

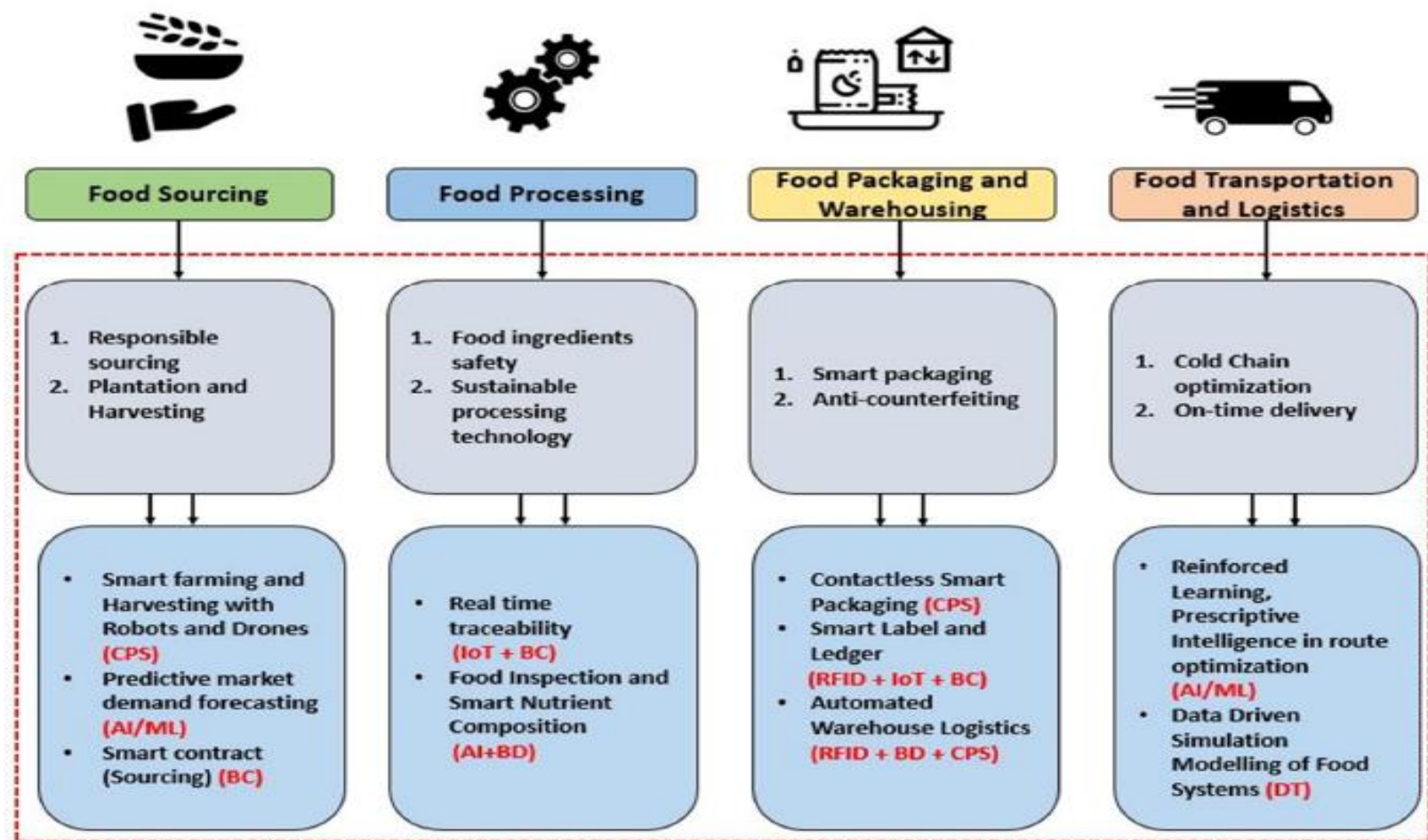
Sustainability Trends for the Future of Foods

Lotis E.
Mopera



University of the Philippines
LOS BAÑOS

Sustainable supply chain solutions

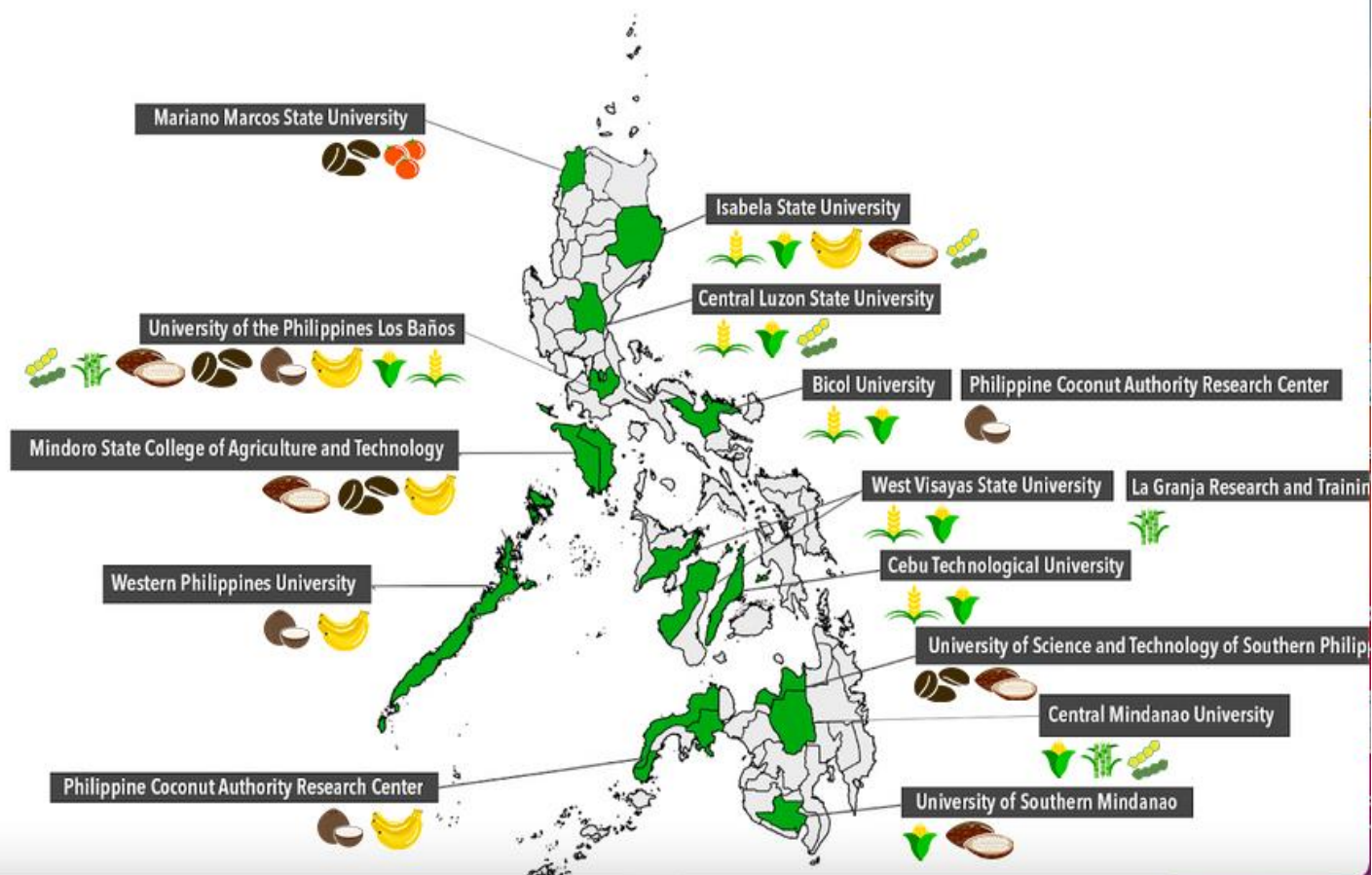


SUSTAINABLE DEVELOPMENT GOALS



WHERE WE ARE

Project SARAI implements a near real-time monitoring of production areas using remotely-sensed images. Project SARAI is implemented by the University of the Philippines Los Baños (UPLB), together with 11 State Universities and Colleges (SUCs) and six National Government Agencies.



FUTURE FARMING TECHNOLOGY

PLANT BASED AND PERSONALIZED NUTRITION



Plant-based Alternatives: Current Scenario



Mungbean and soy



IPB Var 6



Textured vegetable protein



IFST-CAFS Maize-Mungbean beverage



Extrusion Technologies for Alternative Protein Sources

Plant-based Alternatives: Flying to the Moon and Back



**Improved soybean, mungbean,
and corn varieties**



**Insects as sources of protein:
Characterization and Toxicity
Testing, and Product Development**



**Processing innovations: High Pressure Processing of
Plant Based Alternative Plant Sources**

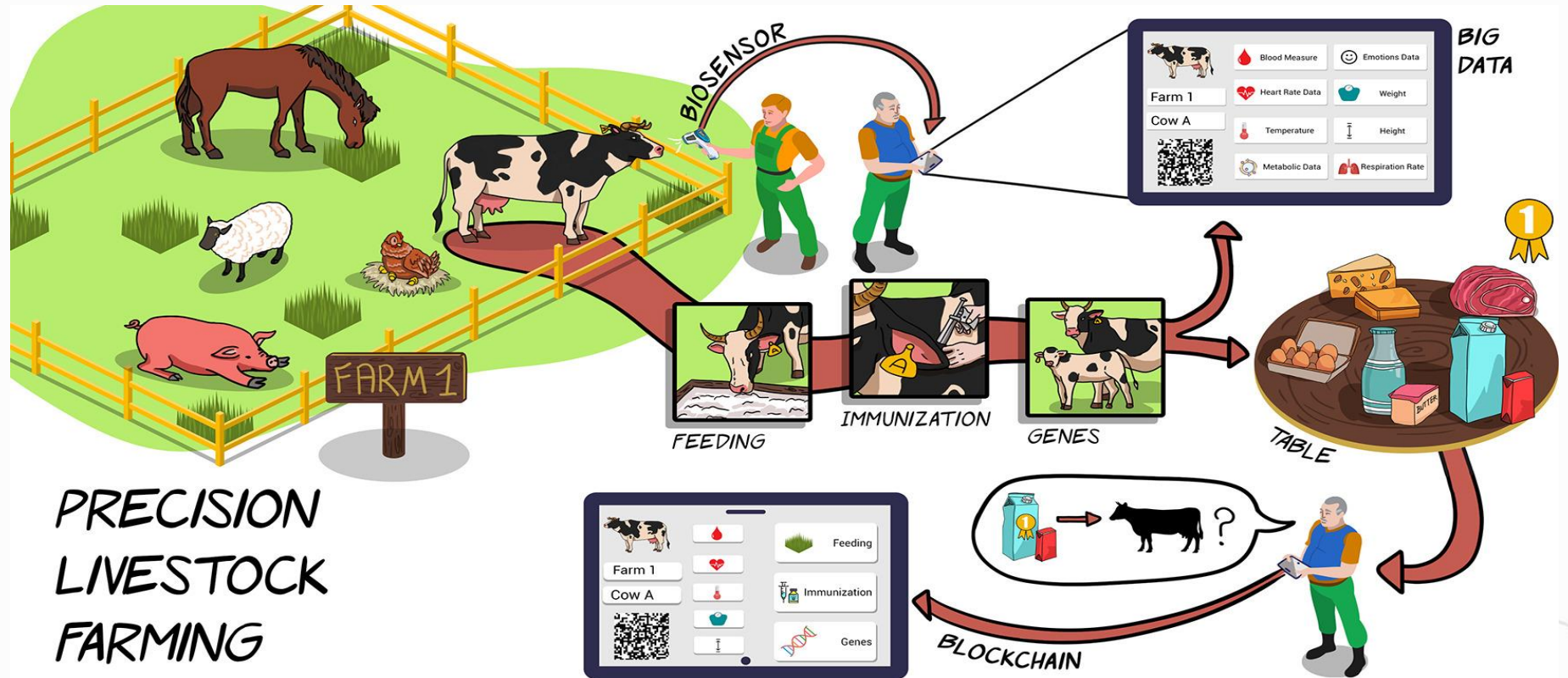


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UPLB Leading in Future-proofing Animal Agriculture

Not to forget the Meat!

A Sustainable Foresight for the Meat Industry



Future-Ready
Animal Diets

Animal
Genomics

Climate
Resilience

Sustainable packaging and



Petroska et al. 2021

SUSTAINABLE DEVELOPMENT GOALS



<https://www.foodnavigator.com/News/Promotional-Features/Sustainable-food-trends-shaping-the-future-of-food>

Possible Sustainability Interventions in the Food Service Sector (Takacs et al. 2020)

Sustainable menu design and planning

Procurement

Food production



Food production standards:

- Organic/integrated production
- Certified products: e.g. high-welfare meat and dairy products, sustainably sourced fish, fair-trade etc.
- Seasonal ingredients

Reducing meat purchasing

Transport and distribution



Reducing food miles

- Local and seasonal ingredients

Improving distribution

- Switching to natural gas/electric vehicles

Resource efficiency and resource management

Food storage and preparation



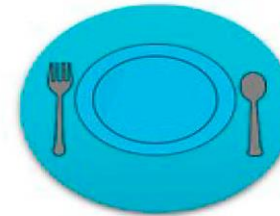
Energy and water management practices

- Energy and water efficient appliances & cooking devices
- Changing food preparation methods and technologies
- Optimising lighting, cooling, ventilation systems
- Using renewable energy

Reducing edible food waste

Tap water

Food serving and consumption



Changing ingredients/nutrients

- Increasing fruit and vegetable consumption
- Serving whole food, plant-based meals
- Reducing meat and animal product consumption
- Reducing salt, saturated fat and refined sugar intake

Tableware and cutlery choices

Portion sizes

Waste disposal and recovery



Food waste reduction

- Optimising planning system to reduce over-production
- Donating leftovers

Multi-use packaging systems

Recycling inorganic waste

Eliminating waste-to-landfill

Philippine Pathway to Inclusive and Sustainable Food System: Conceptual Framework

PRINCIPLES

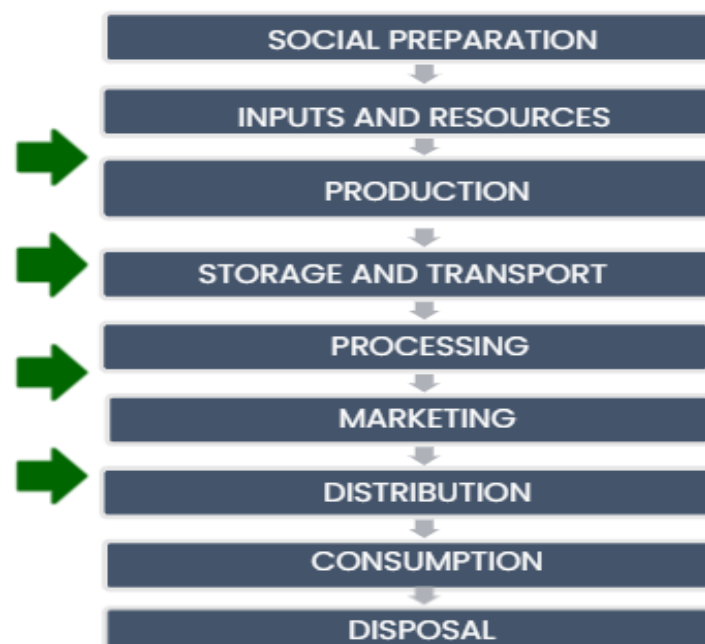
Holistic
Inclusive
Collaborative
Empowering
Market-oriented
Sustainable

STATE INTERVENTIONS

CHANGE MANAGEMENT
INNOVATIONS
INVESTMENTS
KNOWLEDGE &
PROMOTIONS
PARTNERSHIPS
POLICIES
STRUCTURES

AGRO-FOOD SYSTEMS

INCLUSIVE VALUE CHAINS



*EFFECTIVE COMMUNICATIONS AND
MONITORING IMPLEMENTED IN EACH PHASE

OUTCOMES

- Safe and nutritious food accessed
- Filipinos follow healthy and sustainable consumption patterns
- Nature-positive production is widely adopted
- Livelihood and value distributions are equitable
- Nation is resilient to vulnerabilities, shocks, and stresses

PROMOTING YOUTH
EMPOWERMENT, GENDER
EQUALITY AND WOMEN
EMPOWERMENT, HUMAN RIGHTS,
SUSTAINABLE FINANCING AND
INNOVATIONS CUT ACROSS ALL
THE OUTCOMES

IMPACTS

Sustainable
Growth of
Agro-Food
Systems

Philippine food
systems
transformed,
evidenced by
healthier
environment
and quality life
lived by every
Filipino

THANK YOU!



SUSTAINABILITY
SOLUTIONS
EXCHANGE