

EMG Nexus Dialogue Series on Sustainable Bioeconomy

**Dialogue 1: Strengthening Global Coordination,
Building Partnerships, and Financing for a
Sustainable Bioeconomy**

May 9th 2025

ECLAC's work on bioeconomy

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Timeline — milestones

2015

1st event:

International Conference on Bioeconomy in Latin America and the Caribbean 2015

1st publication:

Bioeconomy in Latin America and the Caribbean: Global and regional context and perspectives

2018

1st technical assistance:

Support to the Government of Costa Rica in the elaboration of National Bioeconomy Strategy 2020 - 2030

Between 2020 – 24:

Colombia
Guatemala
Ecuador
Uruguay

2020

1st inclusion in an institutional document:

38th session of ECLAC
Building a New Future: Transformative Recovery with Equality and Sustainability (The bioeconomy: sustainable development based on biological resources and natural ecosystem)

2024

Bioeconomy prioritized as an engine for a Big Productive Transformation:

40th session of ECLAC
Development Traps in Latin America and the Caribbean: Vital Transformations and How to Manage Them (The bioeconomy: a driver of sustainable productive transformation)

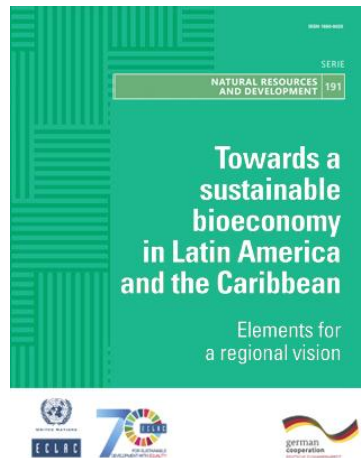
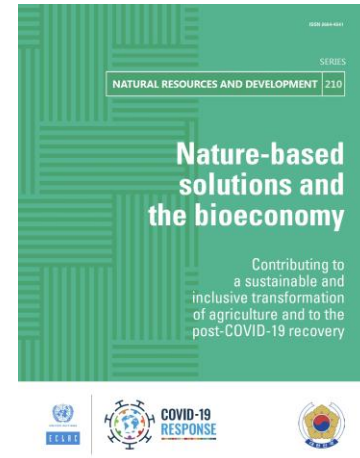
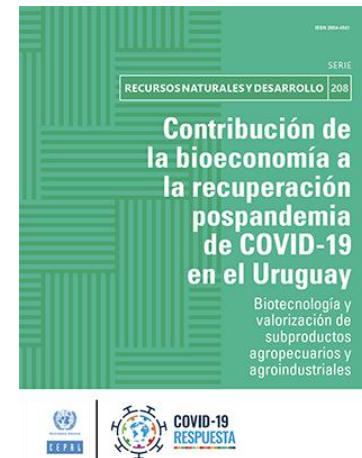
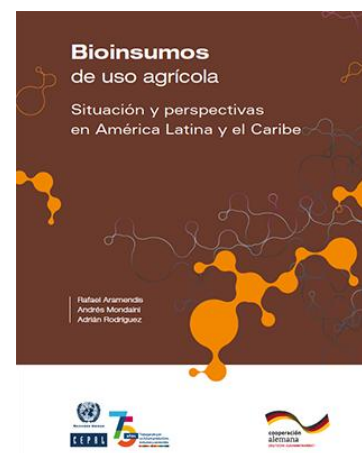
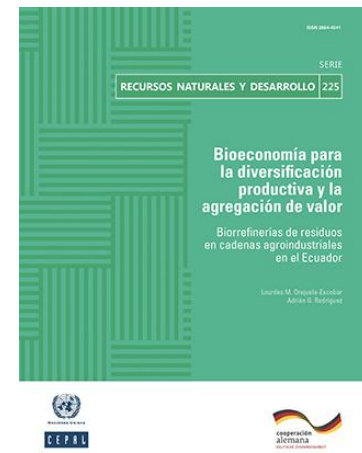
2025 -

Agenda on bioeconomy & productive development:

Focus areas:

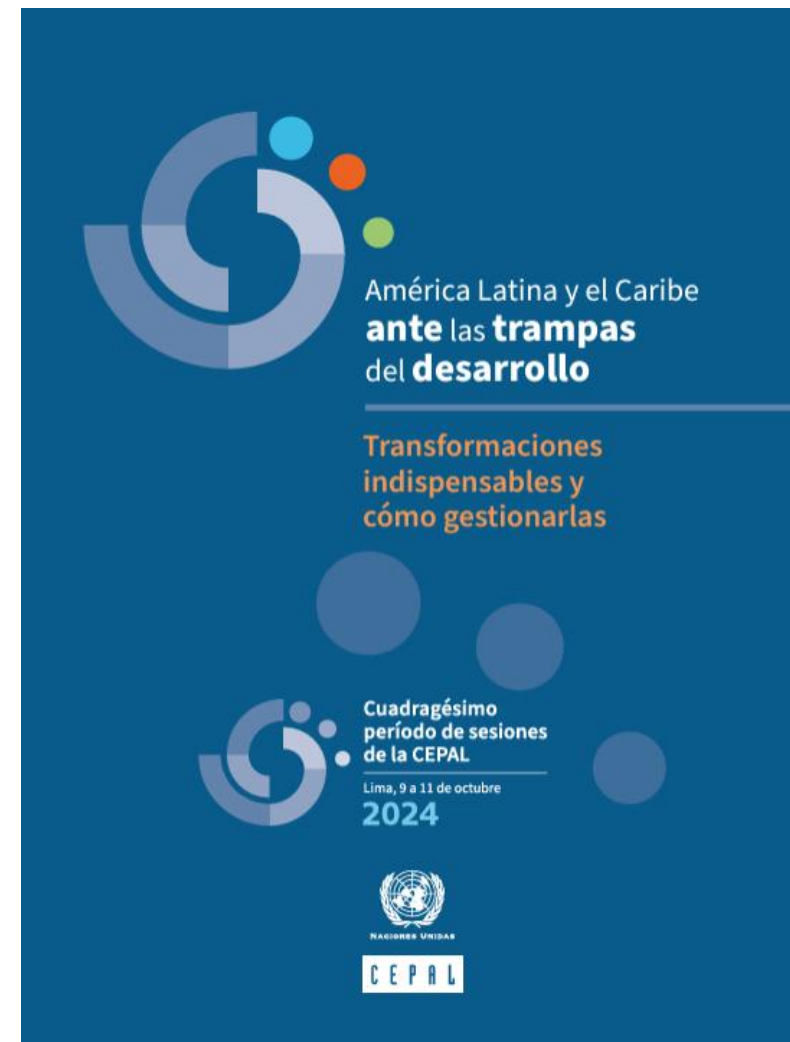
- Measurement
- BE & biodiversity
- BE & sustainable productive development in agriculture
- Circular bioeconomy
- Bioeconomy & regional development
- Bioeconomy clusters
- BE & innovation

Some publications: 2015 - 2024



Current framework: Bioeconomy and productive development

1. Policy and regulatory agendas
2. Science, technology and innovation
3. Technological extension services
4. Infrastructure and other public good
5. Human capital (closing talent gaps)
6. Digital transformation
7. Entrepreneurship
8. Financing and incentives
9. Investment (including FDI)
10. Internationalization



Work on measurement of economic contribution

- **The need for measurement**
- **Some requirement**
 - Ensure comparability over time and across countries (LAC)
 - Coherence with internationally agreed macroeconomic accounting frameworks
- **Approach**
 - Work within the framework of the [Systems of National Accounts](#) (SNA) - Internationally agreed concepts, definitions, classifications and accounting rules
 - Use [Supply and Use Tables](#) (SUTs) – “backbone of the SNA” – cross classification on Products & Sectors
 - Products: [Central Product Classification](#) (CPC)
 - CPC: current version (V2.1, 2015)
 - Over 1.600 products
 - Sectors: [International Standard Industrial Classification of all Economic Activities](#) (ISIC)
 - ISIC: current version (Rev 4, 2009);
 - 419 economic activities

Our approach – National Accounts Framework

Supply table

Products Central Product Classification – (CPC)	Production International Standard Industrial Classification (ISIC)			Imports	Taxes on products	Distribution margins	Total supply
	Primary sectors	Manufacturing industries	Services				
<div>Products</div>							
Agricultural products			<div>S e c t o r s</div>				
Mining products							
Manufactures							
Basic services							
Construction							
Other services							
Total supply							

Use table

Products Central Product Classification – (CPC)	Intermediate consumption <i>International Standard Industrial Classification (ISIC)</i>			Exports	Final consumption	Investment (Gross Capital Formation / Change in inventories)	Total demand
	Primary sectors	Manufacturing industries	Services				
Products							
Agricultural products	S e c t o r s						
Mining products							
Manufactures							
Basic services							
Construction							
Other services							
Total demand							

Conversion into Bioeconomy Supply & Use tables

Bioeconomy characteristic

- Bioeconomy characteristic products are those whose content is entirely attributable to biological resources (e.g. coffee beans, foods, wood).
- Bioeconomy characteristic activities are those that produce bioeconomy characteristic goods and services (agricultural sector, food industry, forestry).

Bioeconomy extended

- Bioeconomy extended products contain biological and non-biological resources, but cannot be separated a priori (e.g. furniture, clothes, plastic products).
- Bioeconomy extended activities produce characteristic and non-characteristic goods and services (e.g. furniture industry, textile industry, chemical industry).

Bioeconomy Supply and Use tables

Supply table

Products Central Product Classification – (CPC)	Production <i>International Standard Industrial Classification (ISIC)</i>			Imports	Taxes on products	Distribution margins	Total supply
	Bioeconomy characteristic activities	Bioeconomy extended activities	Non – bioeconomy activities				
Bioeconomy characteristic products							
Bioeconomy extended characteristic products							
Non – bioeconomy products							
Total Supply							

Products

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Use table

Products Central Product Classification – (CPC)	Intermediate consumption <i>International Standard Industrial Classification (ISIC)</i>			Exports	Final consumption	Investment (Gross Capital Formation / Change in inventories)	Total demand
	Bioeconomy characteristic activities	Bioeconomy extended activities	Non – bioeconomy activities				
Bioeconomy characteristic products							
Bioeconomy extended characteristic products							
Non – bioeconomy products							
Total demand							

Products

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WE RECOMMEND A FOCUS ON PRODUCTS RATHER THAN SECTORS

Focus on products rather than sectors

Focus on products

- Allows exploiting the richness of the product classification
- Does not require to define a priori which sectors are or are not bioeconomy-related
- Allows to obtain estimates of a wider range of macroeconomic variables (e.g. imports, exports, net taxes, consumption), in addition to value-added.
- An assessment of bio & non-bio components of value-added can be obtained from Intermediate Consumption weighting
- Availability of Input – Output tables allows to capture intersectoral linkages

Focus on sectors

- Needs to define a priori which sector are bioeconomy-related
- In industries that produce bio & non-bio products, bio-share estimates usually require making assumptions based on expert criteria or secondary data.

- **Limitations of the data on investment**
 - Intellectual property
 - Investment in green infrastructure
- **Granularity in the classification of products and economic activities**
 - Especially in the segments of more value added, or new products & sectors
 - Bio agricultural inputs, biochemicals, biopharmaceuticals, biocosmetics
 - New products that substitute their fossil-based equivalent
 - Biotechnology and synthetic biology-related products
 - The creation of new categories is a slow process
 - CPC: current version (V2.1, 2015); previous (V2.0, 2008); next ([V3.0, in consultation](#))
 - It includes new codes for R&D services in environmental, industrial, medical, and agricultural biotechnology
 - ISIC: current version (Rev 4, 2009); previous (Rev 3.1, 2002); next ([Rev 5.0, 2025, forthcoming](#))

- **Extensions**

- Using Input-Output Matrices – backward and forward linkages, income, employment, input multipliers, improve estimation of Value Added
- Linking with [The System of Environmental Economic Accounting](#) (SEEA) (e.g., emissions accounts, energy accounts, material flows accounts, water accounts, ecosystems accounts, etc.).

- **An issue of emerging interest: biotechnology**

- **It is desirable**

- Work with the institutions in charge of the elaboration of National Accounts (e.g. Central Banks, National Institutes of Statistics)
- Availability of updated Supply and Use Tables and corresponding Input – Output Matrices

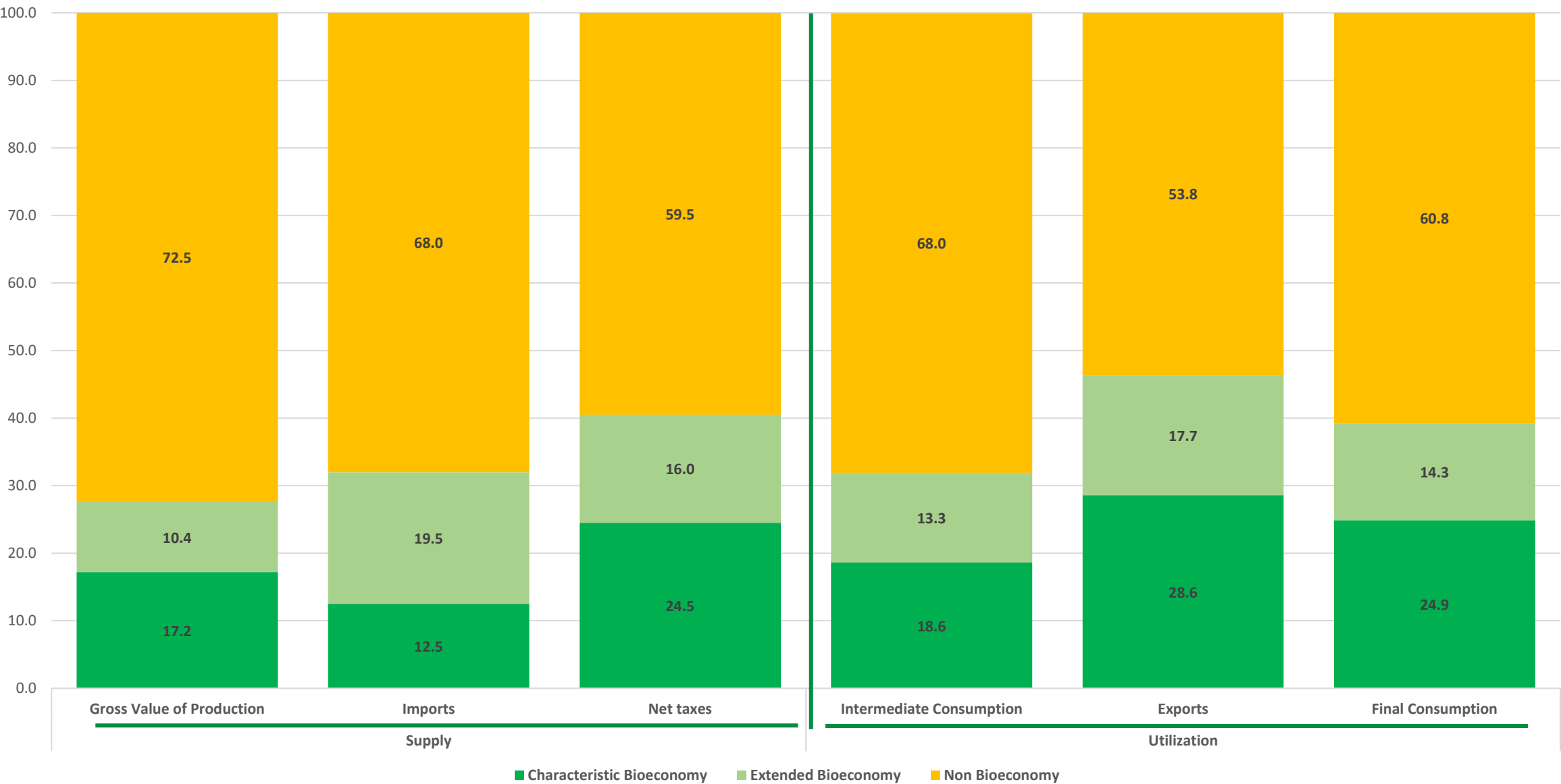
Thank you!

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Annex

Illustrative results

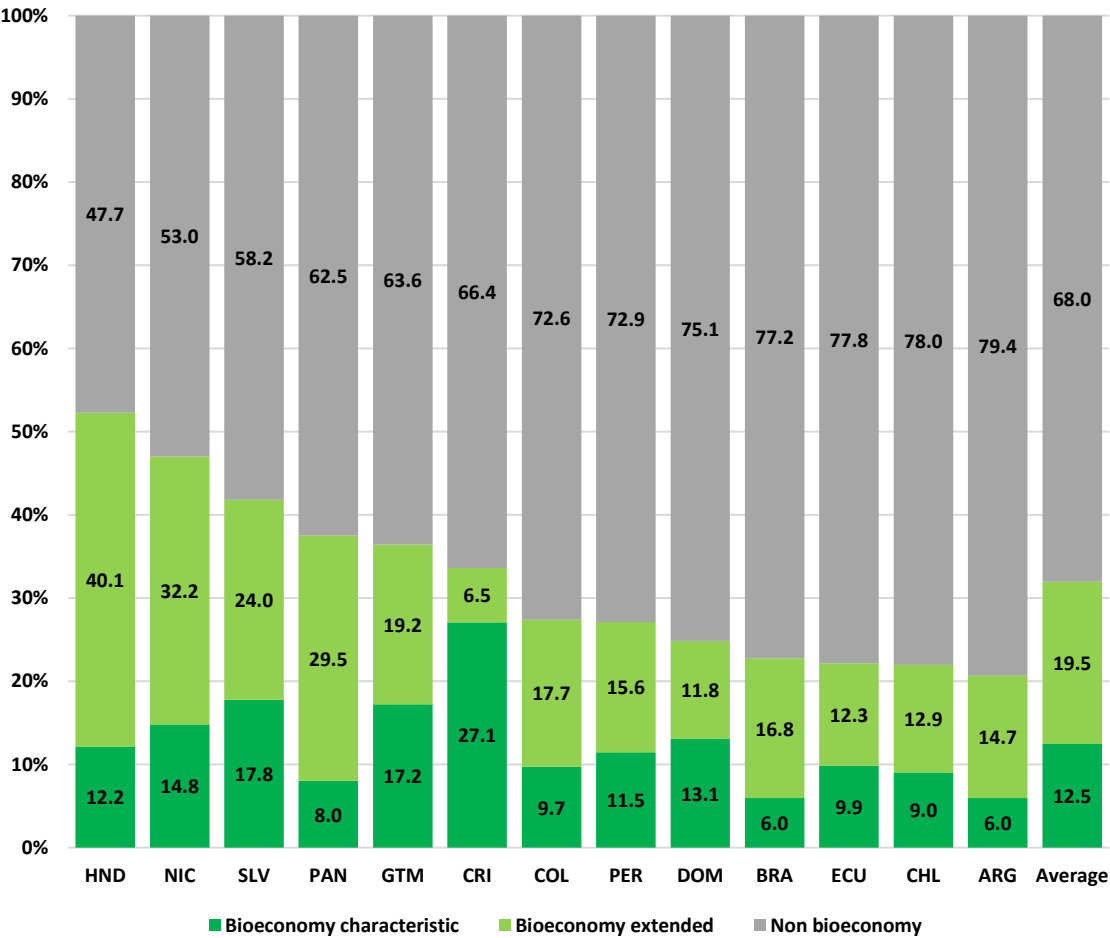
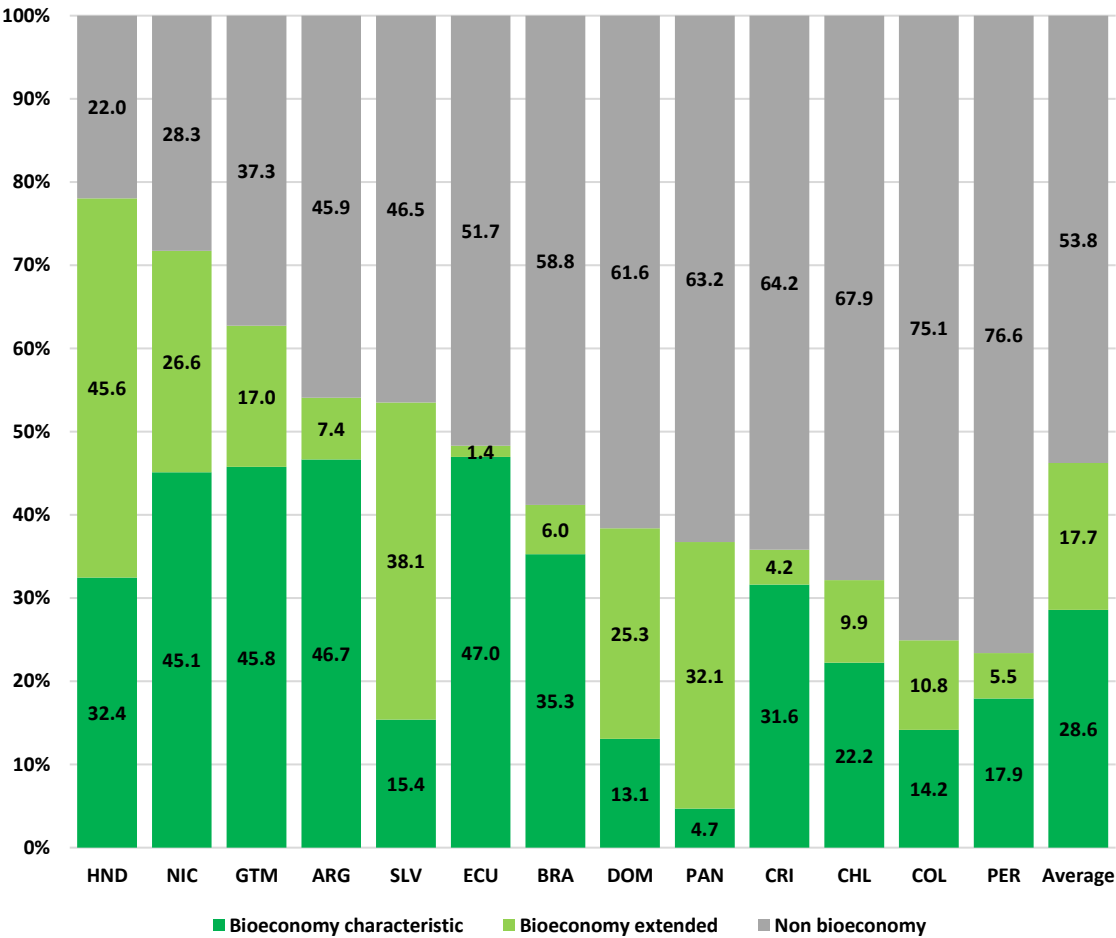
Supply and Use indicators (average 2018, 13 countries, %s)



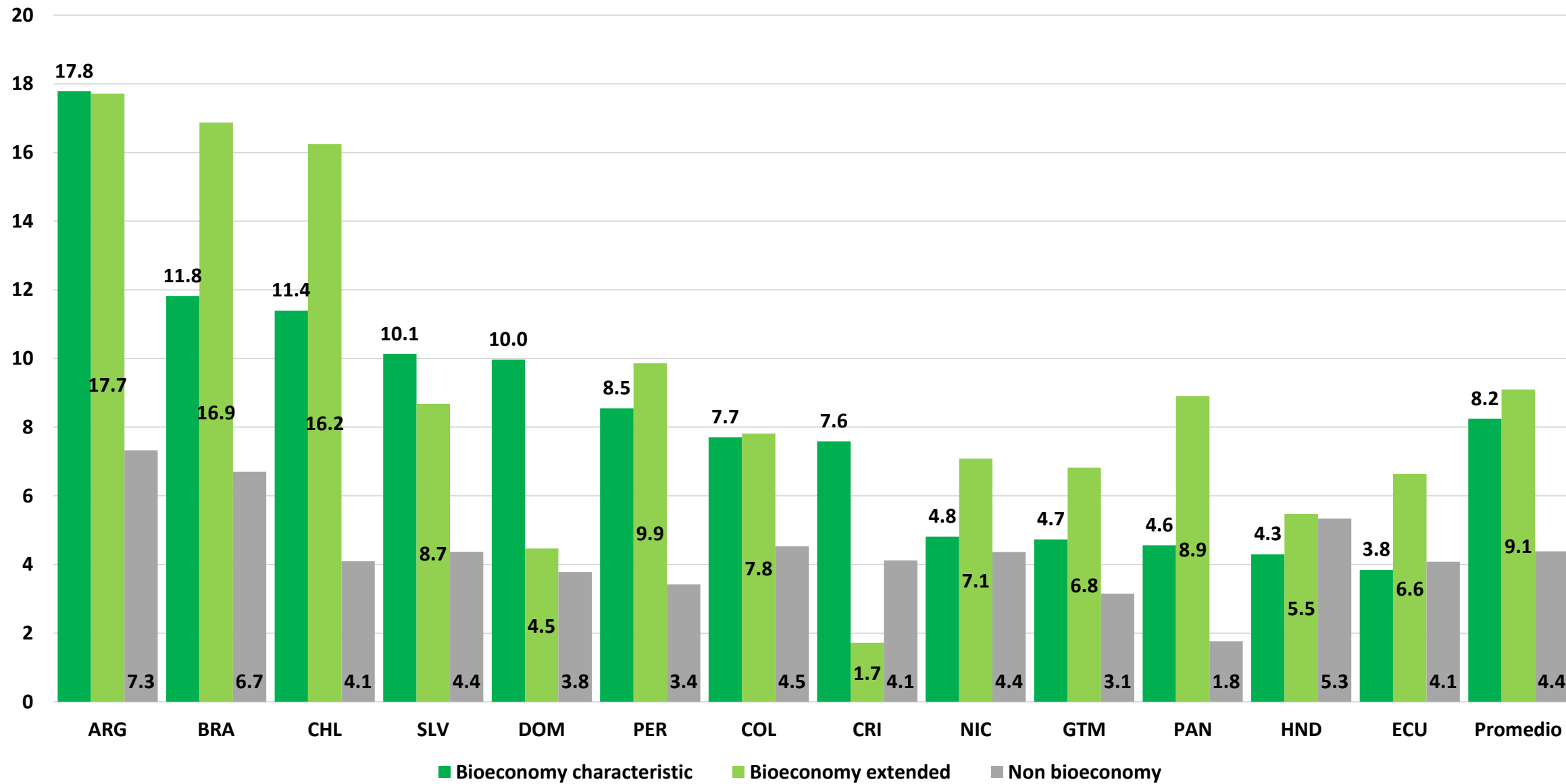
Imports and exports (2018, 13 countries, %s)

Imports

Exports



Implicit tax rates (2018, 13 countries, %s)



Shares in Value Added (2018, 13 countries, %s)

