



ASEAN  
DATA SCIENCE  
EXPLORERS



# ALTERING COLLARS

Empowering Farming towards a Sustainable  
Future of the ASEAN Community



2  
ZERO  
HUNGER



8  
DECENT WORK AND  
ECONOMIC GROWTH



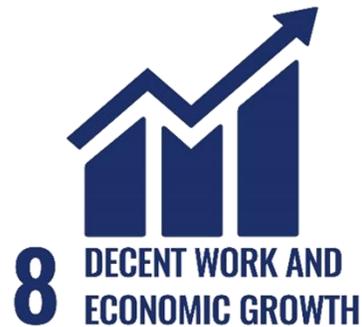
4  
QUALITY  
EDUCATION

 **TEAM YOUTH FORWARD** ▶▶▶

RADA PRAPAIKORNKIET & KANJAREE SUPPAWITTAYA  
Saint Joseph Convent School English Program (Bangrak)

# OBJECTIVES

To resolve the unseen gaps in Agrarian Sector by adapting an effective technological advancement and creating opportunities in education.



# THE DILEMMA

Farmers are one of the key players in ASEAN's rapid growth in the agrarian sector. However, there is still a lack of support and the labour exerted by the farmers is not well-paid.



LOW INCOME ● HARD MANUAL LABOR ● OFFERED LESS

DO WE CARE ABOUT  
THE **KEY PLAYERS**  
BEHIND THE **PROGRESS**  
OF THE **AGRARIAN**  
SECTOR?



# THE PROGRESSIVE ASEAN REGION

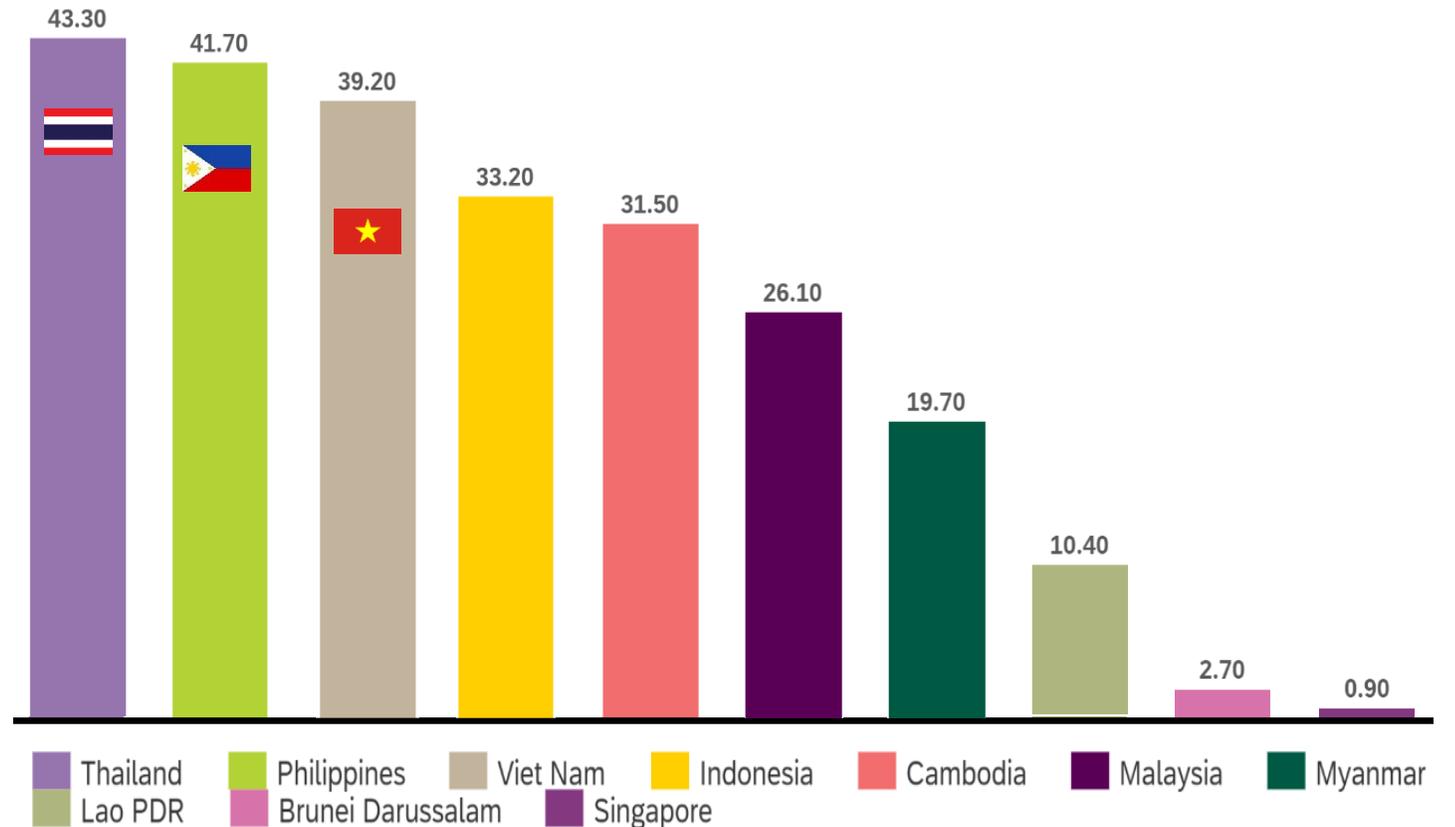
**31.5%**

of ASEAN's land area is used for Agriculture.

ASEAN  
REGION

one of the most productive agricultural baskets in the world

## Percentage of Agriculture Area to Land in ASEAN Region



# THE PROGRESSIVE ASEAN REGION

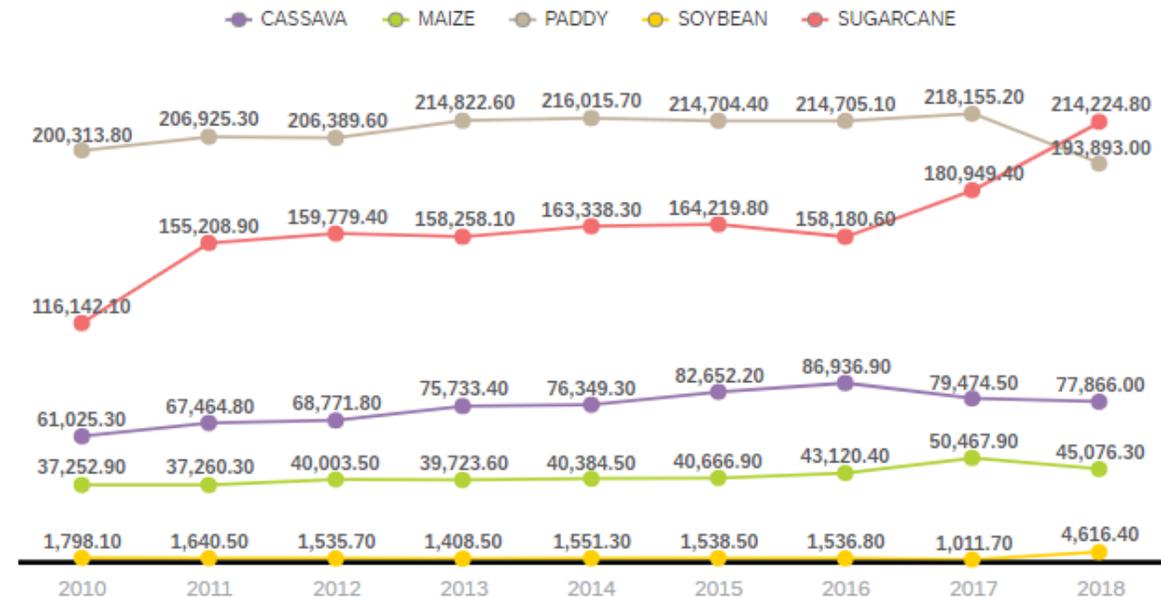
**It increases**  
in the past eight years

ASEAN  
REGION

one of the most productive  
agricultural baskets in the  
world

## The ASEAN's production of its five major food commodities

1 Filter



# THE PROGRESSIVE ASEAN REGION

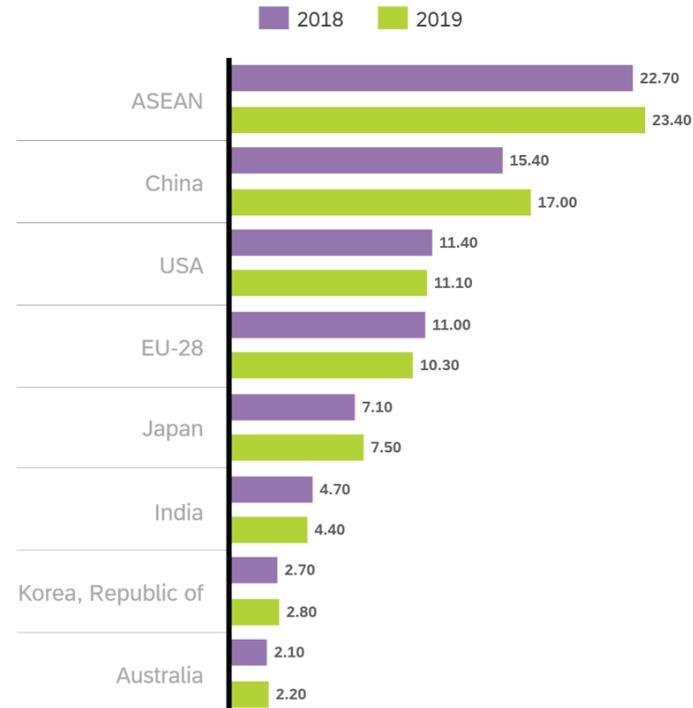
The ASEAN REGION is  
**LEADING**  
on its imports & exports

ASEAN  
REGION

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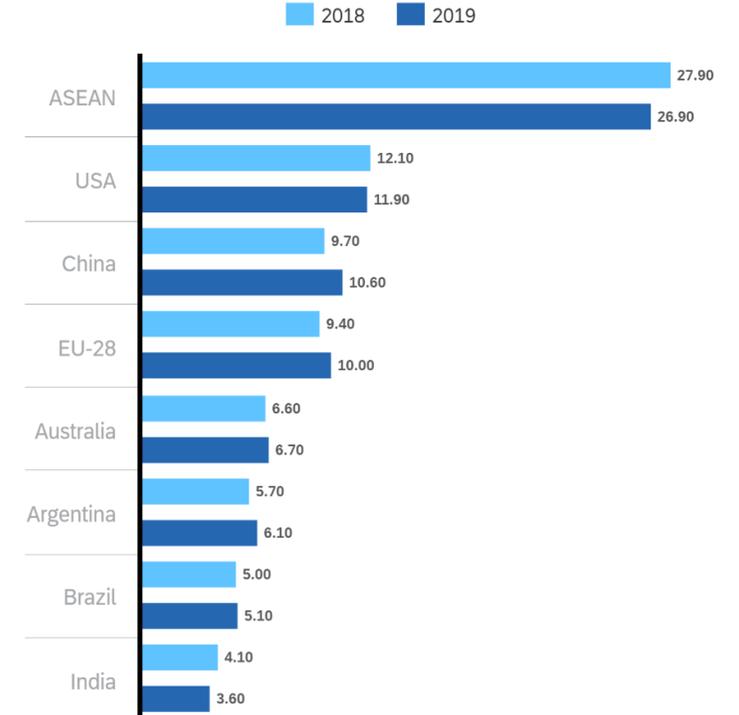
ASEAN Major Markets of Agricultural Export  
Commodities, 2018-2019

Top 8 - All Dimensions (2019)



ASEAN Major Origin of Agricultural Import  
Commodities, 2018-2019

Top 8 - All Dimensions (2018)

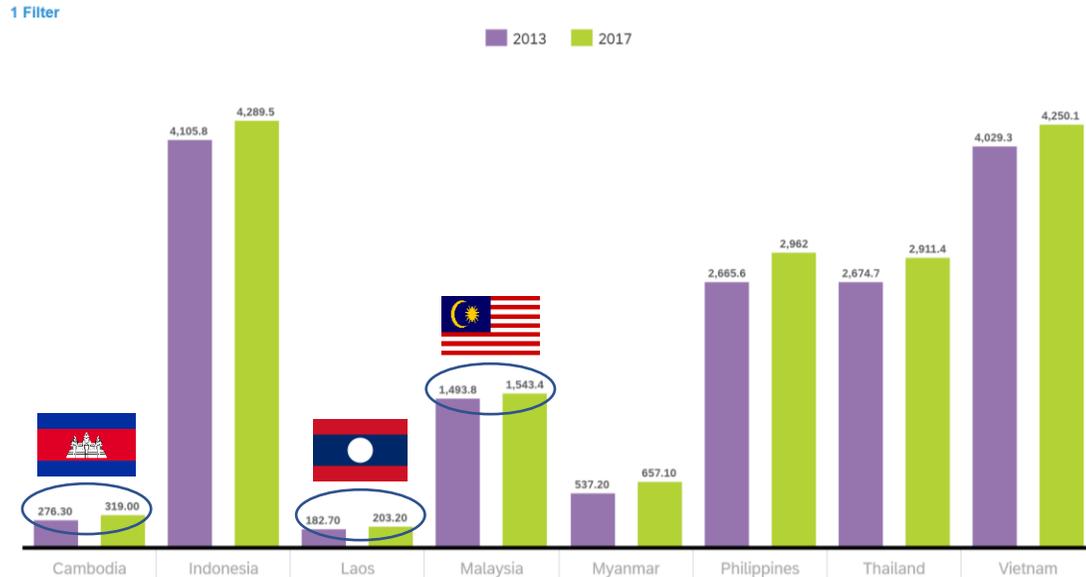


**DESPITE THE PROGRESS OF ASEAN REGION ARE**

**UNSEEN  
GAPS**

# GAPS IN ASEAN REGION'S AGRARIAN SECTOR

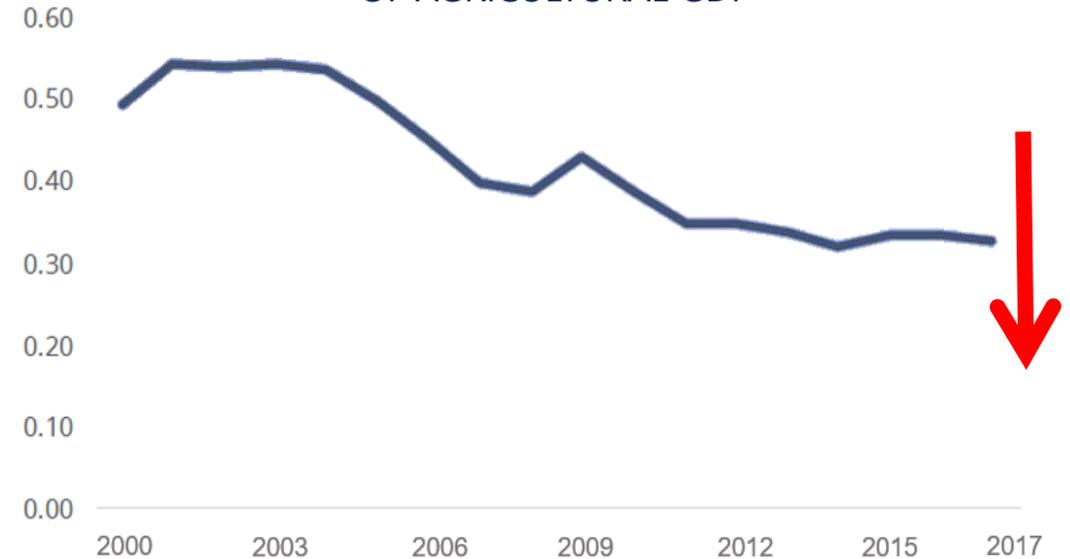
COMPARISON BETWEEN THE NO. OF AGRICULTURAL RESEARCHERS IN 2013 AND 2017



**0.003%**

of the total Population of countries included in the Graph on year 2017

AGRICULTURAL R&D SPENDING AS A PERCENTAGE OF AGRICULTURAL GDP

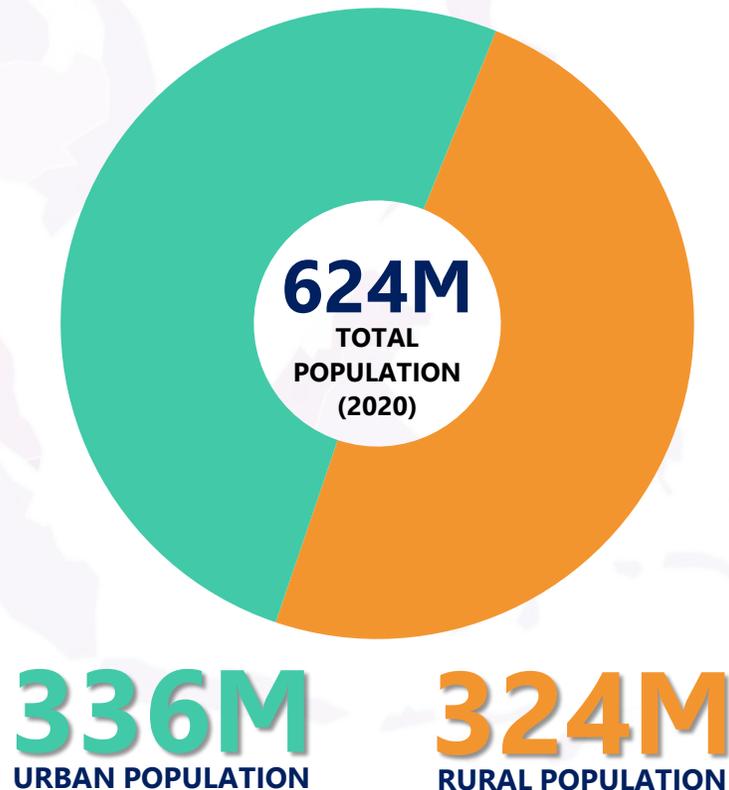


It's **Below** the **1%** investment target recommended by global and regional bodies.

# GAPS IN ASEAN REGION'S AGRARIAN SECTOR

## URBANIZATION

conversion of rural areas into urbanized places, more agricultural land areas are converted to commercialized infrastructures which increases the consumption pattern.

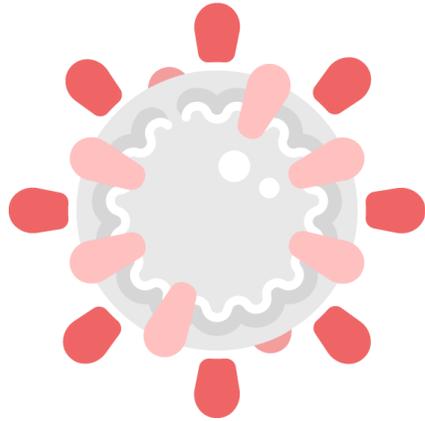


## SOME FARMERS ARE EARNING LESS

In 2018, Philippines' agricultural worker received an average pay of:

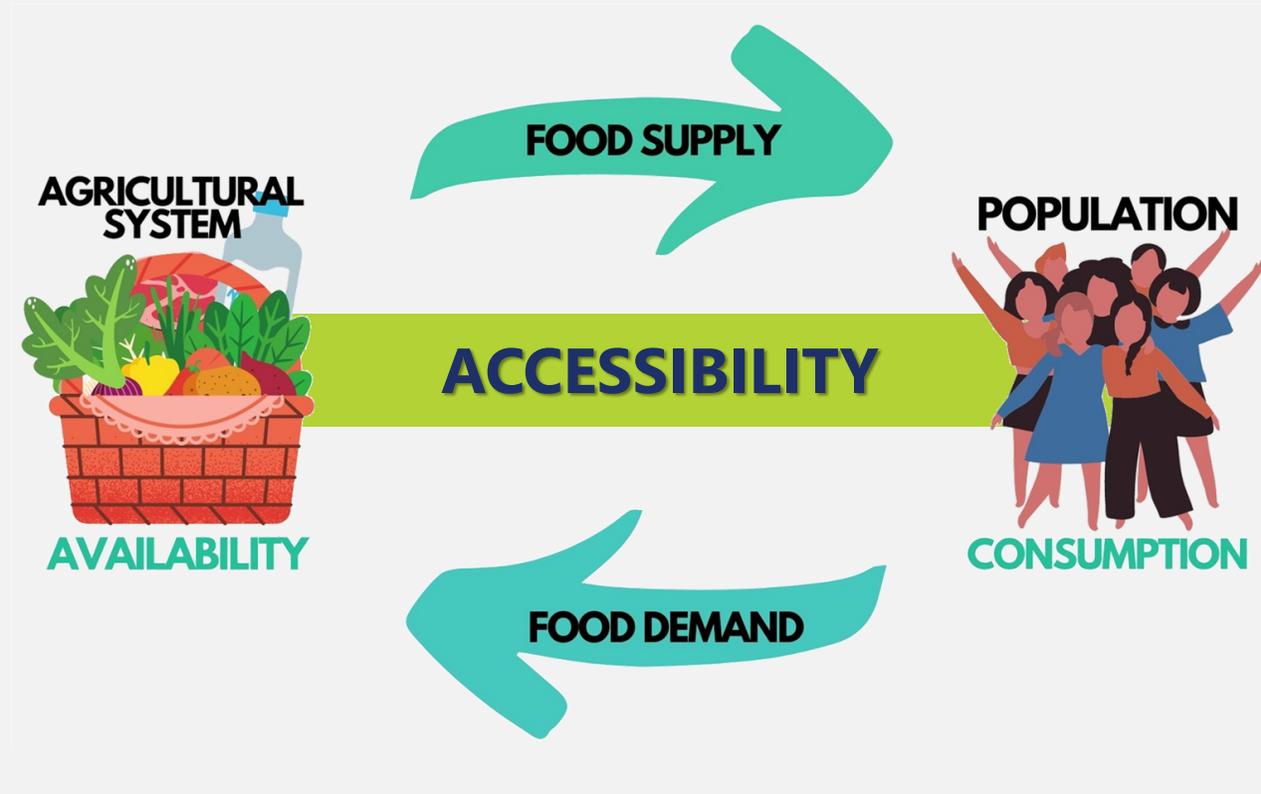
		 MALE FARM WORKER	 FEMALE FARM WORKER
 AGRICULTURE	Php 306	Php 310	Php 286
 in PALAY farms	Php 325	Php 330	Php 300
 in CORN farms	Php 264	Php 269	Php 250
 in SUGARCANE farms	Php 317	Php 318	Php 297
 in COCONUT farms	Php 273	Php 276	PHP 256

The Filipino's minimum wage ranges from PHP 290 (US\$5.70) to PHP 537 (US\$10.61) per day.



# TODAY, THESE PROBLEMS ARE WORSEEN BY **COVID-19**

And threatens the food security not just in Southeast Asia but also the other regions that are severely affected by the pandemic.



# RECOMMENDATION 1

## CENTRALIZED AGRICULTURAL MOBILE APPLICATION FOR FASTER COMMUNICATION TO FARMERS



### INTRODUCING



# AGRI Connect

A mobile application that creates a bridge for farmers to promote their crops and sell in bulks.

### FEATURES

- Easy transactions.
- Users can easily find suppliers.
- Future harvest updates.
- Farmers can now sell their goods without cutting its real price.

IN FUTURE  
PARTNERSHIP  
WITH



กระทรวง  
NSTDA



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กรมส่งเสริมการค้าระหว่างประเทศ  
NSTDA



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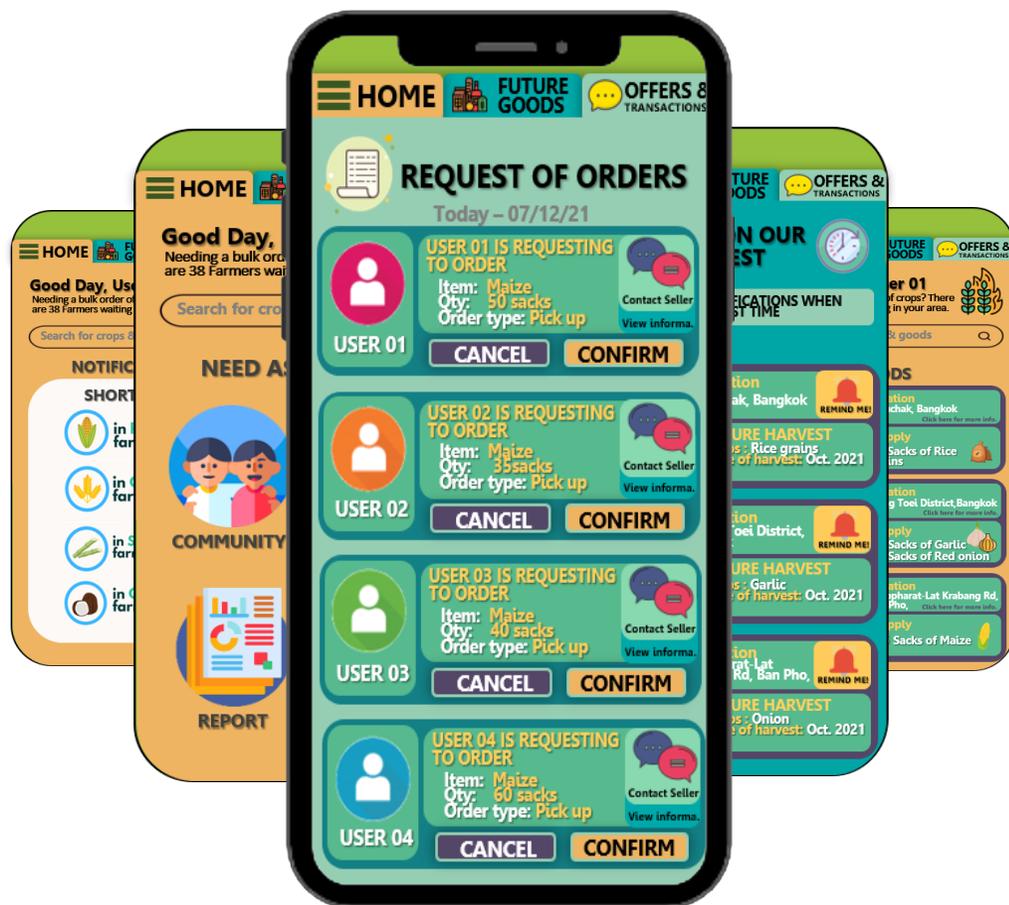


กระทรวง  
NSTDA



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NSTDA



# CENTRALIZED AGRICULTURAL MOBILE APPLICATION FOR FASTER COMMUNICATION TO FARMERS

FEASIBILITY



THIS RECOMMENDATION WILL BE MORE FEASIBLE THROUGH PARTNERSHIP WITH



**SAP**  
ANALYTICS  
CLOUD

To provide management of business processes, develop solutions that facilitate effective data processing and information flow across organisations.



**NSTDA**

Entrusted to accelerate science, technology and innovation development in Thailand in order to respond to the need of the industry and enhance the country's competitiveness.



**MINISTRY OF AGRICULTURE AND COOPERATIVES**

To provide agriculturists with good quality of life, and provide people with safe food for consumption, with their generation of income for the land

**8**  
DECENT WORK AND ECONOMIC GROWTH

**2**  
ZERO HUNGER

**OPPORTUNITIES FOR FARMERS**

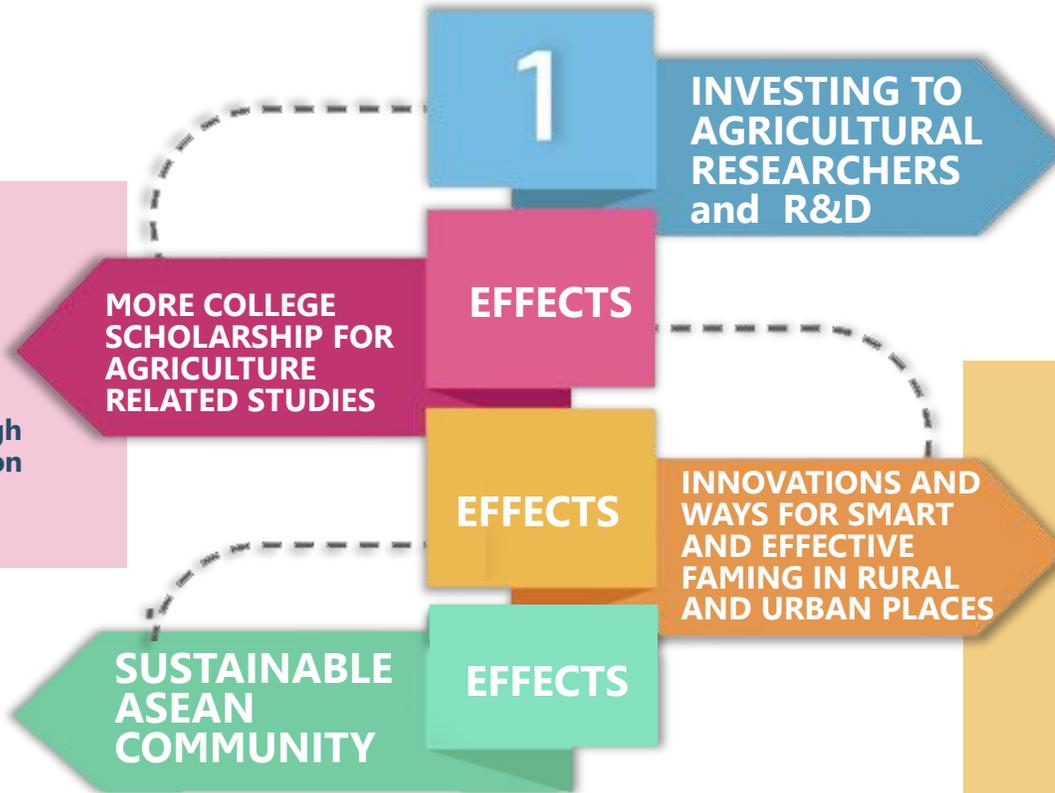
# RECOMMENDATION 2

## EMPOWERING ASEAN REGION THROUGH INVESTING TO AGRICULTURAL RESEARCHERS AND R&D



In this regard, scholarship may attract students to take courses related to this field.

In addition, the importance and job opportunities in the field of agriculture must be instilled to students from elementary to high school to eradicate the perception of the society that there's no future in this field.



With the help of agricultural researchers, they can use their expertise to know what innovations and technologies are needed to be improved in order to have a good Agricultural status.

We can also consult them to create smart ways of farming for small places in urban areas, to create a source of goods/crops.

- ✓ Vertical planting
- ✓ Aeroponics
- ✓ Hydroponics

## RECOMMENDATION 2

### EMPOWERING ASEAN REGION THROUGH INVESTING TO AGRICULTURAL RESEARCHERS AND R&D

**2021 – 2022**

**PHASE 01**

**COLLEGE SCHOLARSHIP  
FOR AGRICULTURE  
RELATED STUDIES**

**2022 – 2025**

**PHASE 02**

**INNOVATIONS AND  
WAYS FOR SMART AND  
EFFECTIVE FARMING**

**2025 – 2030**

**PHASE 03**

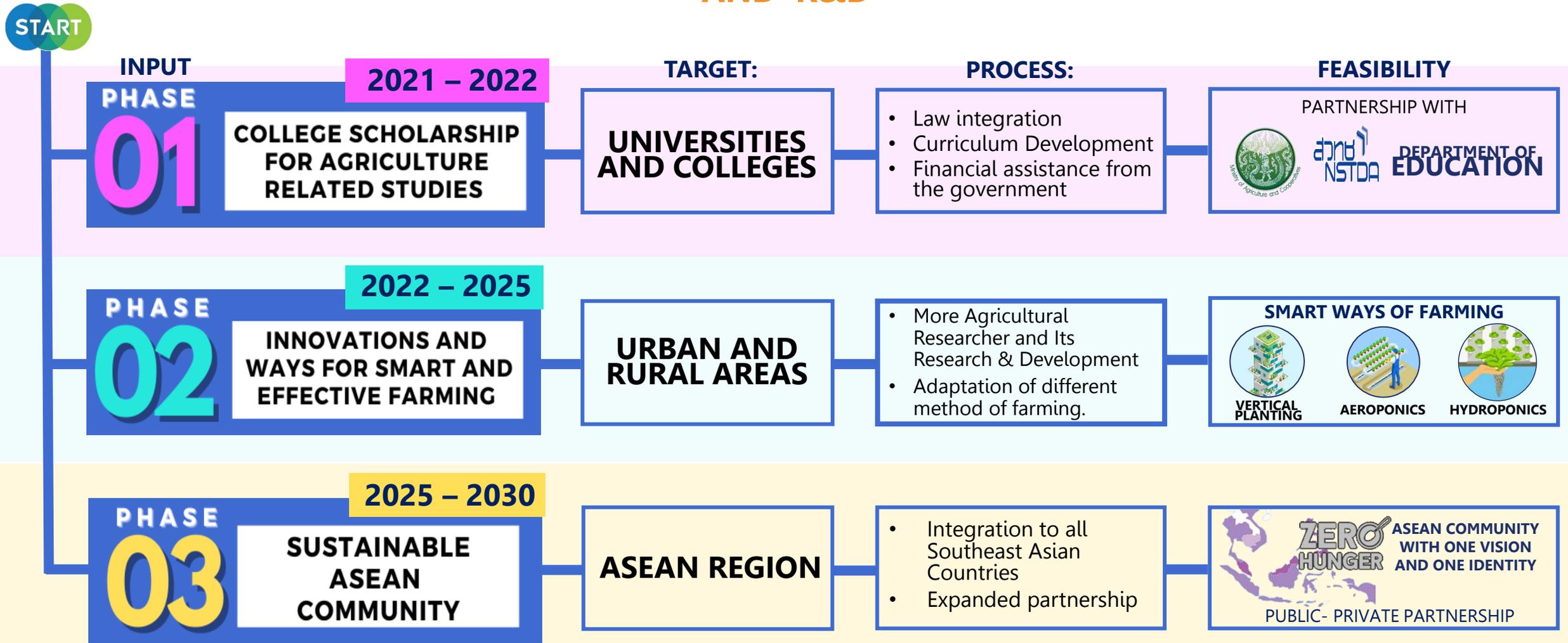
**SUSTAINABLE  
ASEAN  
COMMUNITY**

# TIMELINE

## FOR IMPLEMENTATION

# RECOMMENDATION 2

## EMPOWERING ASEAN REGION THROUGH INVESTING TO AGRICULTURAL RESEARCHERS AND R&D



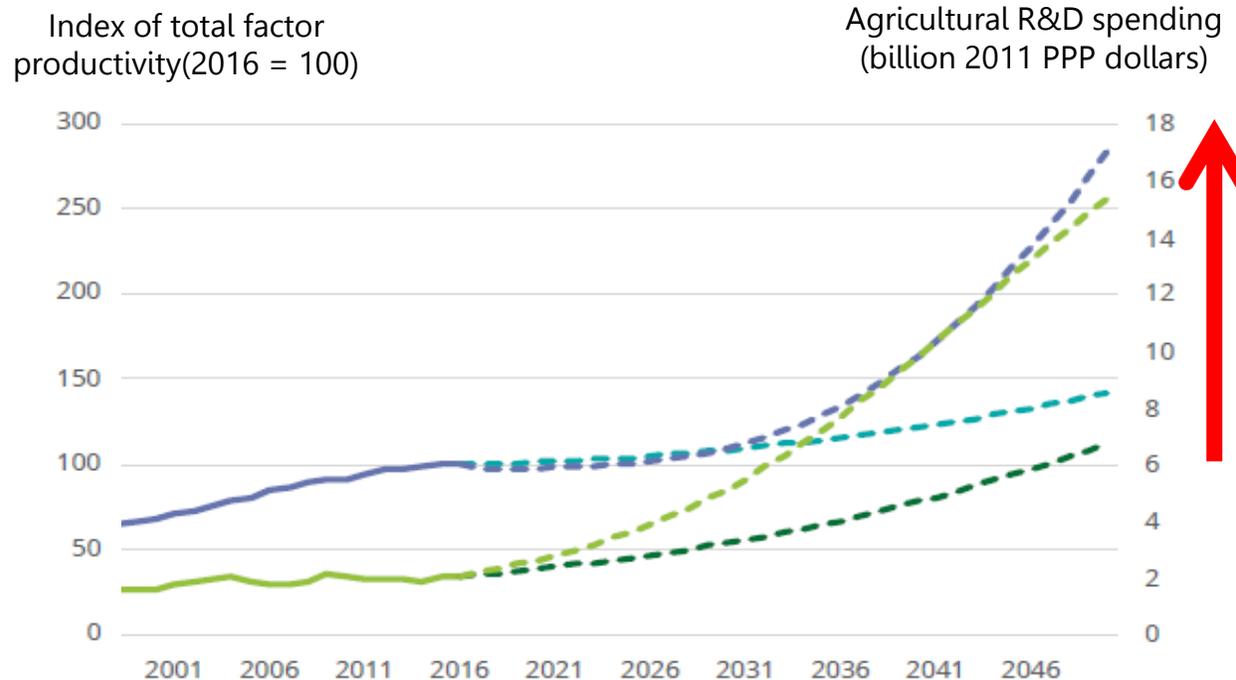
### TIMELINE

## RECOMMENDATION 2

### EMPOWERING ASEAN REGION THROUGH INVESTING TO AGRICULTURAL RESEARCHERS AND R&D

**Regional productivity growth projections to 2050 under two investment scenarios.**

- Historical total factor productivity
- - Total factor productivity under the Business-as-usual scenario
- - Total factor productivity under the Closing-the-gap scenario
- Historical R&D spending
- - R&D spending under the Business-as-usual scenario
- - R&D spending under the Closing-the-gap scenario



Data retrieved from Agricultural research in southeast Asia across-country analysis of resource allocation, performance, and impact on productivity

### EFFECTIVENESS OF INVESTMENT ON AGRICULTURAL RESEARCH & DEVELOPMENT

# RECOMMENDATIONS 1 & 2 are anchored with :



**B4. Productivity-Driven Growth, Innovation, Research and Development, and Technology Commercialization**

iv. Focus support on the development of research and technology parks, joint corporate, government and/or university research laboratories, R&D centres, and similar science and technology institutions and centres;

v. Develop and strengthen ASEAN linkages to global and regional R&D networks;

**B8. Sustainable Economic Development**

vii. Promote good agriculture practices to minimise the negative effects on natural resources such as soil, forest and water, and reduce the greenhouse gas emission



**C.4. Sustainable Consumption and Production**

ii. Promote environmental education (including eco-school practice), awareness, and capacity to adopt sustainable consumption and green lifestyle at all levels;

**E3. Engender a Culture of Entrepreneurship in ASEAN**

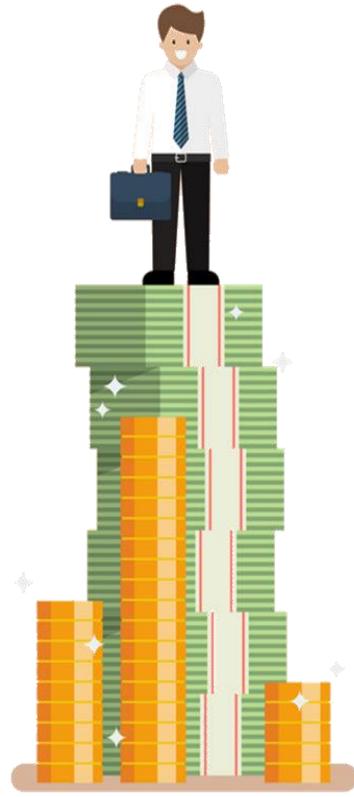
i. Strengthen the supportive environment for socially and environmentally responsible entrepreneurship, such as mentoring, providing seed money, venture and crowd funding, and marketing support;



**Action 11.** Intensify the engagement of academe, private sector and relevant partners in the planning, implementation and assessment of joint undertakings in human resource development, and research and development.

**Action 14.** Strengthen existing regional STI initiatives in priority areas including Sustainable Development Goals.

**Action 22** Establish scholarship, fellowship and/or attachment programs for students, researchers and other STI personnel.



WHITE-COLLAR  
WORKER



BLUE-COLLAR  
WORKER

## FARMING IS CONSIDERED AS BLUE COLLAR JOB

LOW INCOME ◉ HARD MANUAL LABOR ◉ OFFERED LESS



**RESOLVED**

**FARMING AS BLUE COLLAR JOB HAVE THE SAME  
OPPORTUNITY LIKE THE WHITE COLLAR JOB**

~~LOW INCOME • HARD MANUAL LABOR • OFFERED LESS~~



**LET'S OPEN  
OUR EYES AND  
GROW  
TOGETHER AS  
ONE ASEAN  
COMMUNITY**



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**TEAM YOUTH  
FORWARD**



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