



The Economics of Ecosystems and Biodiversity TEEB for Agriculture & Food

Malaysia Inception Workshop day 2 scoping meeting

3 December 2020

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TEEB

The Economics of Ecosystems & Biodiversity

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I Origins of TEEB and TEEBAgriFood



The visible and invisible flows of agricultural production

ZAKIR HOSSAIN CHOWDHURY/ANADOLU AGENCY/GETTY



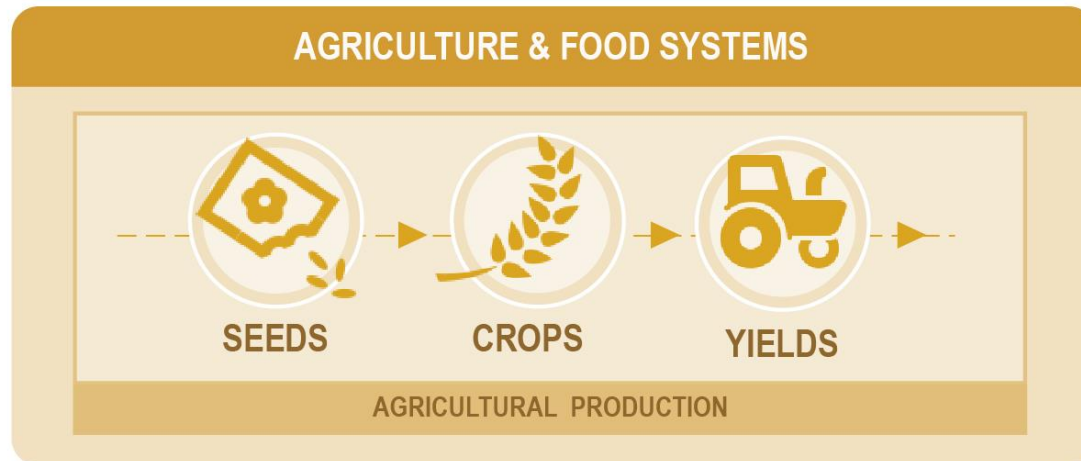
Drying red chillis under the sun provides one of the few sources of employment for women in an area of Bangladesh.

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**.

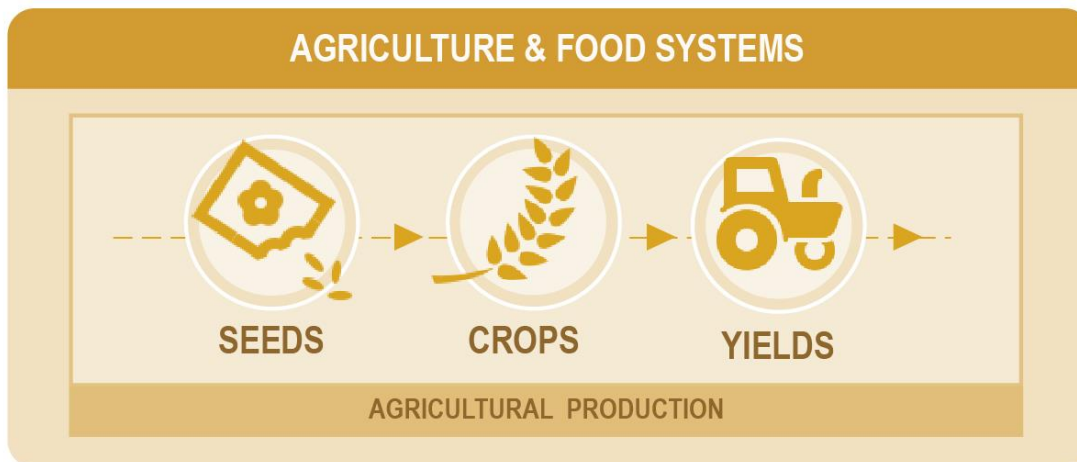
The visible and invisible flows of agricultural production

TEEB for Agriculture & Food



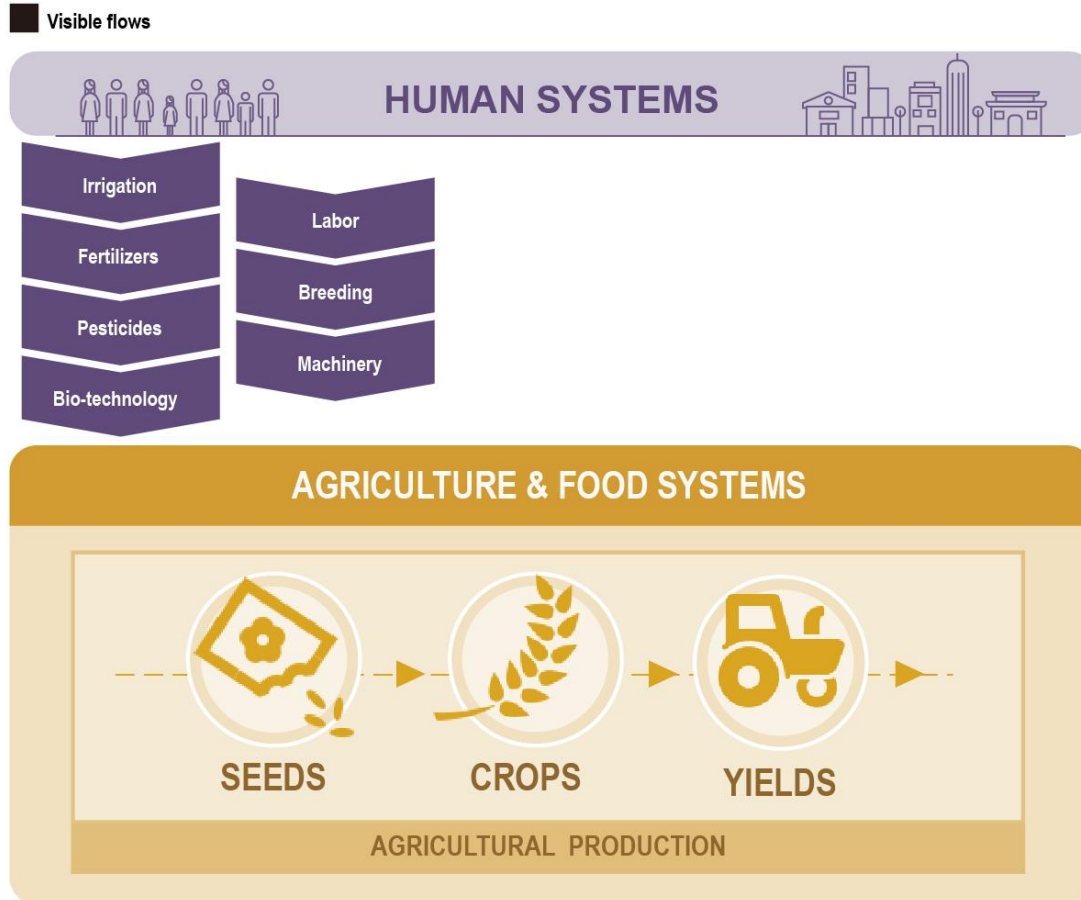
The visible and invisible flows of agricultural production

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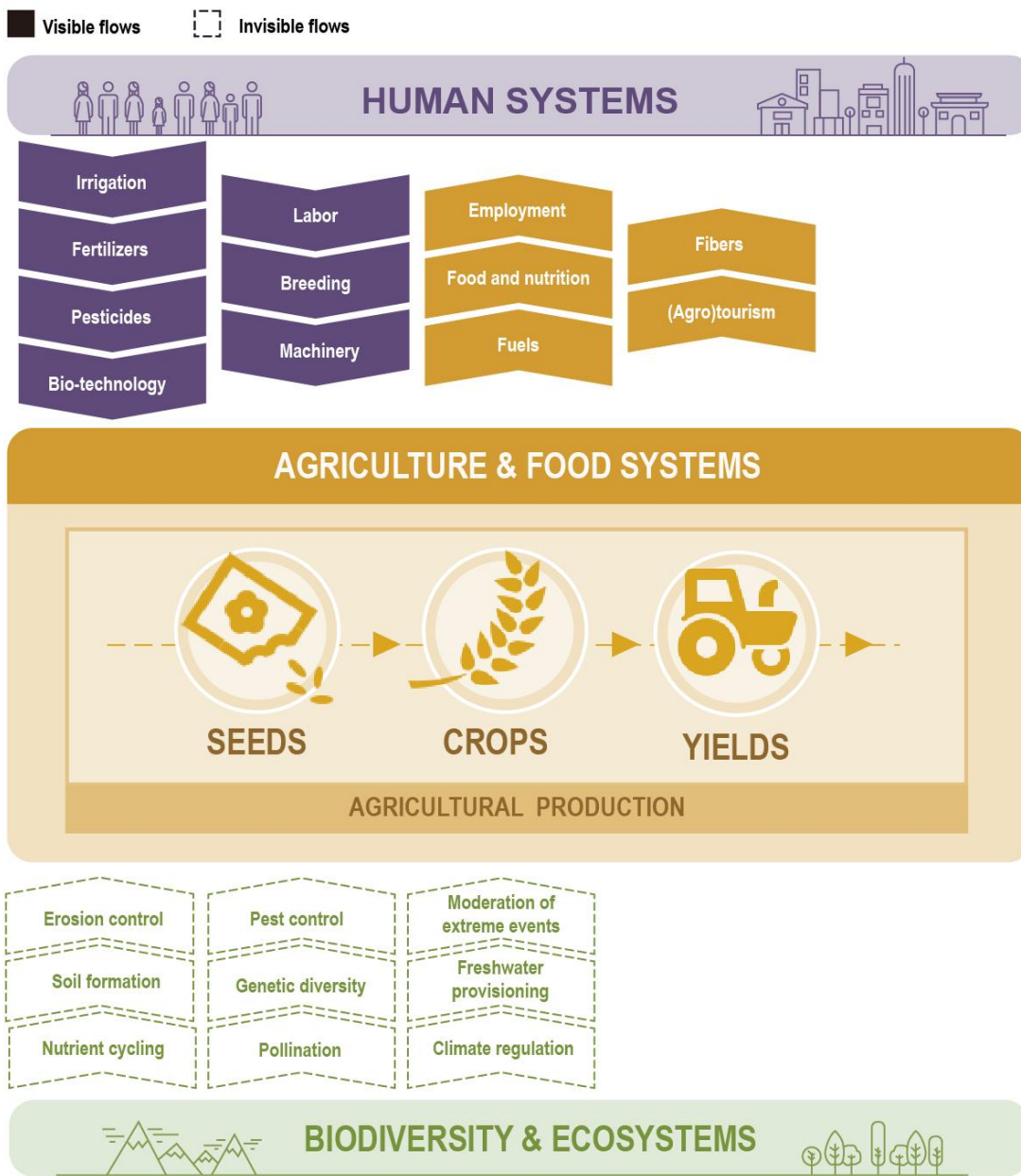
The visible and invisible flows of agricultural production

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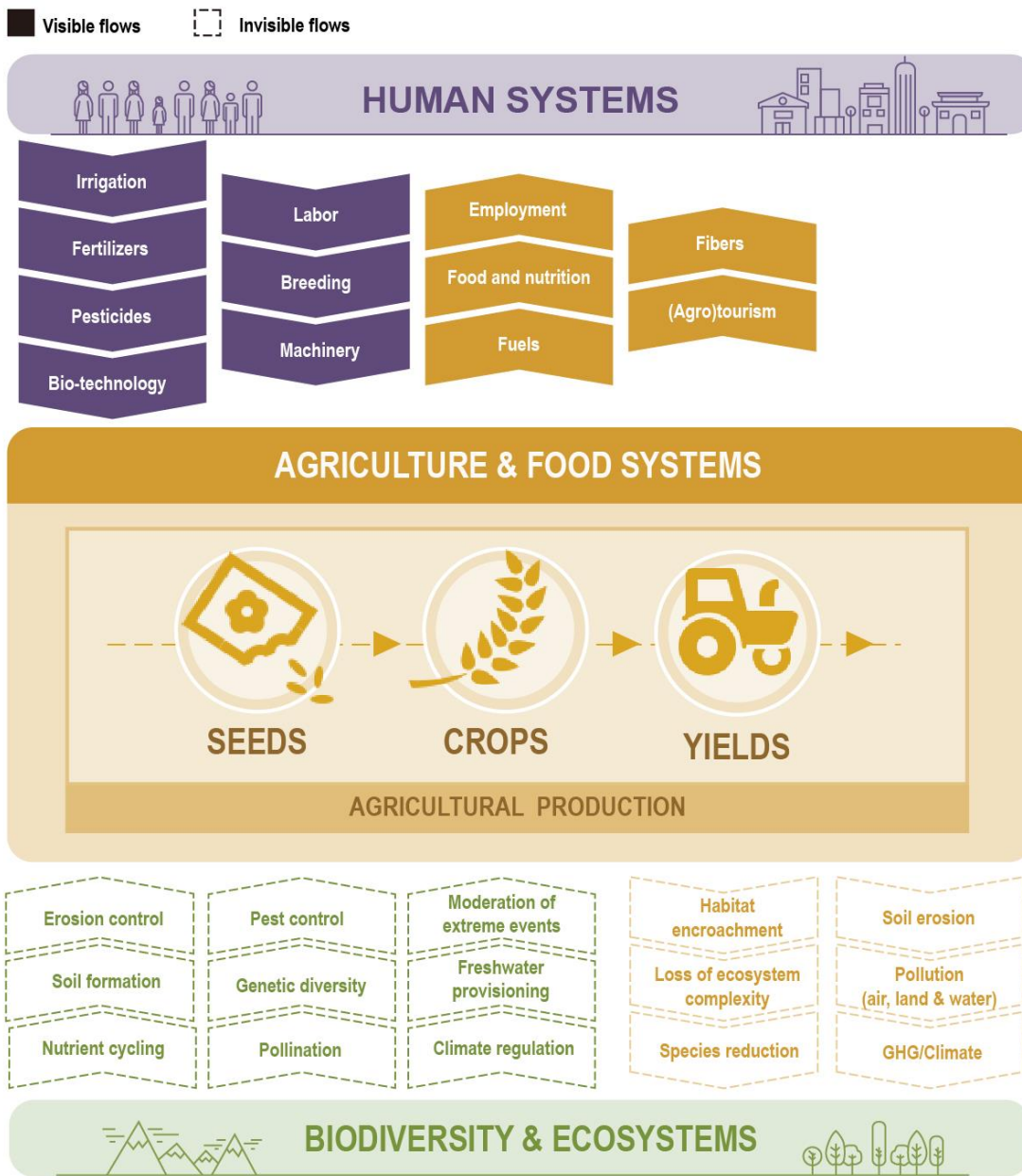
The visible and invisible flows of agricultural production

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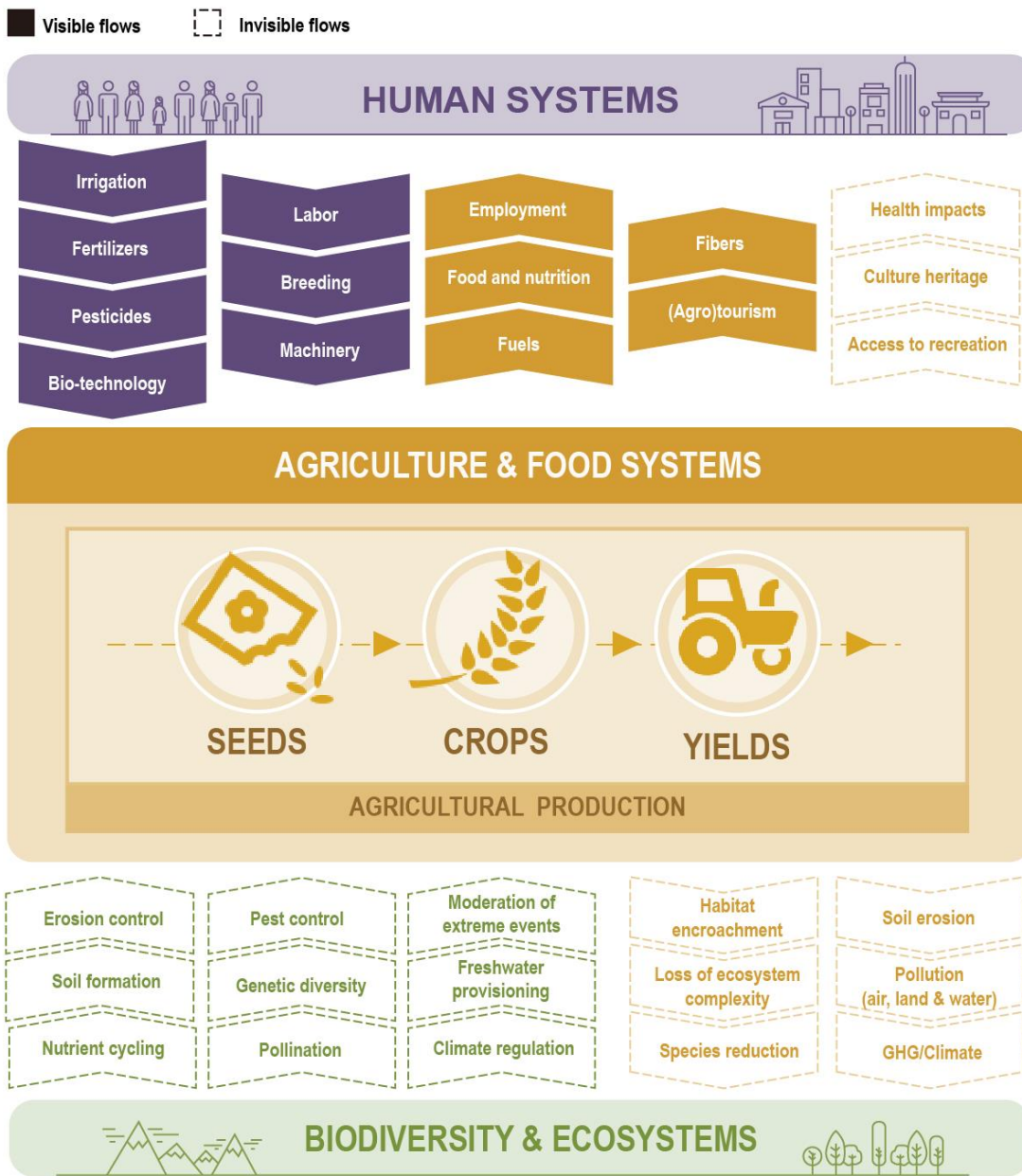
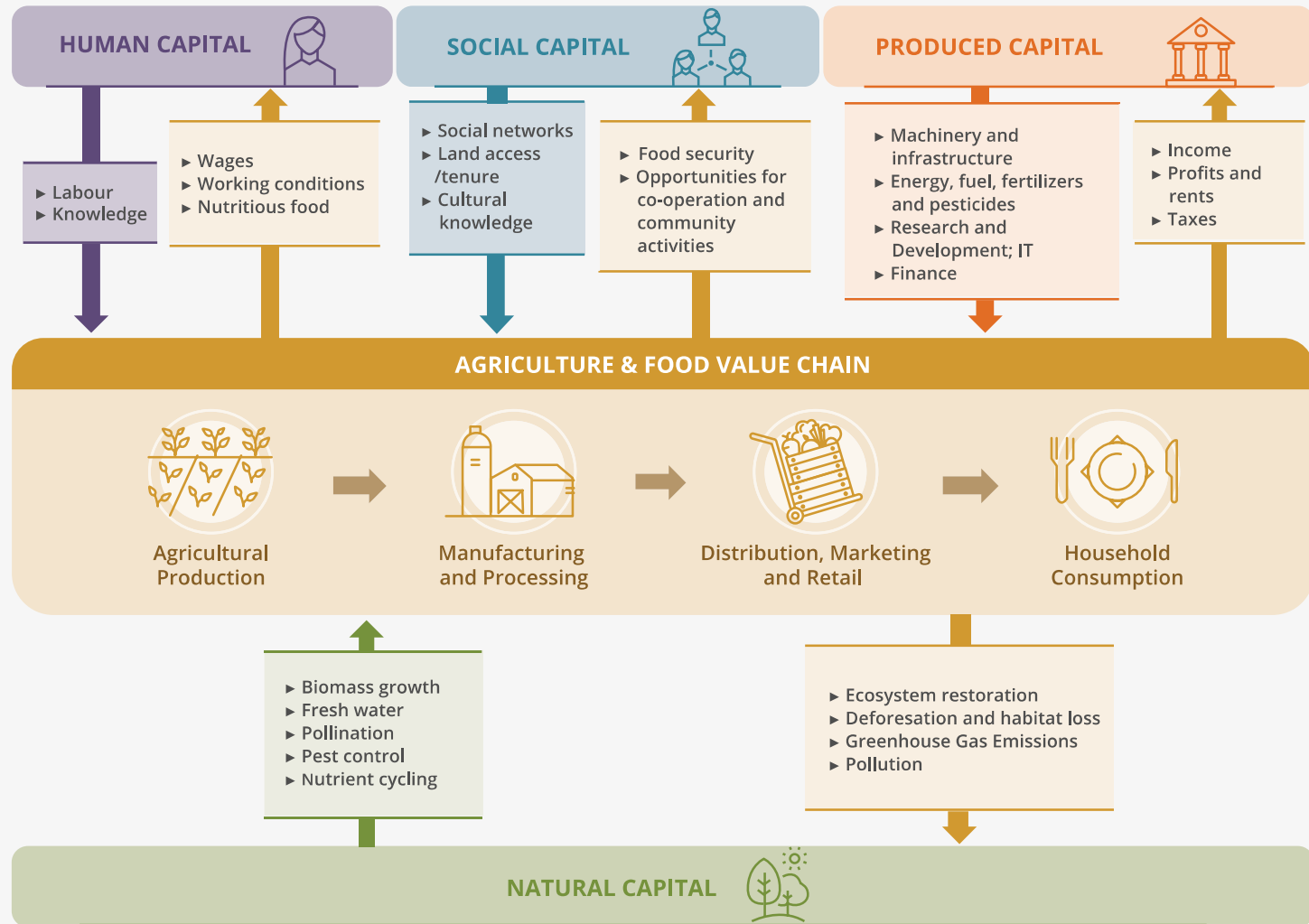




Figure 2.1 Capital stocks and value flows in eco-agri-food systems (Source: Hussain and Vause 2018)





teebweb.org/agrifood/home/scientific-and-economic-foundations-report/



TEEB for Agriculture & Food

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TEEBAgriFood

Information Materials

Events

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TEEB

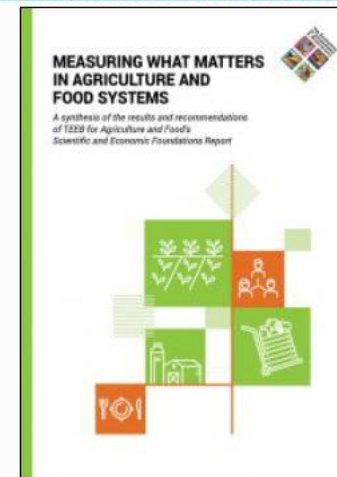
Contact

Scientific and Economic Foundations

[Scientific and Economic Foundations Report](#)



[Measuring what matters in agriculture and food systems](#)



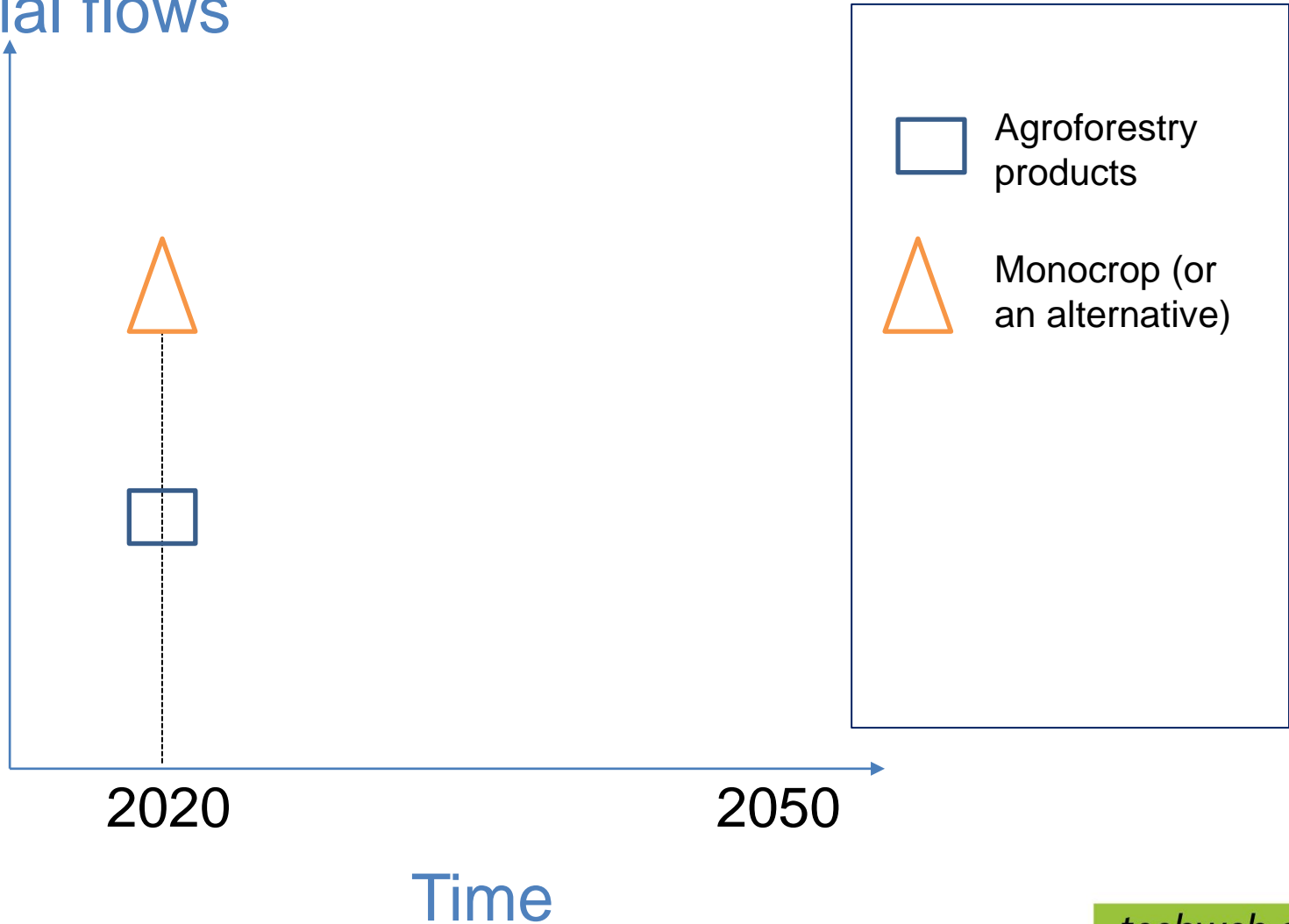


II TEEBAgriFood for Malaysia – hypothesis on ‘invisibilities’



Agro-forestry versus monoculture: *current assumption*

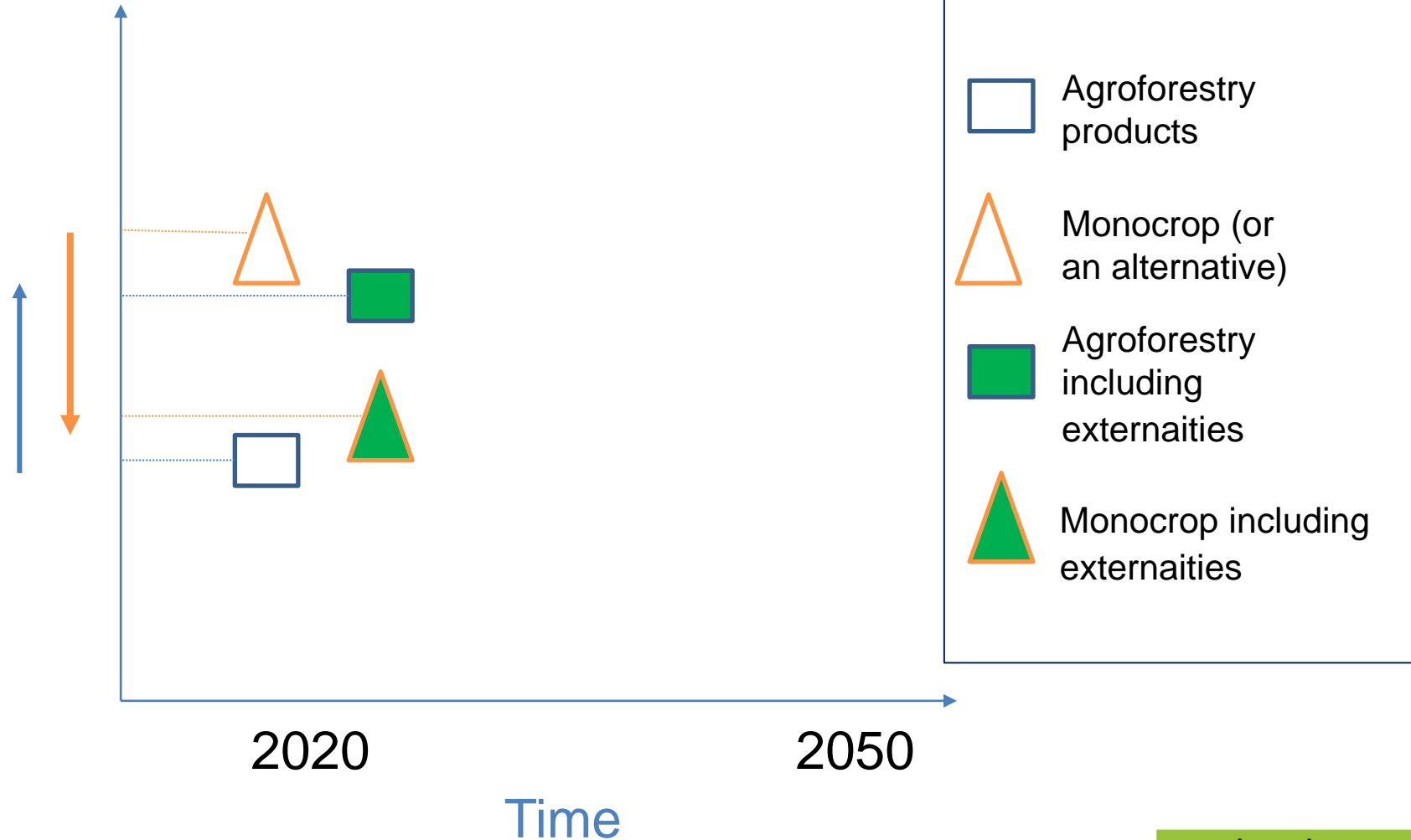
Financial flows





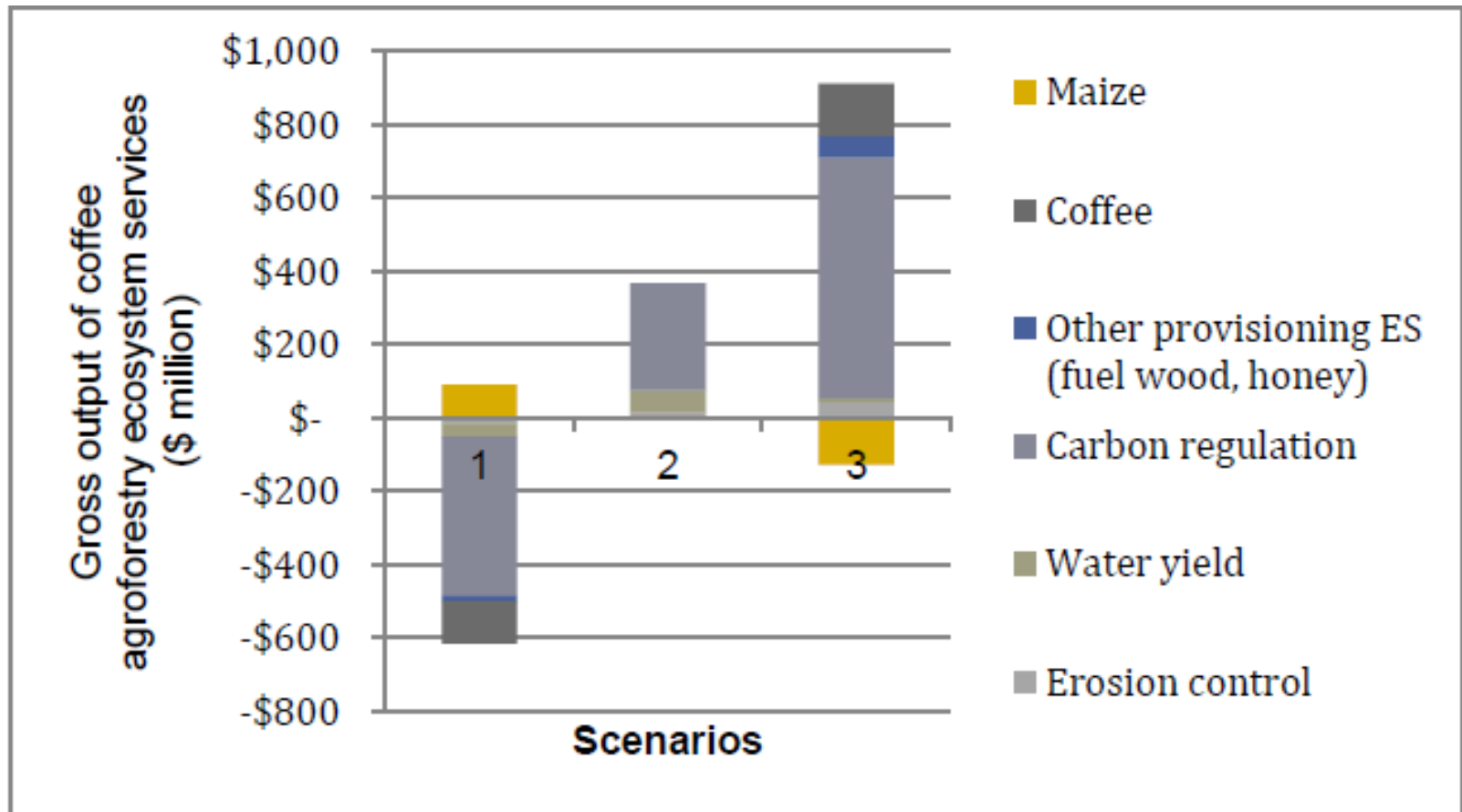
Agro-forestry versus monocrop: 2020 including externalities

Financial/Economic flows





Agro-forestry Scenario analysis





III TEEBAgriFood – developing scenarios for Malaysia



Developing scenarios

The fundamental question that would be answered by a TEEBAgriFood assessment is this:

- *If the Malaysian government were to implement a change in economic incentives or regulations for agri-food systems, what would be the economic costs and benefits of this change relative to the no-change Business as Usual?*
- Sub-questions: (i) *What* and (ii) *Where*?



Developing scenarios

- Selection of **which policy interventions to test/apply** using the TEEBAgriFood Framework will be determined by government and stakeholder priorities
- In carrying out the **scenario analysis**, Business-as-Usual and the policy-on scenarios includes known changes
 - Urbanization
 - Population demographics
 - Changing dietary patterns
 - Climate change scenarios
 - **Current policies/incentives/measures**
 - **Covid19 responses**



V Linking TEEBAgriFood to Malaysian policy



Conserving natural heritage and biodiversity

- Part of **Vision 2030** (1)
 - Vision 2030's objective will be geared toward a new economic model which advocates **shared prosperity**
 - 11th Malaysia Plan (2016-2020) and the 12th (2021-2025) both emphasize **green growth** that is resource-efficient, clean, and resilient.
 - The green growth strategy aims to significantly reduce greenhouse gas emissions; **improve conservation of terrestrial and inland water**, as well as coastal and marine areas including its ecosystems; **intensify the conservation of natural resources, including biodiversity** and promote **sustainable consumption and production practices** (2).

1. Prime minister office. (2019, July 11). Malaysia a True Entrepreneurial Nation by 2030. <https://www.pmo.gov.my/2019/07/malaysia-a-true-entrepreneurial-nation-by-2030/>.
2. GOVERNMENT OF MALAYSIA. (2015). Eleventh Malaysia Plan 2016-2020. Anchoring Growth on People. https://www.talentcorp.com.my/clients/TalentCorp_2016_7A6571AE-D9D0-4175-B35D-99EC514F2D24/contentms/img/publication/RMKe-11%20Book.pdf.



Conserving natural heritage and biodiversity

Twelfth Malaysia Plan, 2021-2025 : Development Dimensions

12MP

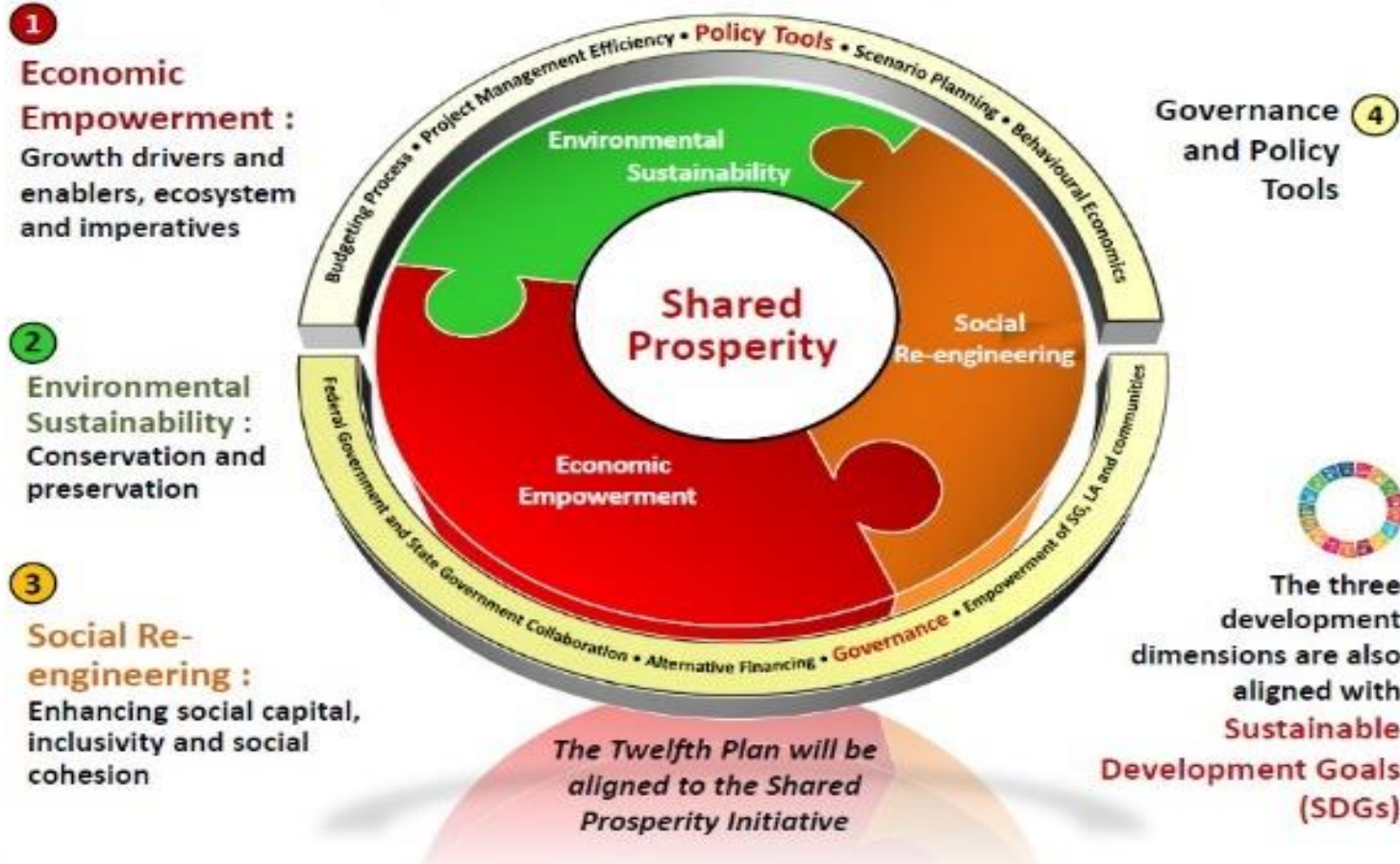
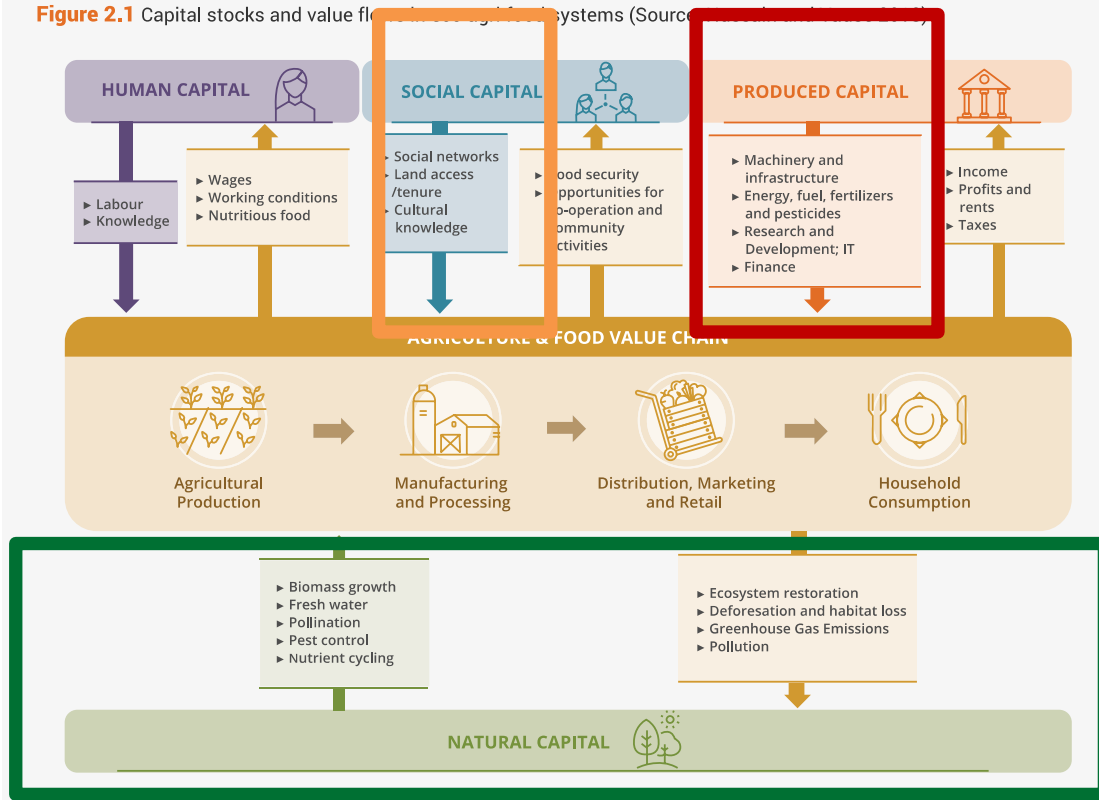




Figure 2.1 Capital stocks and value flows in agricultural systems (Source: TEEB, 2010)



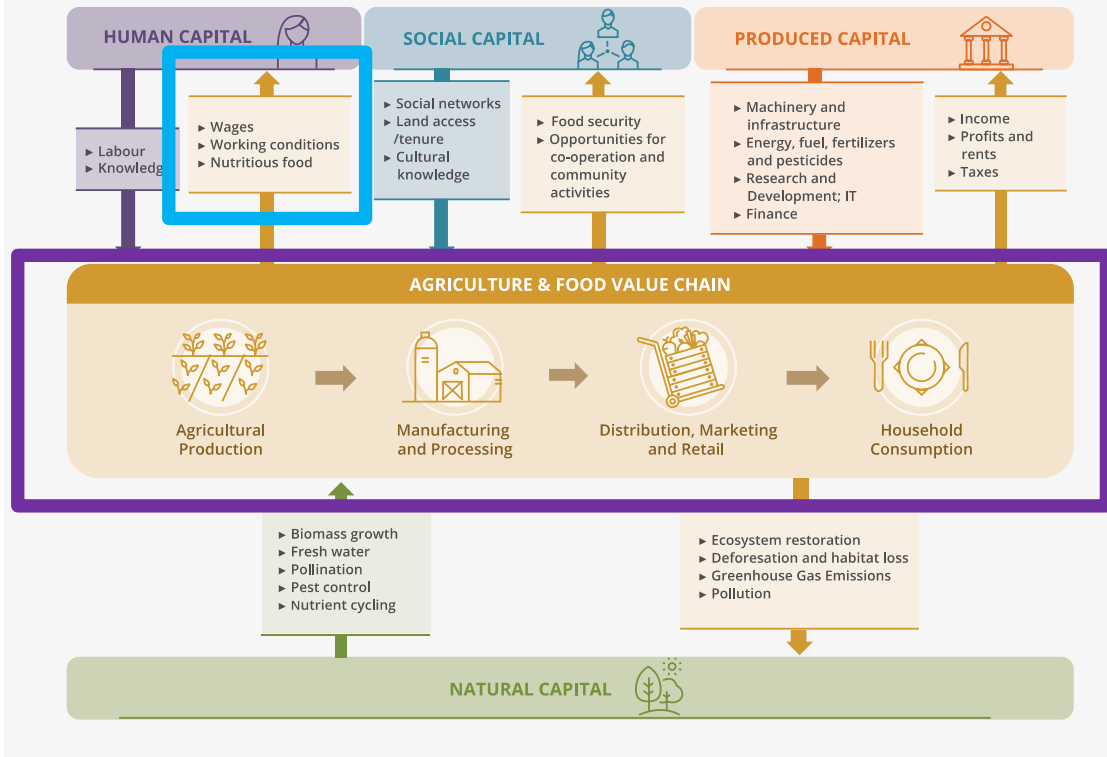
1. Economic empowerment
Growth drivers and enablers, ecosystems and imperatives

2. Environmental Sustainability –
conservation and preservation

3. Social re-engineering –
enhancing social capital, inclusivity, and social cohesion



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



The National Agro-food Policy (2011-2020), has as key policy objective to “tackle the issue of **sustainable agriculture** and the competitiveness of the agro-food industry with **food safety and nutrition** aspects along its value chain”

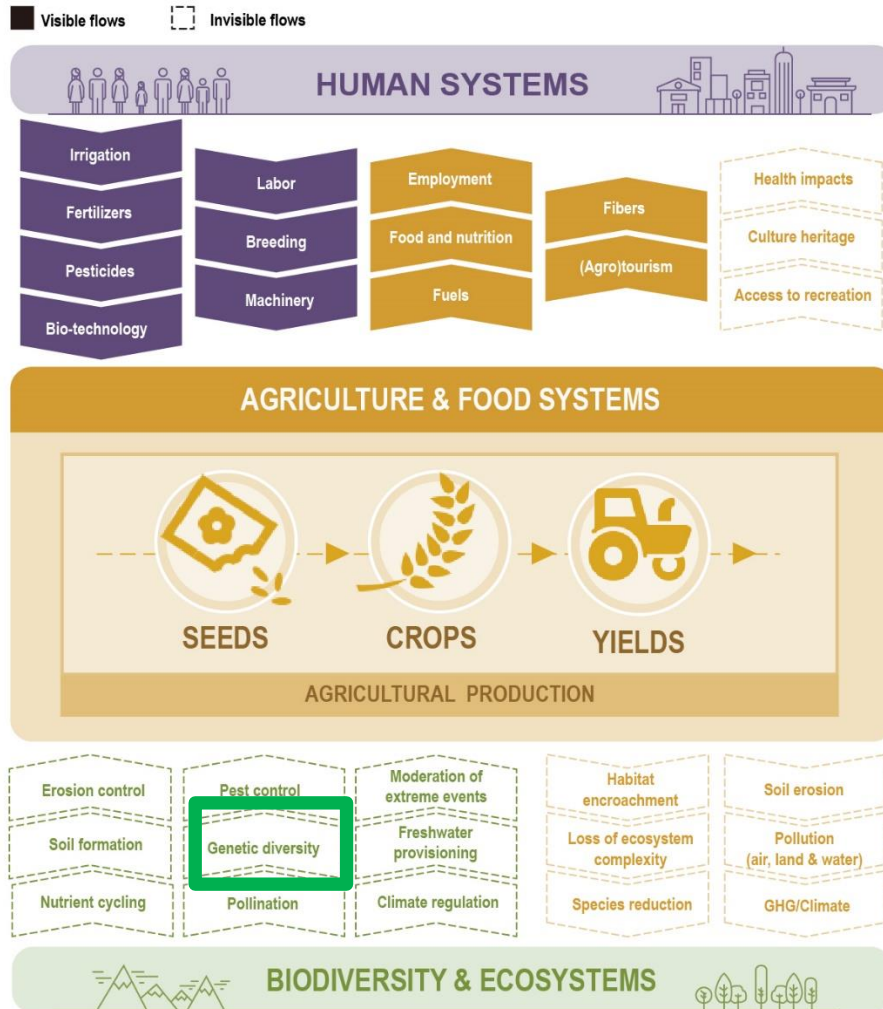


Coherent (linked) policies

2. The National Strategies and Action Plans on Agricultural Biodiversity Conservation and Sustainable Utilization

- Mainstreaming the Convention on Biological Diversity (**CBD**) objectives into the development of the agriculture sector in Malaysia.
- The Government of Malaysia recognizes the huge potential biodiversity holds as a **reservoir of future food**,
- **natural gene bank** harboring the key ingredients for developing new varieties for better yield and also to meet the potential impacts of climate change (1)

1. MOA. 2012. National Strategies and Action Plans on Agricultural Biodiversity Conservation and Sustainable Utilization. Ministry of Agriculture and Agro-based Industry. Retrieved from <http://www.fao.org/3/a-bc259e.pdf>



1. **CBD**
 2. huge potential biodiversity holds as a reservoir of future food, **natural gene bank** harboring the key ingredients for developing new varieties for better yield and also to meet the **potential impacts of climate change**



Coherent (linked) policies

3. The National Policy on Biological Diversity (NPBD) 2016-2025

- Malaysia is committed to conserve its biological diversity, promote its sustainable use and ensure fair and equitable sharing of the benefits arising out of the utilisation of biological resources, through overarching strategies and action plans in the NPBD.
- Current NPBD 2016-2025 specifies **5 national goals and 17 national biodiversity targets** to be implemented by all segments of stakeholder and society



Coherent (linked) policies

3. The National Policy on Biological Diversity (NPBD) 2016-2025

- Target 1: By 2025 more Malaysians are **aware of the values of biodiversity** and the steps they can take to conserve and use it sustainably.
- Target 2: By 2025, the contributions of **indigenous peoples and local communities, civil society and the private sector** to the conservation and sustainable utilisation of biodiversity have increased significantly.
- Target 3: By 2025, biodiversity conservation has been **mainstreamed** into national development planning and sectoral policies and plans.
- Target 4: By 2025, our production forests, **agriculture production and fisheries** are managed and harvested sustainably.



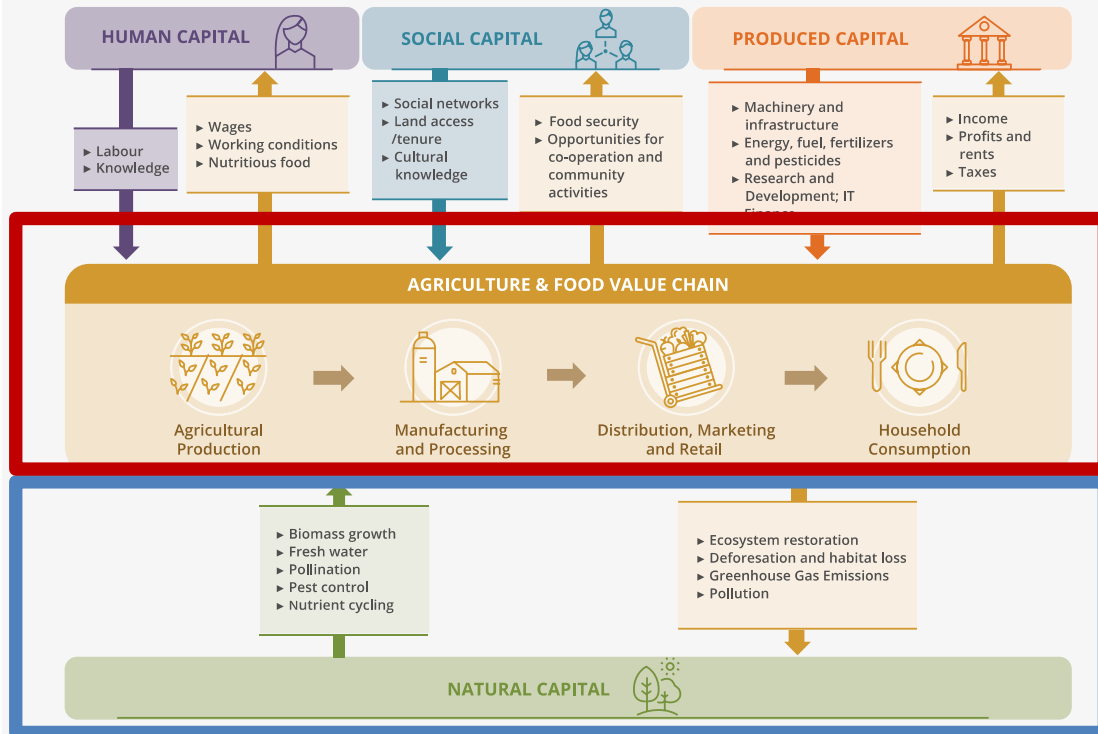
Coherent (linked) policies

3. The National Policy on Biological Diversity (NPBD) 2016-2025

- **Goal 1:** Empower and harness the commitment of all stakeholders to conserve biodiversity
- **Goal 2:** Significantly reduce direct and indirect pressures on biodiversity
- **Goal 3:** Safeguard all key ecosystems, species and genetic diversity
- **Goal 4:** Ensure that the benefits from the utilisation of biodiversity are accrued equitably to all
- **Goal 5:** Improve the capacity, knowledge and skills of all stakeholders to conserve biodiversity



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



National Policy on Biological Diversity (NPBD) 2016-2025
Targets 1-3
Target 4



Measures to tackle COVID-19 in the agri-food sector

1. Special measures for **SMEs and low-income earners** including for the agriculture sector:
 - lending facilities
 - fund injections for infrastructure development and short-term agriculture projects,
 - financial assistance to workers on unpaid leave
 - wage subsidy programmes
 - RM40 million to assist SMEs in the agriculture sector **sell their products on e-commerce platforms** so they can reach a wider pool of consumers
2. RM 1 billion to the **Food Security Fund**
3. RM 100 million will be allocated for the development of **agro-storage and distribution infrastructure**, alongside crop integration programs.



VI TEEBAgriFood in Malaysia – process and next steps



The current project

| Year | | Year 1 | | | | Year 2 | | | | Year 3 | | | | Year 4 | | | |
|------------------------------|---|--------|----|----|----|--------|----|----|----|--------|----|----|----|--------|----|----|----|
| Work Packages and activities | | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 |
| WP 1 | Country specific analysis – lessons learned from previous interventions | █ | █ | █ | █ | | | | | | | | | | | | |
| WP 2 | Policy mapping | █ | █ | █ | | | | | | | | | | | | | |
| WP 3 | Determine and refine the case studies | | | █ | █ | █ | █ | | | | | | | | | | |
| WP 4 | Engaging agri-business with NCP | █ | █ | █ | █ | █ | █ | █ | █ | █ | | | | | | | |
| WP 5 | Scenario Analysis | | | | | | █ | █ | █ | █ | | | | | | | |
| WP 6 | Develop a roadmap of concrete steps to implement a change | | | | | | | | | | █ | █ | | | | | |
| WP 7 | Deliver the change and ensure project sustainability | | | | | | | | | | █ | █ | █ | █ | █ | █ | █ |
| WP 8 | Communicating biodiversity benefits and mainstreaming | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ |



The Role of the Lead Ministry

- The project would be implemented by the TEEB Office
 - Staff and consultants in Geneva, Nairobi, Bangkok, Delhi and Brasilia
 - Seven country pilots: Brazil, China, India, Indonesia, Malaysia, Mexico, Thailand
- The roles of the lead line Ministry is:
 - To invite agencies/individuals to the **Inception Workshop**
 - To chair and then to convene a series of Steering Committees (around one per year)
 - To provide a policy steer, to ensure that the policy question being assessed is relevant



The Economics of Ecosystems & Biodiversity

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