National Workshop:
Presentation of TEEBAgriFood assessment in Thailand

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INTERNATIONAL CLIMATE INITIATIVE

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I The origins and rationale for TEEB and TEEBAgriFood

ZAKIR HOSSAIN CHOWDHURY/ANADOLU AGENCY/GETTY

Drying red chillis under the sun provides one of the few sources of employment for women in an area of Bangladesh.

Fix food metrics

For sustainable, equitable nutrition we must count the true global costs and benefits of food production, urge **Pavan Sukhdev**, **Peter May** and **Alexander Müller**.

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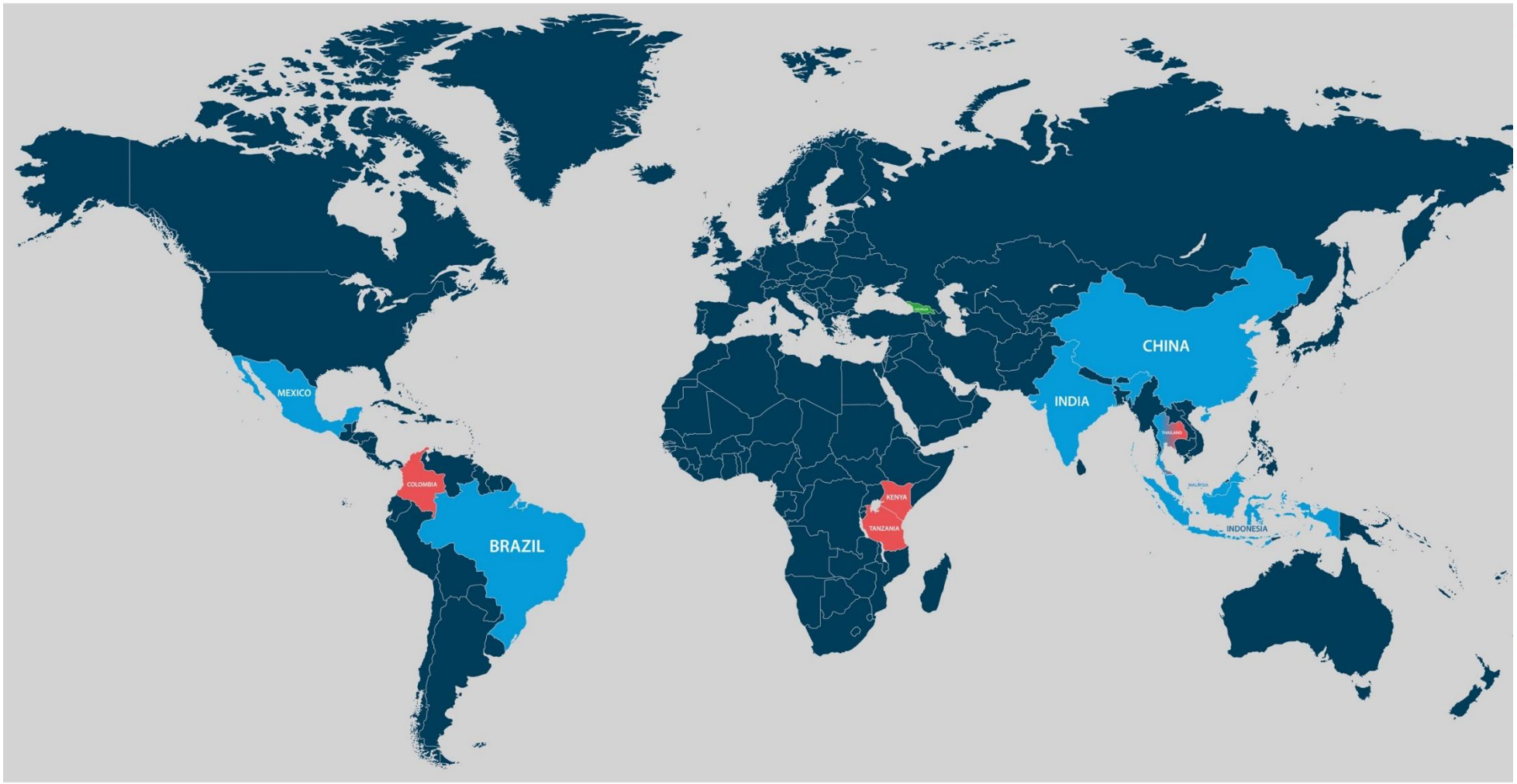
For Agriculture & Food



EU-PI

Brazil i) Degraded Pasture Land Restoration ii) Urban and Periurban Agriculture
China Green Food Production
India Organic Farming and Agroforestry
Indonesia Cacao Agroforestry Production
Mexico Agroforestry Coffee; Conventional & Traditional Maize
Thailand Organic Rice Production
Malaysia TBD

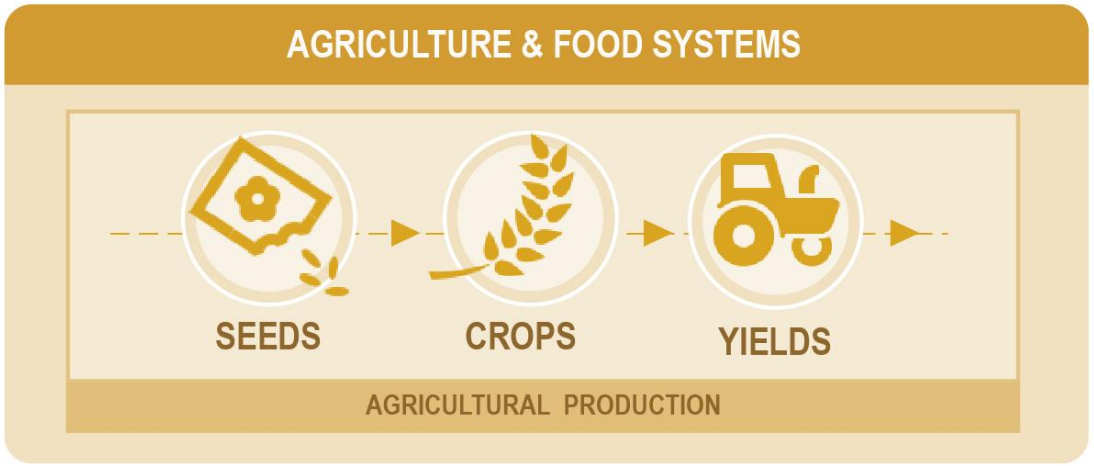
IKI

Columbia Land Use Change
Kenya Cereals and Medicinal Plants
Tanzania Land Use Change; Water Quality & Food Security
Thailand Organic Rice Production

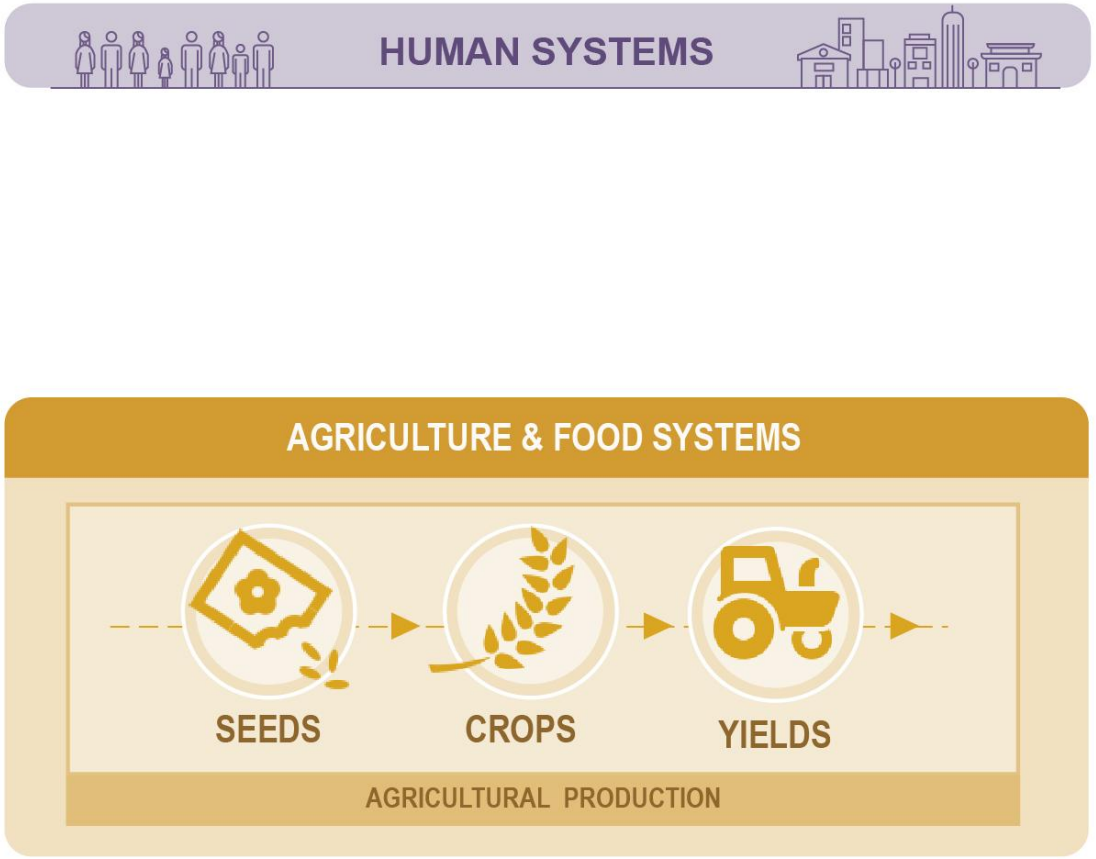
GEF

Georgia Sustainable Land Management Practices

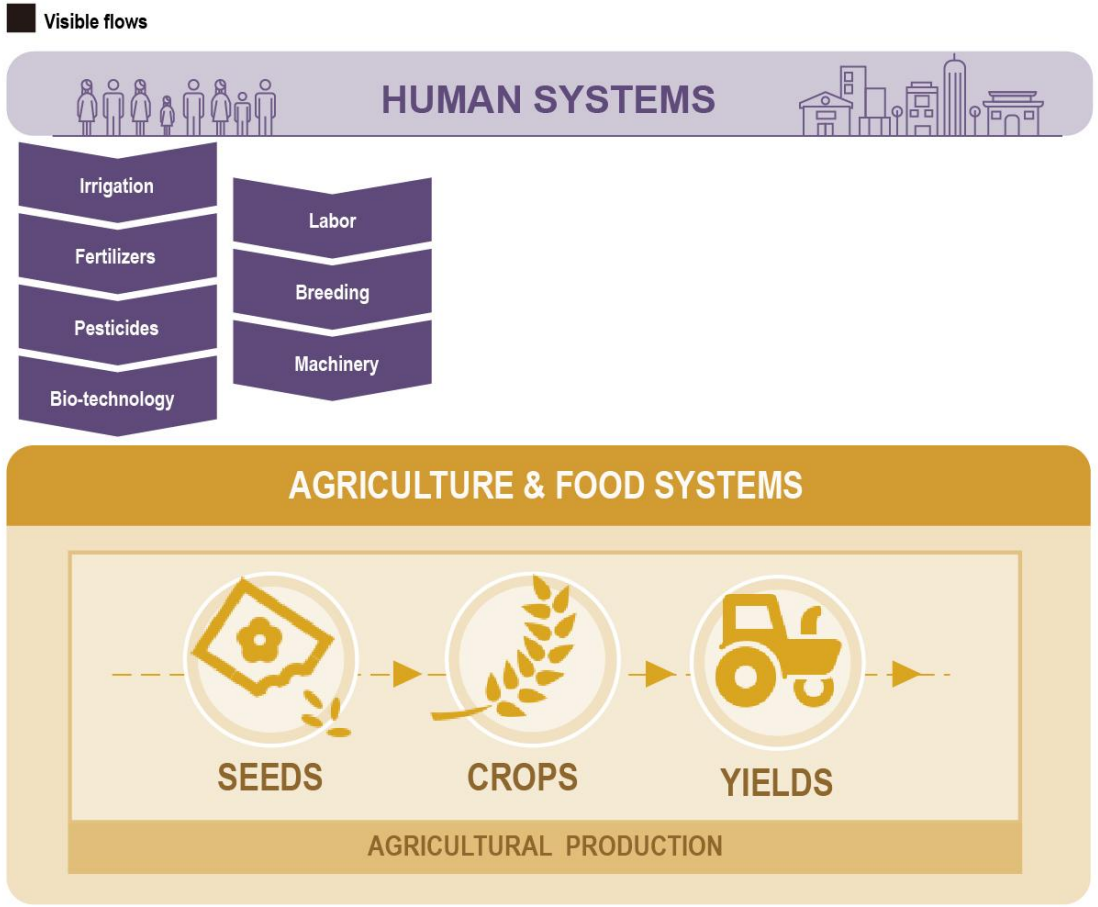
The visible and invisible flows of agricultural production



The visible and invisible flows of agricultural production



The visible and invisible flows of agricultural production



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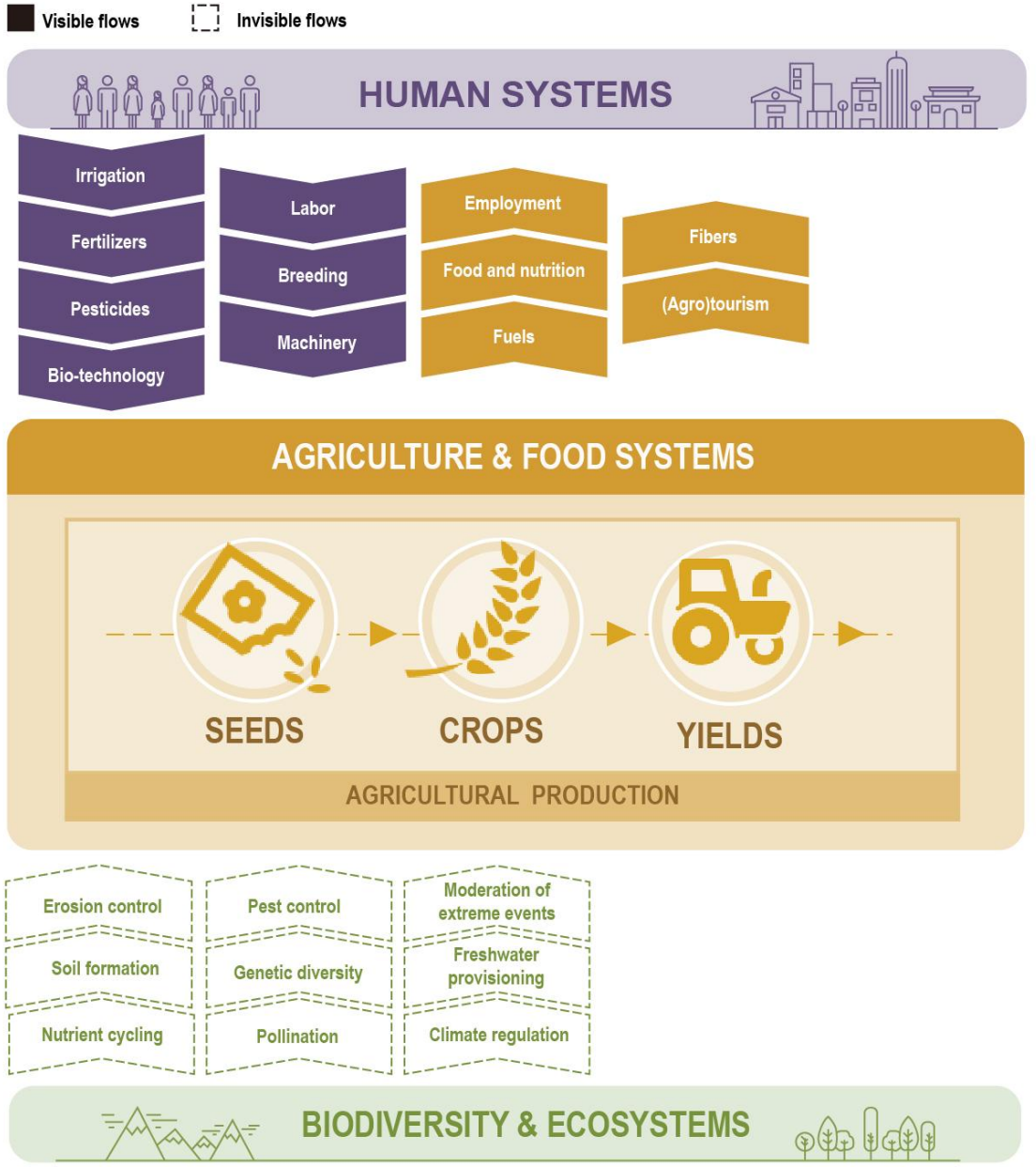

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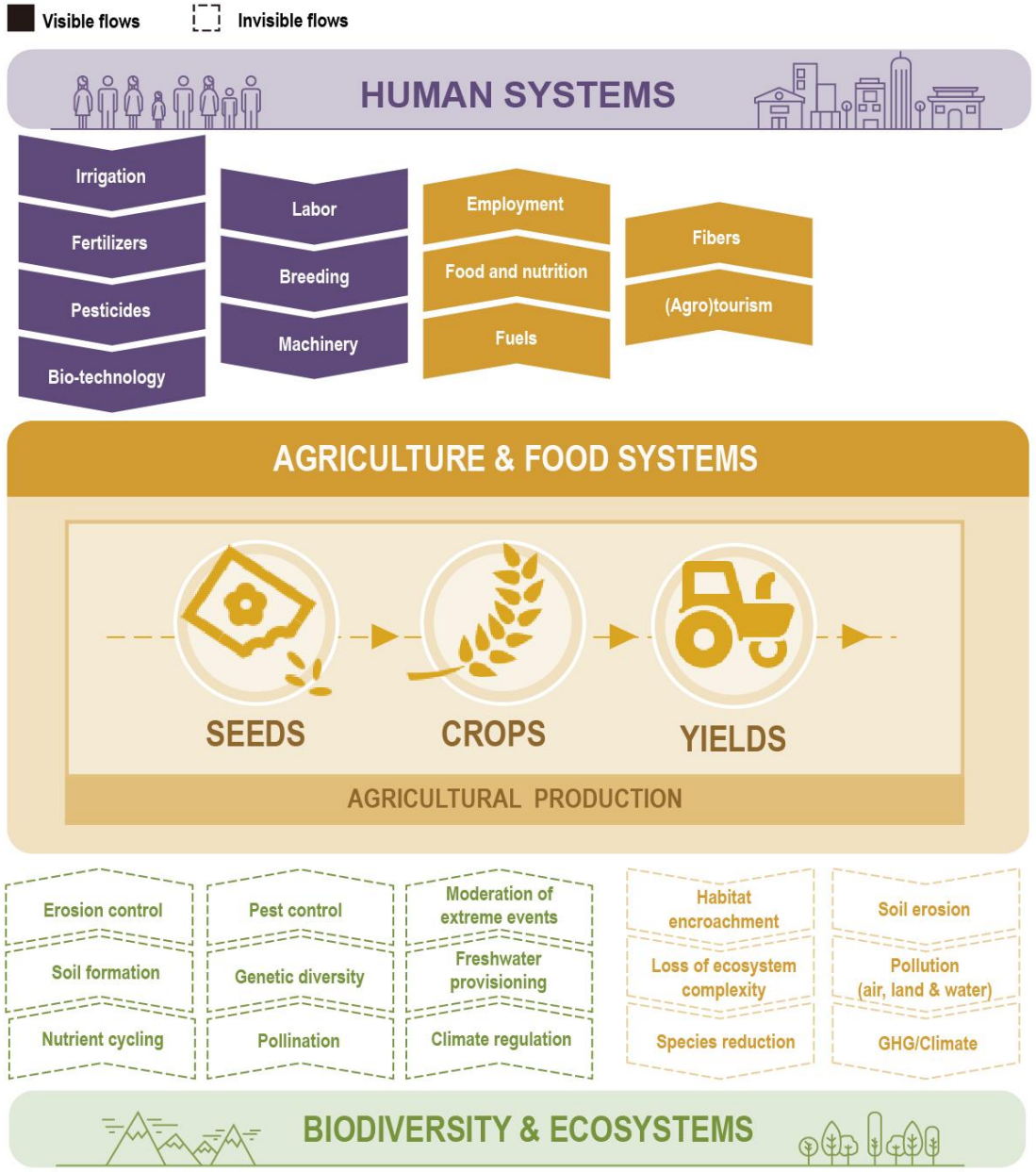


The visible and invisible flows of agricultural production

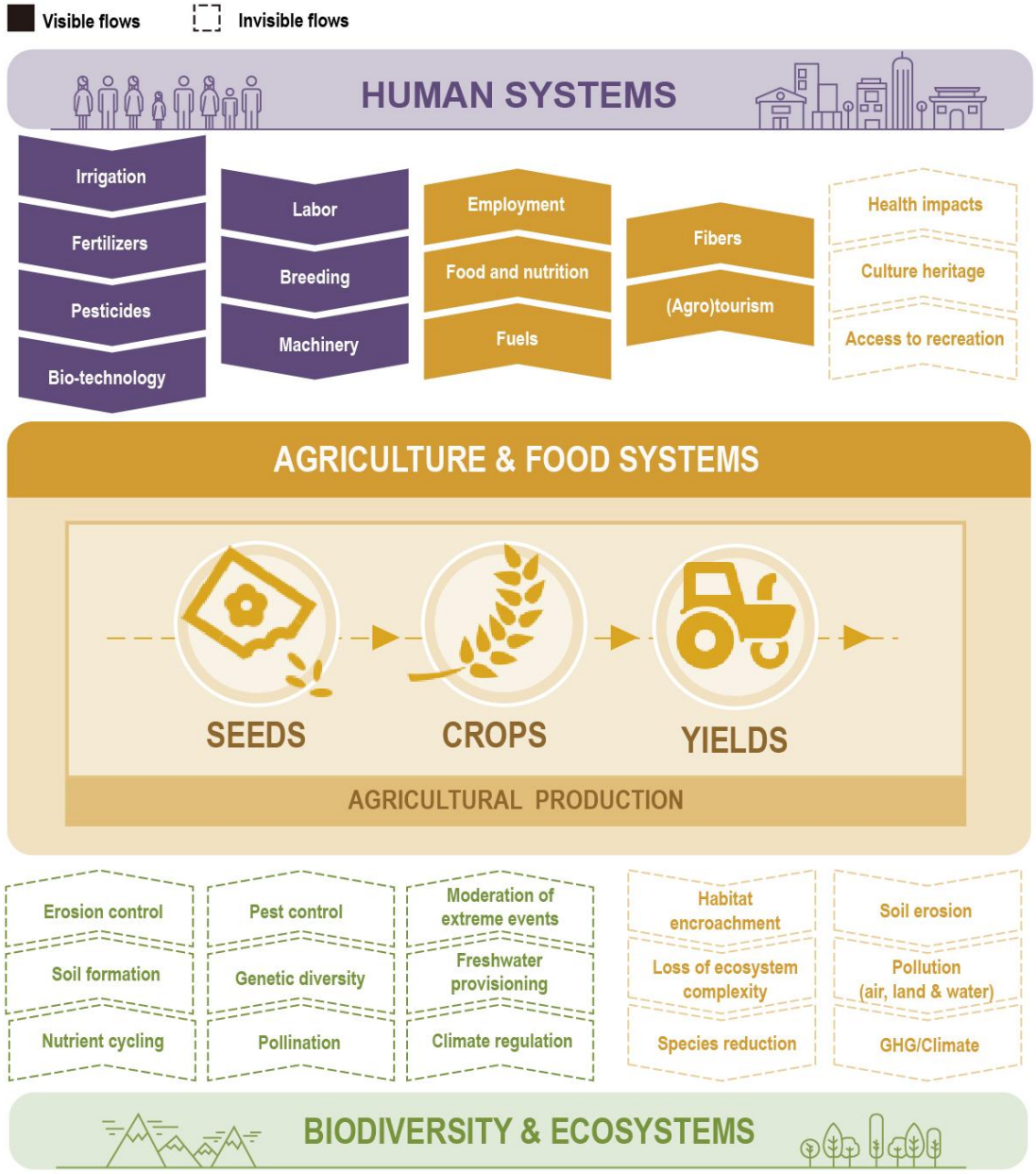
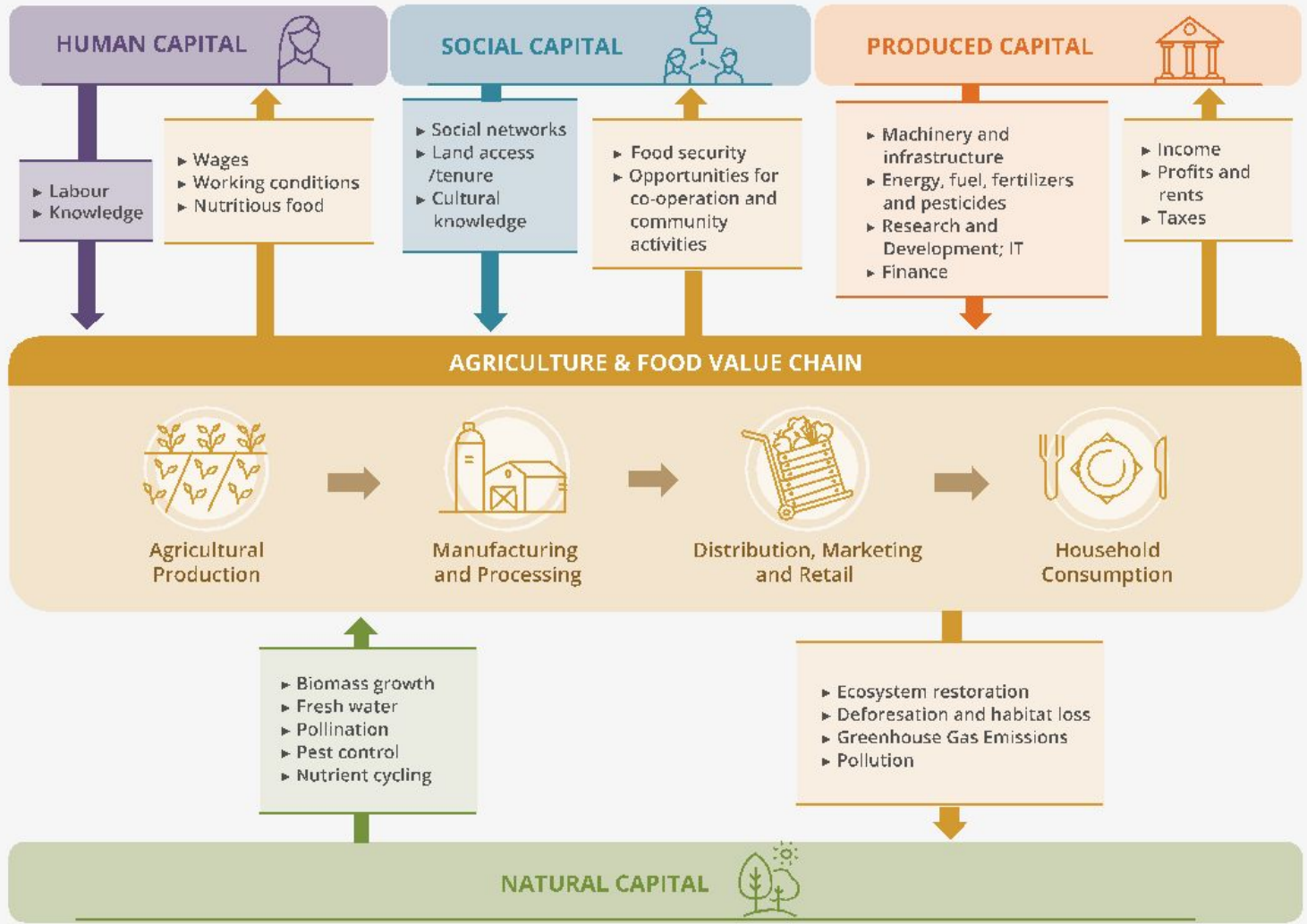
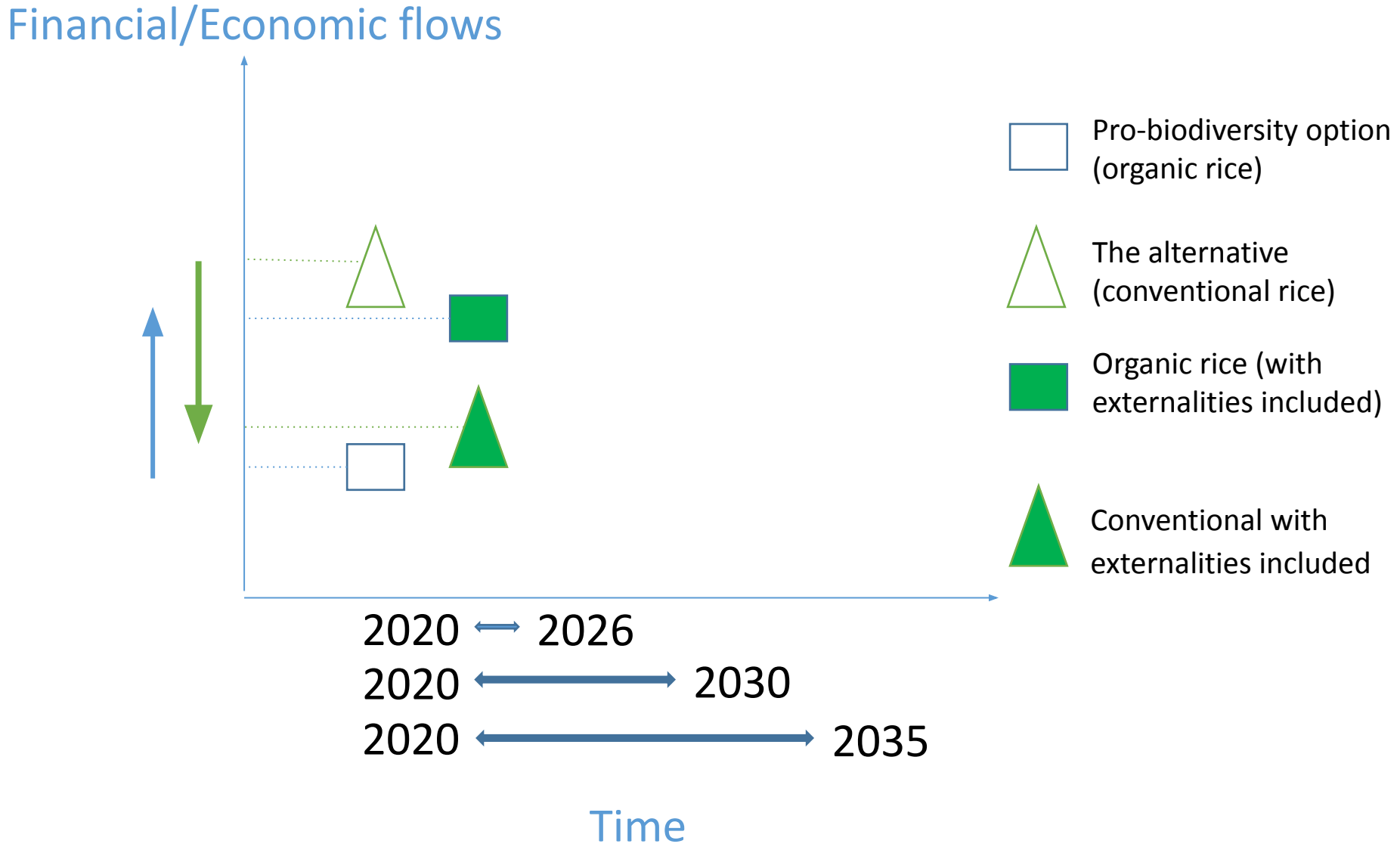


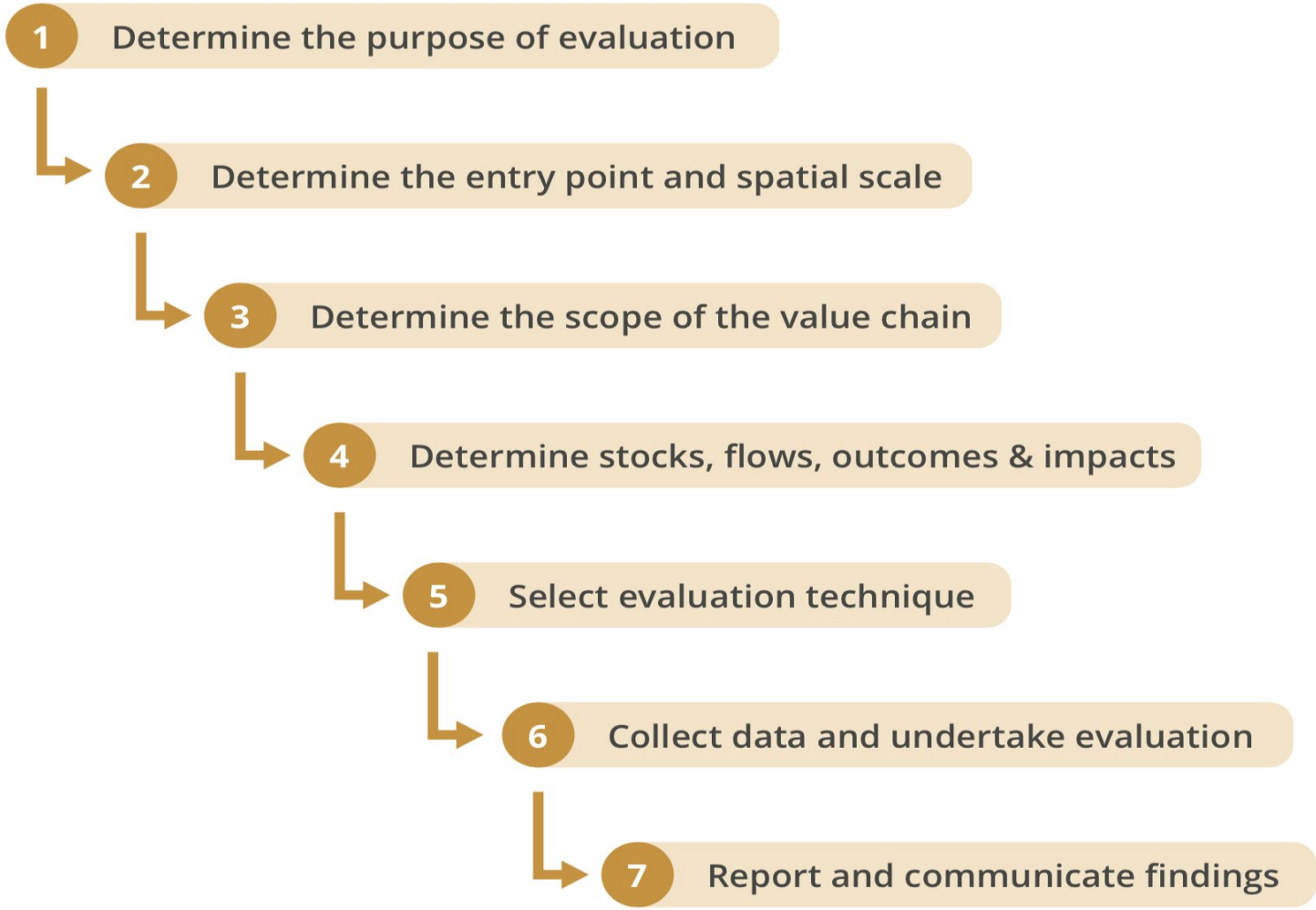
Figure 2.1 Capital stocks and value flows in eco-agri-food systems (Source: Hussain and Vause 2018)



The TEEBAgriFood core proposal



Steps in applying the TEEBAgriFood Evaluation Framework



II Do we have evidence to support policy change for organic rice in Thailand?

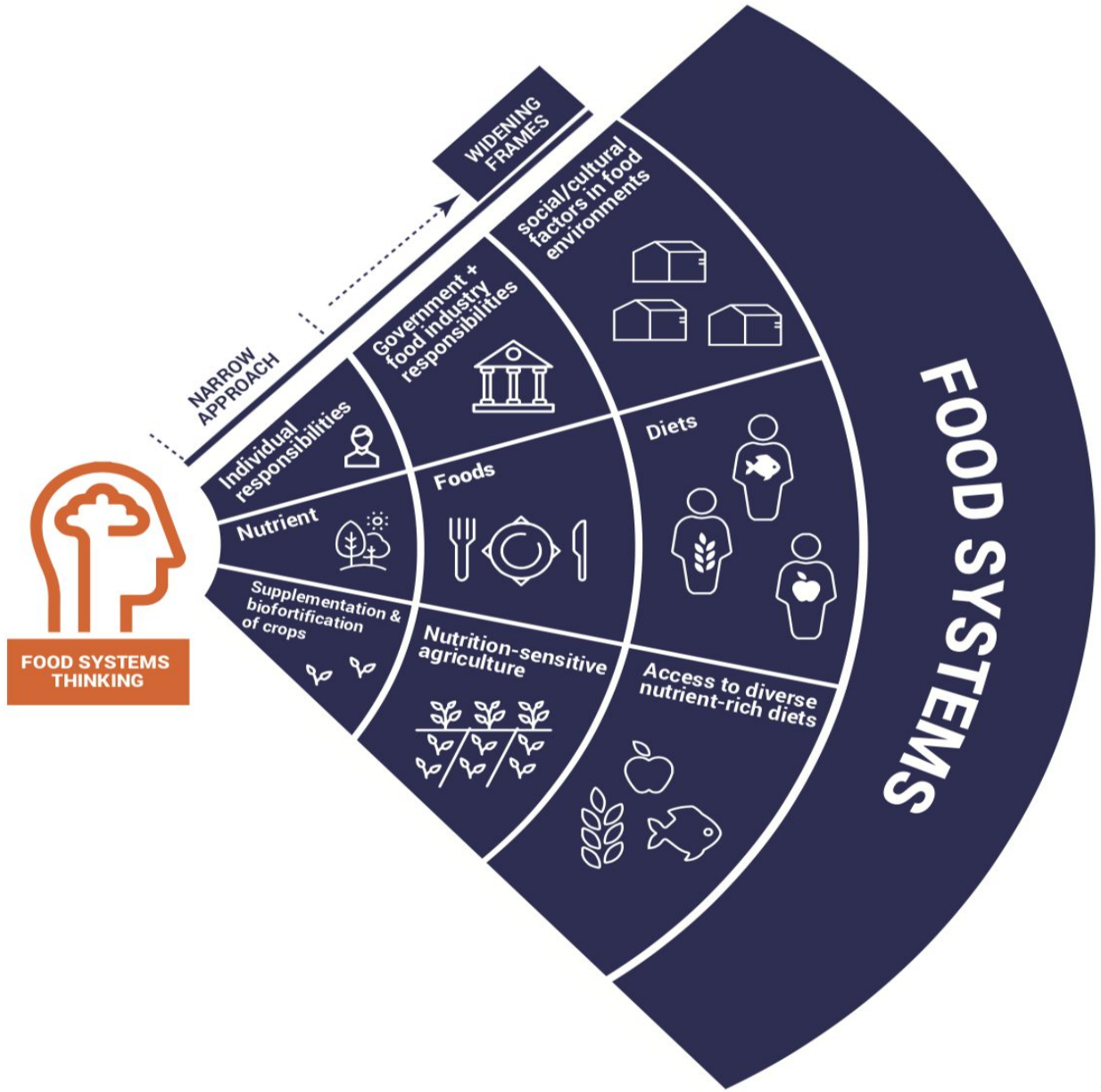


Figure 4.12
Source: adapted from IPES-Food 2017

Things to consider in the TEEBAgriFood Thailand study on organic rice production

1. There is only a ca. **1% difference** in projected yields for organic versus conventional rice
2. Only a subset of the positive ecosystem services generated by organic versus conventional are quantified and valued in THB ***but even with just this subset* organic is much better**
3. We do not value in BHT:
   - **biodiversity gains** in THB
   - **nutritional benefits** of organic rice
   - Enhanced community cohesion, social capital and the **involvement of women**
4. Apart from carbon sequestration and storage (global public good) the **beneficiaries are Thai** citizens

III What are the next steps?

What are the reasons why farmers do not adopt organic if the benefits are so large?

1. Perhaps farmers' **perceptions of the costs** of switching to organic and the perceived decrease in yields far exceeds what the models tell us
2. The assumed social **Discount Rate** applied in the analysis is 5% but the private rate of time preference for farmers (with debt, little access to microfinance etc.) is likely much higher
3. There are **coordination costs/network lock-ins** for conventional rice production. It is not worth the while of any one farmer or one farming community to unilaterally develop the supply chains for organics, but if everyone contributes then all benefit

What are the reasons why farmers do not adopt organic if the benefits are so large/should government intervene?

1. Perhaps farmers' **perceptions of the costs** of switching to organic and the perceived decrease in yields far exceeds what the models tell us
   - Markets are assumed to function efficiently the closer we get to 'complete and perfect information'.
   - If the consumer is misinformed, s/he will make the wrong decisions. There is an economic argument for intervention.

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2. The assumed social **Discount Rate** applied in the analysis is 5% but the private rate of time preference for farmers (with debt, little access to microfinance etc.) is likely much higher
   - Providing credit/a grant for one year makes economic sense if Thai farmers and citizens then reap the benefits of organic production in perpetuity

What are the reasons why farmers do not adopt organic if the benefits are so large/should government intervene?

3. There are **coordination costs/network lock-ins** for conventional rice production. It is not worth the while of any one farmer or one farming community to unilaterally develop the supply chains for organics, but if everyone contributes then all benefit
   - It makes economic sense for the government to intervene in such cases to overcome these coordination effects.
   - This is a form of market failure – economists know that the market will not function well in the presence of lock-ins.

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