



# *SEAMEO – UNESCO Joint Webinar on World Environment Day*



United Nations  
Educational, Scientific and  
Cultural Organization



Sustainable  
Development  
Goals

## *Agricultural Innovation for Sustainable Agriculture Food Systems*

Glenn B. Gregorio



S E A M E O  
SEARCA

**COVID-19 Effects on Biodiversity: Science Education Reimagined**

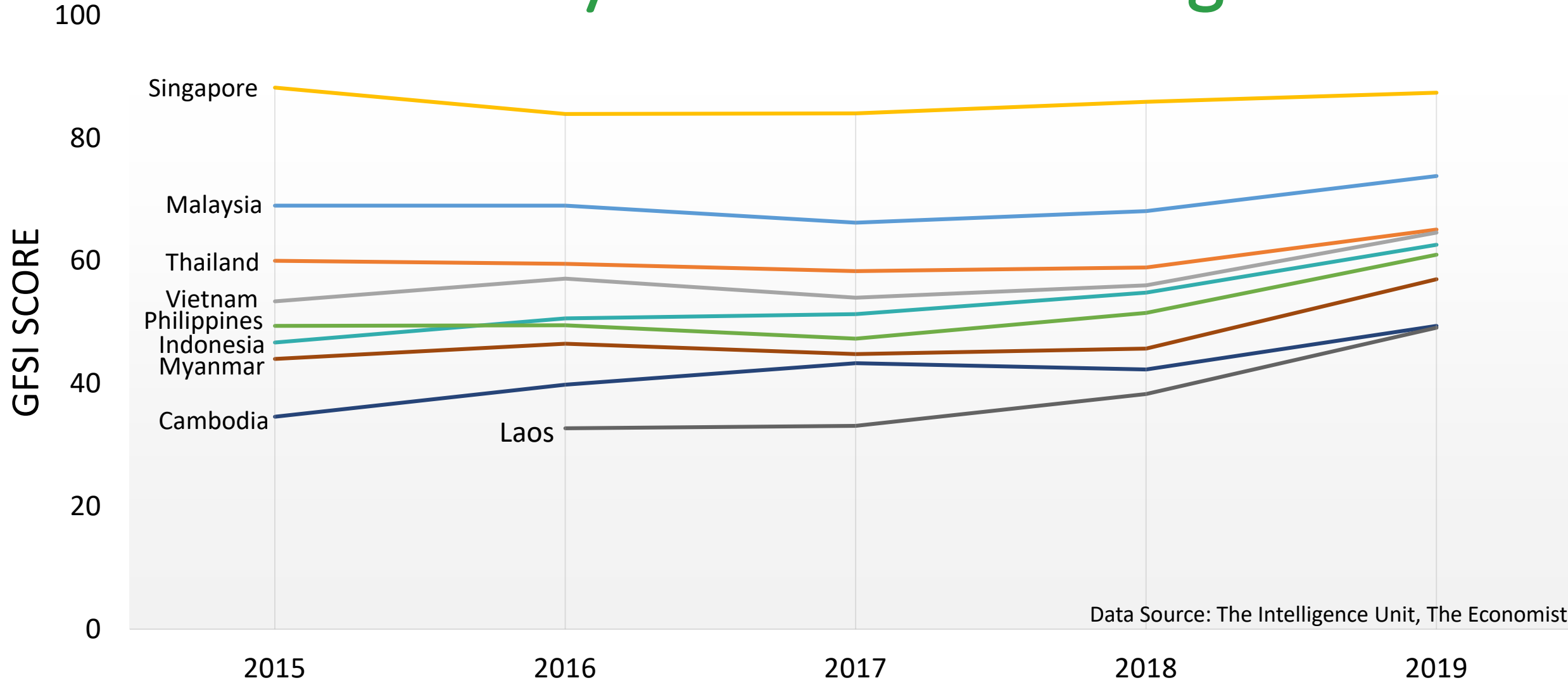


# Impact of COVID-19 pandemic on agricultural production in Southeast Asia (Gregorio and Ancog, June 2020)

- Disruptions in agriculture food systems create supply and demand shocks on economic performance and food security.
- C-19 pandemic reduce vol. of production by **3.11% or 17.03M tons** due to decline in agricultural farm labor affecting **100.77M** people.
- C-19 cause 1.4% decline in GDP of the SEA, equivalent to 3.76B USD.



# Food security remains a challenge in SEA

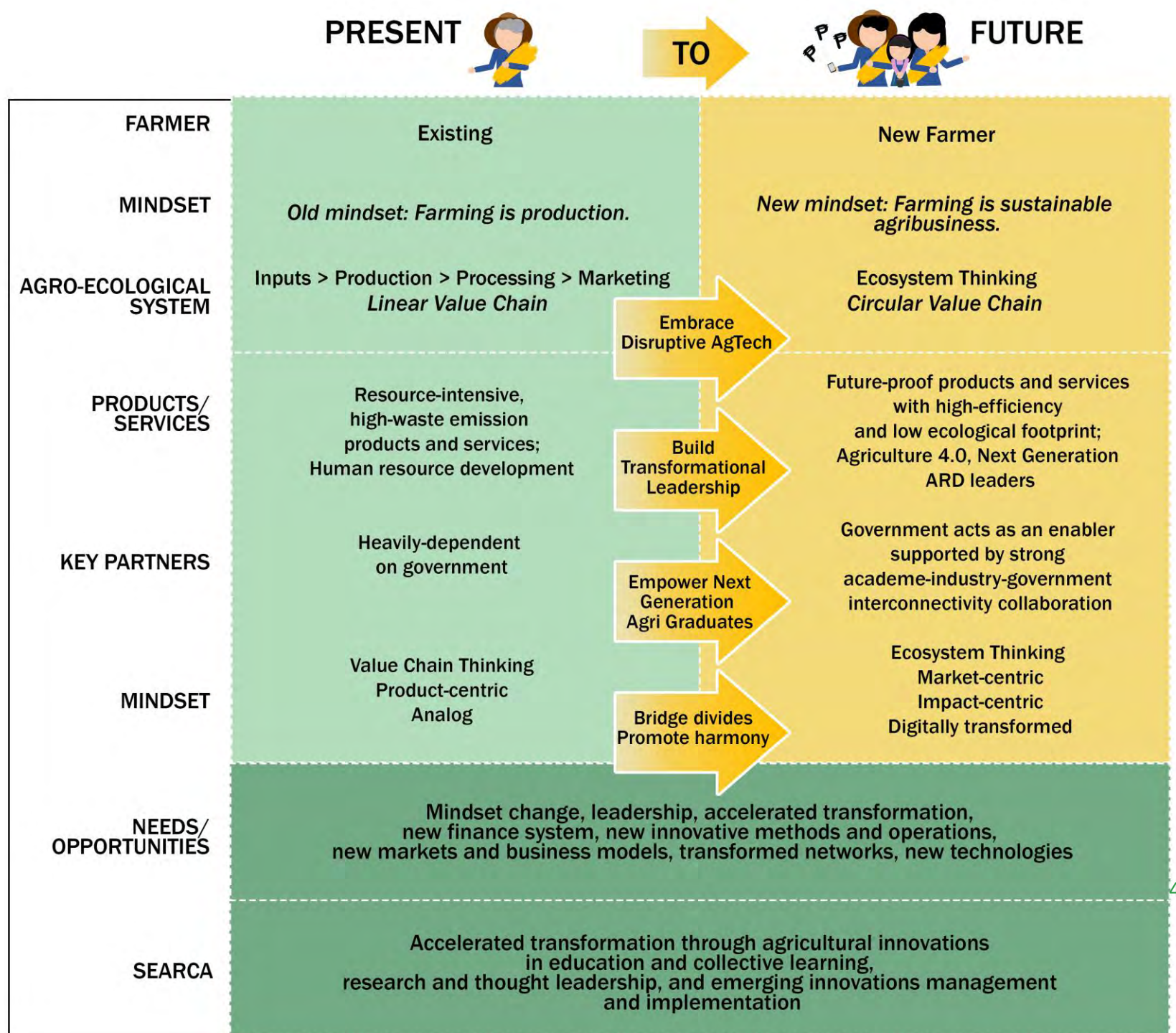






# ATTAIN

## Accelerating Transformation Through Agricultural INnovation





# Challenges and Opportunities

1. Genetic erosion
2. Climate change
3. Invasive species and decline in pollination services
4. Unregulated conversion of agricultural lands
5. Knowledge gaps
6. Research & Devt support
7. Migration to urban areas

1. Source of genetic material for improving crops, resistance to pest & diseases, and climate change adaptation
2. Natural way of managing pests and diseases
3. Outsmarting climate change with more crop options
4. Contribute to health and nutrition
5. Sustain soil health, food and habitat for important pollinators and natural pest predators
6. Contribute to maintaining cultural identity and traditional knowledge
7. Institutionalize policies to prevent land degradation and promote land restoration programs
8. Understand agrobiodiversity needs to be conserved, the system and components and their relationships





# Agricultural Innovation and Biodiversity Conservation: A Win-Win Proposition for SEA



Agriculture is a major driver of biodiversity loss but making it sustainable through agricultural innovations promotes and enrich biodiversity to ensure high quantity and quality, and sustainability of environmental goods and services.



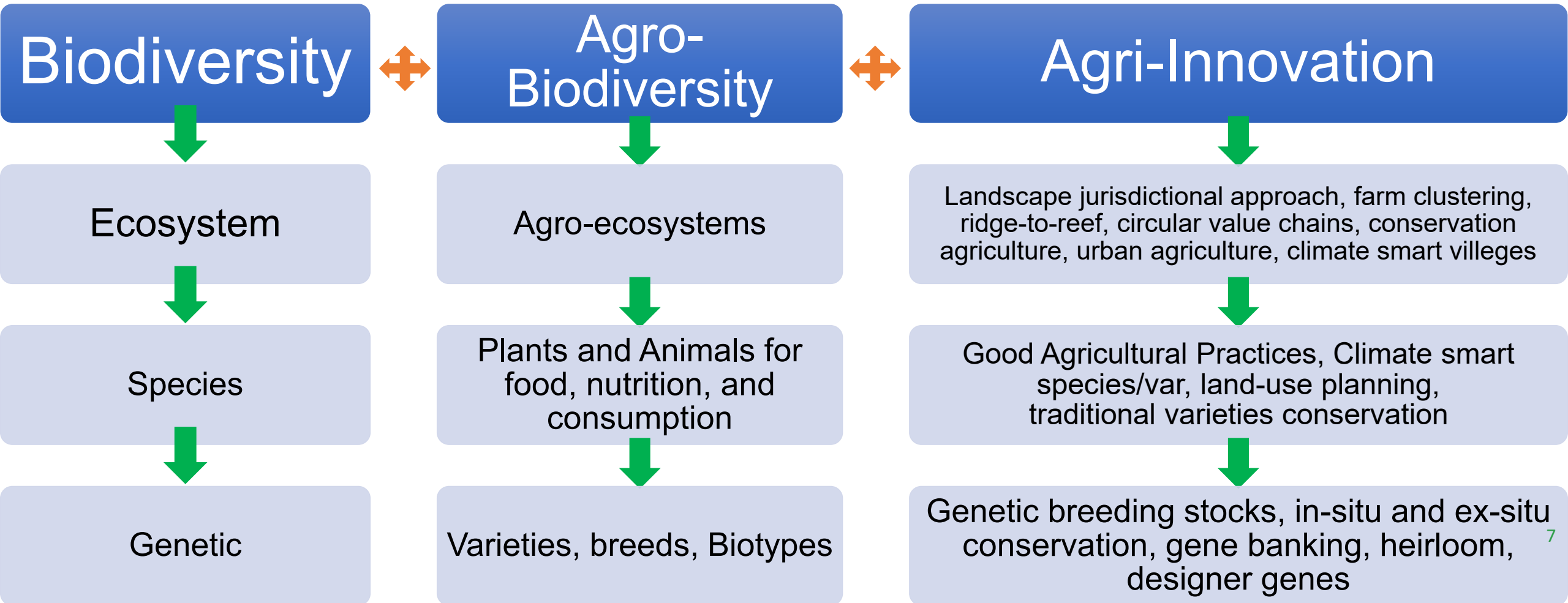
Metrics to attain agricultural productivity and biodiversity conservation must be: **PRODUCTIVITY, STABILITY, SUSTAINABILITY, EQUITABILITY**



Appreciating that human well-being is underpinned by biodiversity-rich agricultural food systems would be critical in wielding holistic agricultural innovations across the food supply chain.



# Inter-linkages between Biodiversity ↔ Agro-Biodiversity ↔ Agri-innovations



# Academe-Industry-Government

## (AIG) Interconnectivity Model:

### Action Points for the PRODUCTION SECTOR

- Supporting local capacity toward being self-sufficient through well-planned production and post-production systems.
- Promoting incentive systems to support innovation studies and activities to improve production and post-production, increase efficiency, and promotion of value-adding activities.
- Designing financial technologies (FinTechs) to empower farmers and rural communities.

## ACCELERATING TRANSFORMATION THROUGH AGRICULTURAL INNOVATION (ATTAIN)







## *Academe-Industry-Government (AIG)* Interconnectivity Model: Action Points for a Reimagined ENVIRONMENTAL EDUCATION

1. As consumers are more aware of the intricate link between "plate" and "farms", responsible consumption practices and lifestyle must be actively promoted thru Lifelong Education.
2. Sustaining more targeted capacity building activities is needed to support growing interest in agriculture and biodiversity conservation.
  - Youth and women engagement needs to be strengthened.
3. At the macro level, trade policies must support food security and biodiversity conservation.

The ASEAN Economic Cooperation has been very vital in this front.





SEAMEO  
SEARCA



# COVID-19 Effects on Biodiversity: Science Education Reimagined

