
CIRCULAR BIOECONOMY TO ACHIEVE CLIMATE AND SUSTAINABILITY GOALS

11TH REGIONAL 3R AND CE FORUM IN ASIA AND THE PACIFIC
08-10 FEBRUARY 2023, SIEM REAP, KINGDOM OF CAMBODIA

MARTA GOMEZ SAN JUAN

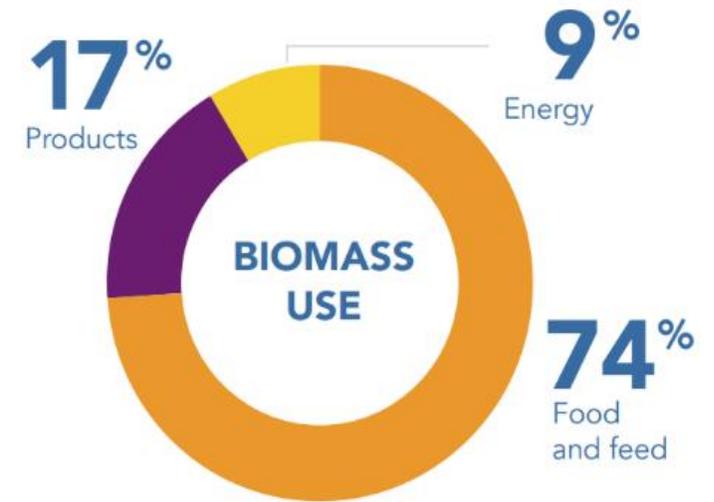
OFFICE OF CLIMATE, BIODIVERSITY AND ENVIRONMENT



Food and Agriculture
Organization of the
United Nations

THE FAO PERSPECTIVE ON THE BIOECONOMY

The production of food, feed, wood-products, furniture, paper, bio-textiles, bio-chemicals, bio-plastics, bio-pharmaceuticals and bio-energy uses **biomass and bio-based processes**, carried out by microorganisms.



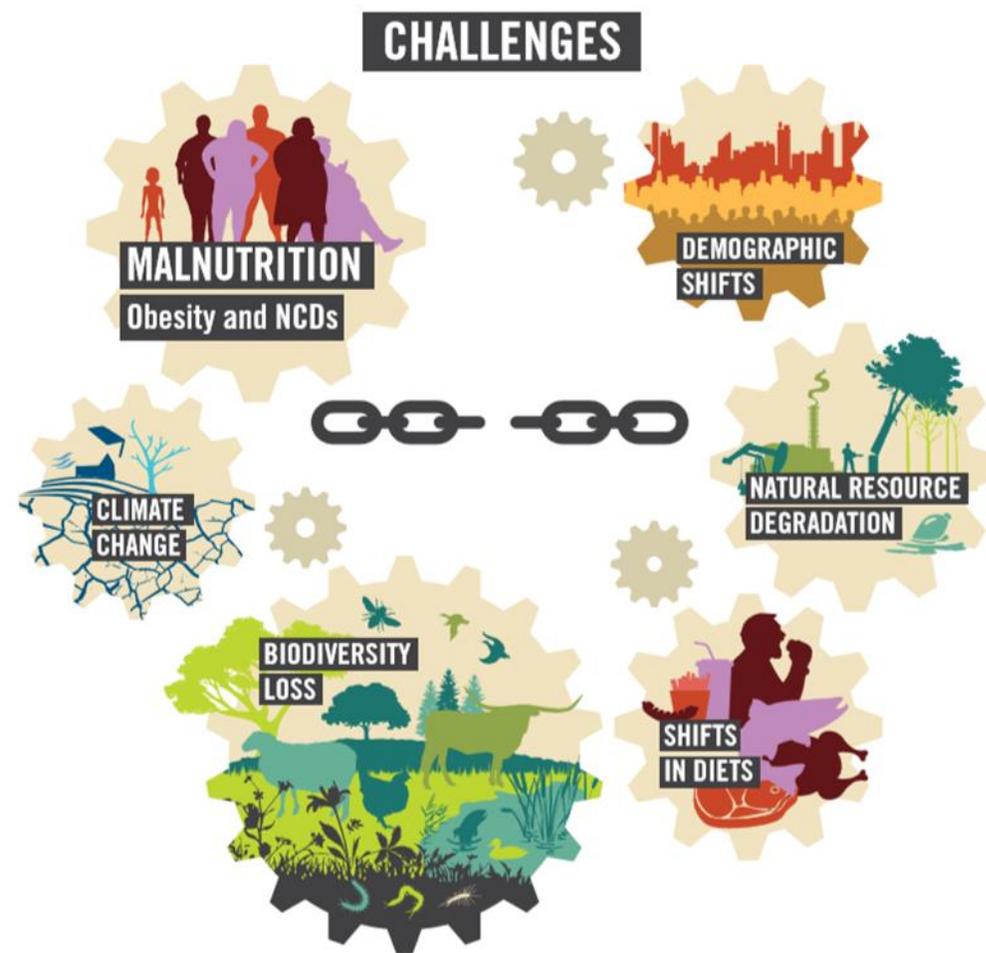
[\(WBCSD, 2020\)](#)



To be sustainable, its application should be informed by **evidence**.

BUT THERE ARE THREATS TO AGRIFOOD SYSTEMS

- The agrifood sector is responsible of pollution and 1/3 of global emissions. And 30% of soils are already degraded.
- 14% of the world's agricultural production is **lost** and 17% of available food is **wasted**.
- Urban waste sent to landfill has 20-50% organic content that was not treated or composted.
- USD 1.7 trillion per year by 2030 of social cost of GHG emissions and **pollution** associated with current dietary patterns.



COP 27: WHAT'S IN FOR BIOECONOMY?

- FAO launched a publication on the bioeconomy examples and links to national climate action plans, during a side event of the Food and Agriculture Pavilion, and participated in several events on bioeconomy.
- Our research has found that several countries have identified circular bioeconomy as a strategy to achieve their NDCs, Long-term Low Emission Development Strategies (LT-LEDS), or have included bioeconomy practices in their climate agenda.
- Examples are Thailand, Viet Nam, Pakistan, India, Costa Rica, Brazil, Mauritania, Namibia, Nigeria.
- The Sharm el-Sheik Implementation Plan notes *the importance of transition to sustainable patterns of consumption and production.*

BIOECONOMY STRATEGIES



There are many bioeconomies in the world and even in the same region or country

Generally, countries estimate that bioeconomy represents between 5-10% of the total GDP. They develop strategies to increase that share while supporting the environment

> 60

regions and countries have bioeconomy or bioscience-related strategies

20

of which have published dedicated bioeconomy strategies, including in Africa, Asia, Europe, Oceania and the Americas.



BIOECONOMY IN ASIA

A study conducted under FAO's work on bioeconomy found that:

- Countries in Asia are rich in biological resources and offer opportunities for bioeconomy development.
- Understanding the bioeconomy landscape is crucial for effective strategies.
- Harmonizing policies and integrating incentives and funding is necessary for effective bioeconomy development.
- Implementation mechanisms include dedicated investment platforms, co-financing to increase feasibility, collaborative mechanisms to absorb risk - feedstock guarantees.
- The sustainability trade-offs, environmental factors and competition with other uses are not entirely clear.
- Need for thorough monitoring to address sustainability in socio-economic and environmental aspects.

SOME EXAMPLES OF POLICIES IN ASIA

- Australia National Plastics Plan; National Agricultural Plastics stewardship scheme
- Cambodia National Strategic Plans on Green Growth
- China Fourteenth Five-Year Plan for Bioeconomy Development
- Indonesia Plan of Action on Marine Plastic Debris, and bioeconomy in Biodiversity National Reports
- Japan Bio-Strategy
- Malaysia Bioeconomy Transformation Programme
- Republic of Korea National Action Plan on Marine Litter and Contaminated sediment
- Thailand Bio Circular Green Economy Action Plan
- Viet Nam Forestry Development Strategy, and bioeconomy part of LT-LEDS
- **Bangkok Goals on Bio-Circular-Green Economy, 2022 Leaders' Declaration APEC (November 2022)**

BIOECONOMY – A SELECTED PRIORITY IN FAO STRATEGIC FRAMEWORK 2022-2031



Bioeconomy is a priority area in FAO's programme of work towards the 2030 Agenda, supporting countries to:

1. Develop and implement of integrated bioeconomy **strategies and policies**.
2. Deploy **sustainable innovations** (technological, social, policy, institutional, and financial).

TOWARDS THE SDG 2030

- A set of 10 Aspirational Principles and 24 Criteria for a Sustainable Bioeconomy were agreed upon by the FAO-led International Sustainable Bioeconomy Working Group (ISBWG), a multistakeholder platform established in 2016



HOW TO MAINSTREAM CIRCULARITY INTO AGRIFOOD SYSTEMS

| | | |
|---|---|---|
|  | <p>To promote high-value production that is sustainable and equitable</p> | <p>SDG 12.2 Sustainably manage and use natural resources</p> |
|  | <p>To improve environmental outcomes in agrifood systems and prevent pollution</p> | <p>SDG 12.4 Responsibly manage chemicals and waste</p> |
|  | <p>To increase resource use efficiency in the production of food and non-food products</p> | <p>SDG 12.5 Substantially reduce waste generation</p> |



Examples in all stages of the value chain





Food and Agriculture
Organization of the
United Nations

THANK YOU

Contact: Marta.gomezsanzjuan@fao.org

<http://www.fao.org/in-action/sustainable-and-circular-bioeconomy/en/>

