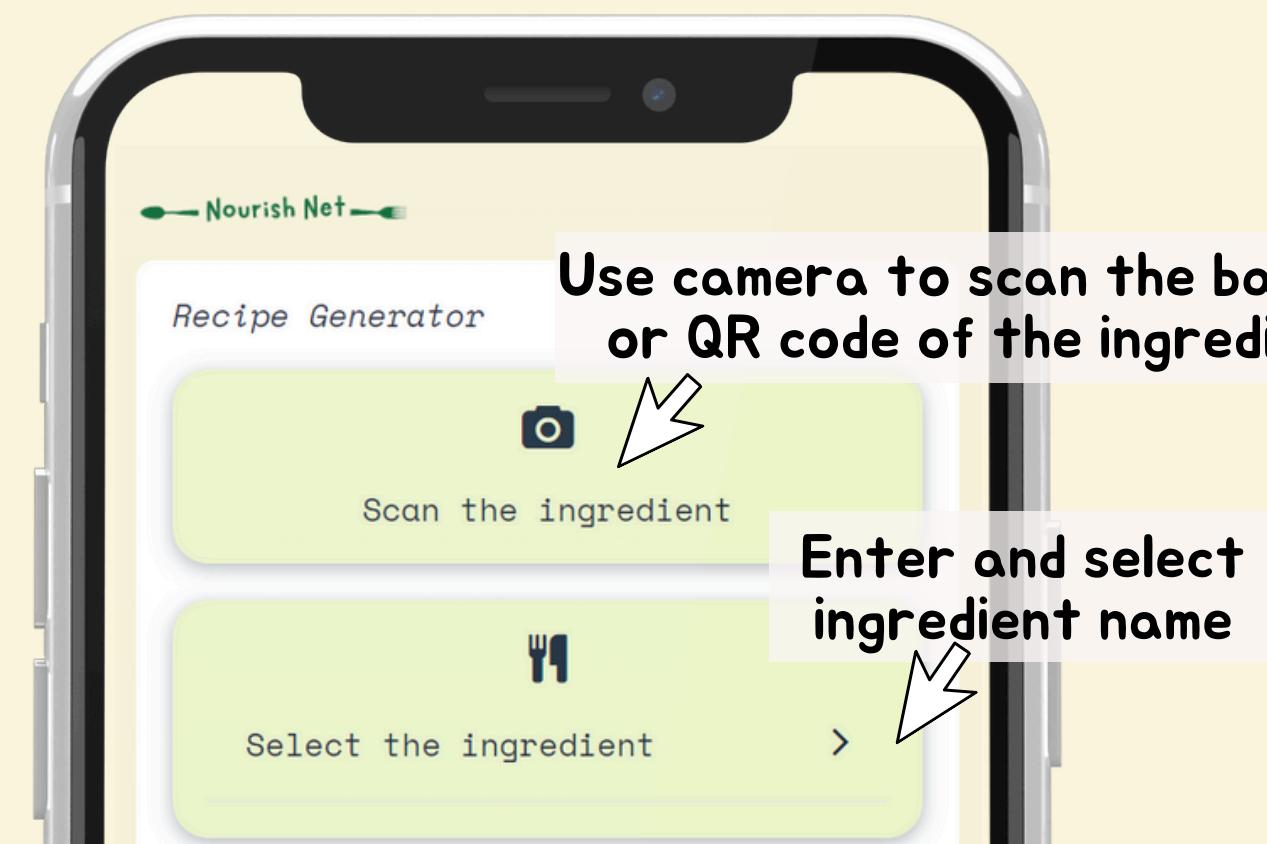
## Implementation

## Conclusion

# Recommendation 2:

## Recipe Generator

- Offer cooking tutorials, recipes for meal planning to maximize the use of available food.
- Provide information on the nutritional value of different foods



## Objective

## Problem

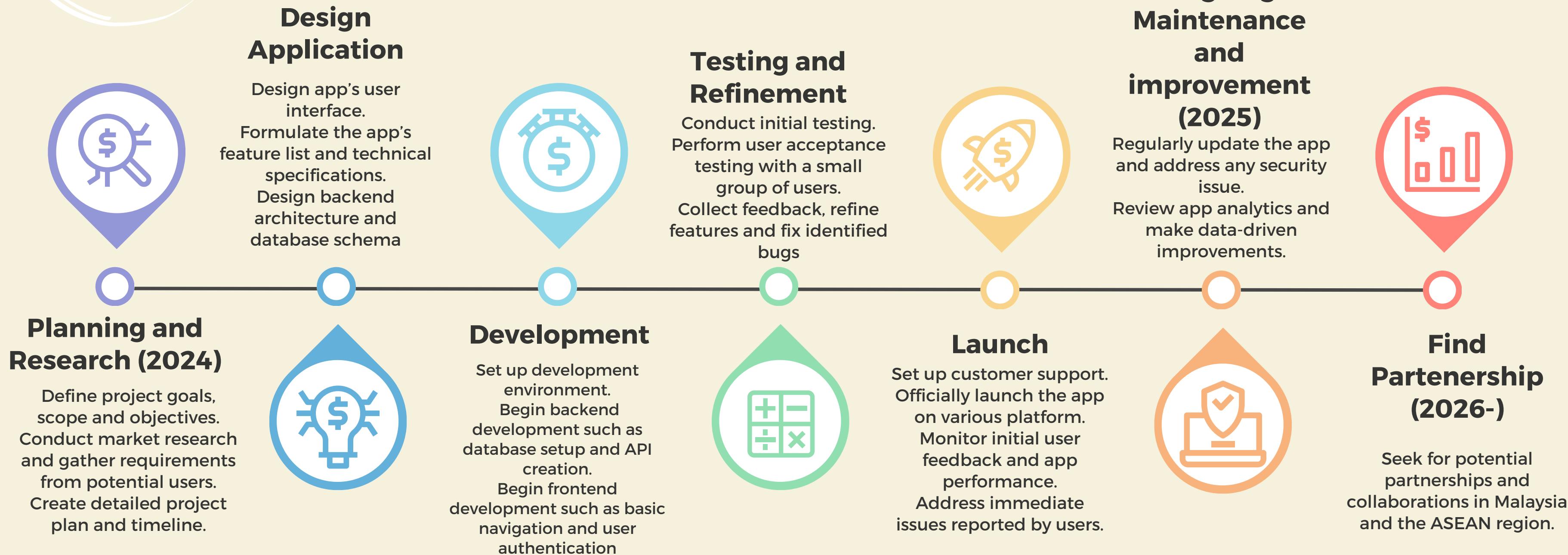
## Recommendation

## Implementation

## Conclusion



# IMPLEMENTATION TIMELINE



## Objective

## Problem

## Recommendation

## Implementation

## Conclusion

# COLLABORATIONS AND PARTNERSHIPS



Government Agencies

Ministry of Agriculture and Food Industries (Malaysia)

Ministry of Health (Malaysia)

ASEAN Coordinating Centre for Humanitarian Assistance on disaster management



NGOs

Food Aid Foundation

Kechar Soup Kitchen

ASEAN Food Security Information System



International Organizations

United Nations Development Programme



World Food Programme



World Food Programme

Private Sector

Grab Malaysia

Food Panda Malaysia

Local Supermarkets (Tesco Malaysia, Giant)

ASEAN Youth Organization

## Objective

## Problem

## Recommendation

## Implementation

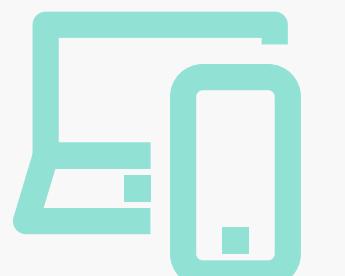
## Conclusion

# CHALLENGES

01

## PRIVACY AND SECURITY

The privacy of users and the security of their data may be at risk, which is crucial for maintaining trust.



01

## DATA PROTECTION MEASURES

Implement end-to-end encryption for all communications within the app. Clear communicate privacy policies and secure communication established



02

## HEALTH RISKS

The safety and quality of food items being exchanged or donated may not be guaranteed.



02

## VERIFICATIONS OF USERS

Implement a verification system for donors and recipients such as ratings. Users are required to fill in actual personal information.



03

## USER ENGAGEMENT

Getting users to adopt and regularly use the app can be difficult. Users may be hesitant to try a new platform



03

## USER ENGAGEMENT

User-friendly design to ensure the app is easy to navigate. Offer the app in customized content to reflect local cultures. Partnerships with local organizations

# STRATEGIES/ SOLUTION

# CONCLUSION

Why we choose reducing food waste to alleviate hunger?



**Increase food availability**

Reduce food insecurity



**Economic efficiency**

Maintain stable food prices and reduce food inflation



**Environmental sustainability**

Preserve sustainable agricultural conditions and food production

**DEMO**  
**SCAN ME!**



*Thank You*

# Reference

- asean2023.id. (n.d.). Food Security: An ASEAN's Priority. [online] Available at: <https://asean2023.id/en/news/food-security-an-aseans-priority>.
- Food Cycle Science. (n.d.). A Complete Overview of the Food Waste Crisis In Southeast Asia. [online] Available at: <https://foodcyclescience.com/blogs/food-waste-industry/a-complete-overview-of-the-food-waste-crisis-in-southeast-asia>.
- Global Hunger Index (2023). GLOBAL HUNGER INDEX THE POWER OF YOUTH IN SHAPING FOOD SYSTEMS. [online] Available at: <https://www.globalhungerindex.org/pdf/en/2023.pdf>.
- Newsroom. (n.d.). FAO report: In 2023, in Asia-Pacific millions of people have been unable to afford a healthy diet – women fare worse than men. [online] Available at: <https://www.fao.org/newsroom/detail/fao-report--in-2023--in-asia-pacific-millions-of-people-have-been-unable-to-afford-a-healthy-diet---women-fare-worse-than-men/en>.
- www.kaggle.com. (n.d.). Food Waste. [online] Available at: <https://www.kaggle.com/datasets/joebeachcapital/food-waste>.
- Seasia.co (n.d.). Hunger Index in Southeast Asia, 2023. [online] Seasia.co. Available at: <https://seasia.co/infographic/hunger-index-in-southeast-asia-2023#:~:text=In%20Southeast%20Asia%2C%20Thailand%20has> [Accessed 2 Jun. 2024].
- www.kaggle.com. (n.d.). Global Inflation Dataset - (1970~2022). [online] Available at: <https://www.kaggle.com/datasets/belayethossainds/global-inflation-dataset-212-country-19702022>.
- Zereyesus, Y.A. and Cardell, L. (2022). USDA ERS - Global Food Insecurity Grows in 2022 Amid Backdrop of Higher Prices, Black Sea Conflict. [online] www.ers.usda.gov. Available at: <https://www.ers.usda.gov/amber-waves/2022/november/global-food-insecurity-grows-in-2022-amid-backdrop-of-higher-prices-black-sea-conflict/>.