

Plan to Accelerate Solution Bioeconomy

Axis: 6. Unleashing Enablers and Accelerators including on Financing, Technology and Capacity Building ▾

Key objective: 29. Bioeconomy and biotechnology ▾

Solution: To bridge this gap, we propose the launch of the Bioeconomy Challenge – a three-year multi-stakeholder Platform to translate the G20 High-Level Bioeconomy Principles into concrete actionable strategies for a sustainable and inclusive global bioeconomy. The Challenge will move from principle to practice by convening key actors to build and implement a global bioeconomy roadmap. The initiative will be divided into four working groups (WGs) - metrics, financial mechanisms, market development and sociobioeconomy, aiming to unfold the G20 Bioeconomy High Level Principles into actionable strategies in each of the WGs thematics.

Host initiative: Nature finance (Host); FAO; IADB; UNCTAD; WRI (WG Leads)

Scope: The Bioeconomy Challenge is a multi-stakeholder Platform designed to accelerate bioeconomy solutions globally, allowing specific regional and national approaches reflecting territorial particularities. The plan is firmly based on the G20's 10 High-Level Principles of Bioeconomy, aiming to overcome main bioeconomy global structural barriers (insufficient metrics, financing, market, and policies) and turn bioeconomy into a driver of NDC implementation, as well as NBSAP and NAP.

Bioeconomy Challenge: A Global Roadmap for Transformative Bioeconomy Action

As the world surpasses the 1.5°C warming threshold, we are confronted with compounding risks spanning climate, nature, and the financial system. A common global understanding of bioeconomy emerges as a promising pathway to advance the Rio Conventions (accelerating delivery of NDCs, NBSAPs and NAPs) and deliver positive outcomes for climate, biodiversity, and human well-being, while simultaneously fostering socioeconomic development. Strategic investments in bioeconomy solutions—across ecosystems, livelihoods, and infrastructure—can pave the way for a more resilient and inclusive global financial and economic system, particularly in nature-rich countries.

The 2024 G20 High-Level Principles (HLP) on Bioeconomy provided a political foundation for this transition. The bioeconomy is already substantial and expanding rapidly. Current estimates place the value of the global bioeconomy at US\$4-5 trillion, with the potential to grow to US\$30 trillion by 2050. However, this potential is impacted by an existential challenge: the lack of a common framework. Different contexts and economic sectors define and account for bioeconomy in distinct ways, creating fragmentation and hindering investment. While data gaps and methodological weaknesses persist, there is clear evidence of key growth drivers, including rising climate and environmental concerns,

heightened focus on public health and food security, shifting market preferences, and evolving regulatory frameworks. However, significant work is still needed to establish and refine standardized metrics, financing mechanisms, and market development strategies to fully unlock the potential of the bioeconomy.

The Bioeconomy Challenge is a three-year initiative that aims to translate the 10 HLPs into action, by transforming them into tangible outcomes through the implementation of a global bioeconomy roadmap that covers the WGs thematic areas. In addition, the initiative aspires to serve as an international umbrella strategy that connects various existing initiatives committed to positioning the bioeconomy prominently within the multilateral agenda.

Solution: To bridge this gap, we propose the launch of the Bioeconomy Challenge – a three-year multi-stakeholder Platform to translate the G20 High-Level Bioeconomy Principles into concrete actionable strategies for a sustainable and inclusive global bioeconomy. The Challenge will move from principle to practice by convening key actors to build and implement a global bioeconomy roadmap.

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Advancing the Global Bioeconomy (2025-2028)

1. General milestones and goals

Phase 1 - Mobilization & Governance (2025)

Milestones: G20 GIB South Africa and Official Launch at COP30

Goals:

- Formalize governance: Appoint Steering Committee, Secretariat, and Working Group Co-Leads
- Onboard a critical mass of members (target until COP30: 5+ active members per WG)
- Launch the official Bioeconomy Challenge website.
- Official Launch at COP30
- Each WG will develop a detailed workplan outlining how its theme contributes to operationalizing the HLPs.

Phase 2 - Framework Development & Consensus Building (2026-2027)

Milestones: COP31, CBD COP17 and other international fora (e.g. CEPAL Forum, ASEAN)

Focus: build an actionable framework through multistakeholder discussions.

Goals:

- Structure of the BioChallenge platform governance and processes, including Steering Committee, WGs, Secretariat roles and activities structuring
- Agree on the specific intended contributions of each WG to building a sustainable, inclusive, and innovation-driven bioeconomy
- Place the BioChallenge as an international umbrella strategy that connects various existing initiatives committed to inserting the bioeconomy in the multilateral system over the next three years.

Expected outcomes by COP31:

- All working groups have 15 members, with a minimum of 30% private sector participation.
- By June 2026, 50% of the draft version of the global bioeconomy roadmap is finalized to present the full preliminary version by COP31.
- Secure at least 100 new organizations adhering to the G20 High-Level Principles (HLPs).
- Metrics: Progress is made towards a possible Global Bioeconomy Monitoring Framework (GBMF) with a core set of indicators agreed upon for voluntary adoption.
- Markets: assessment/demand planning of potential viable markets for bioeconomy products/services.
- Financial Mechanisms: Establish a common, policy-relevant bioeconomy standardized KPIs to serve as a backbone for de-risking investments.
- Socio-Bioeconomy: a common understanding of the concept advances globally and progress is made towards making socio-bioeconomy visible within international bioeconomy strategies and frameworks
- Make progress in international alignment on bioeconomy definitions.
- Produce key research outputs and baseline definitions.

Phase 3: 2027-2028: Deliver Practical Solutions

Milestones:

- COP32: presentation of a consolidated "Global Bioeconomy Roadmap" and impact report monitoring the first stage of implementation
- COP33: evaluation of the roadmap implementation results and exit strategy to continuation in a multilateral organism

Focus: roadmap implementation- translating frameworks into concrete, globally scalable solutions.

Goals:

- Implement the Global Bioeconomy Roadmap and monitor results
- Develop and test innovative bioeconomy markets to unlock socioeconomic potential.
- Mainstream financial mechanisms to ensure scalability.
- Launch pilot projects in forest and nature-rich countries to demonstrate success.
- Expand partnerships for global adoption of bioeconomy solutions.

Expected outcomes by COPs 32 (2027) and 33 (2028):

- 2027: Conduct a public review and stakeholder consultation documenting lessons learned, obstacles, and breakthroughs with input from at least 50% of platform members.
- Release an openly accessible "impact tracker" for roadmap progress and member engagement.
- 2028: Link member outcomes and pilots to SDGs, NDCs, or national bioeconomy strategies, tracking both policy adoption and on-the-ground impact.
- Demonstrate bioeconomy as both a transformative socioeconomic pathway and a viable, profitable investment strategy
- Demonstrate bioeconomy as an accelerator of NDC, NBSAP and NAP implementation
- Bioeconomy inserted in the multilateral system
- Implement the proposed Global Bioeconomy Monitoring Framework (GBMF) in pilot contexts, on a voluntary basis
- Bioeconomy markets differentiated in the global trade system

2.Goals breakdown per WGs:

Working Group 1 – Metrics and Indicators

Co-Leads: FAO + TBC

- **Goal:** Advance towards the development of a harmonized framework of core indicators to measure the economic, social, and environmental performance of the bioeconomy.

Objectives:

- Advance towards the development of a harmonized Global Bioeconomy Monitoring Framework (GBMF) based on a set of core indicators. This framework should be piloted in a selection of partner countries in diverse regions, directly improving the quality and credibility of their reporting for NDCs and National Biodiversity Strategies and Action Plans (NBSAPs). This work directly enables accurate reporting for SDGs 12, 13, and 15.
- By 2028: GBMF piloted (number TBC) and adopted by a growing cohort of countries; submitted for recognition by relevant fora
- Contributions of the metrics WG to the goals of the Bioeconomy Roadmap are published annually in the Global Bioeconomy Dashboard (Impact Tracker).

Working Group 2 – Financing Mechanisms

Co-leads IDB + TBC

- **Goal:** By the end of 2028, build a robust, inclusive financial architecture that mobilizes public and private capital into bioeconomy innovation, enterprise, and infrastructure.

Objectives:

- Engage key actors in the financial architecture of Bioeconomy (banks, institutional investors, insurers, and others) to identify/advance investable pipelines.
- Identify and promote incentives to increase investments in Bioeconomy.
- Support the development and develop blended financial structures and vehicles to maximize and crowd-in private sector participation.
- Foster connections between the financial institutional architecture and the WG1 metrics (connecting hubs, bridges).
- Support dynamizing local bioeconomy ecosystems (MSMEs, micro-finance, ventures) while fostering inclusive financing mechanisms for [IPAD.TC](#).
- Assess the nexus with GST 1.3tri goal, SDGs (9, 17); UNFCCC (NDCs finance chapters, means of implementation); UN CBD (target 19, resource mobilization), in alignment with the countries' bioeconomy strategies.

Working Group 3 – Market Development and Trade

Co-leads UNCTAD + TBC

- **Goal:** Expand global markets and value chains for sustainable bioeconomy products/services while reducing trade barriers via evidence-based policy alignment, market differentiation schemes, and capacity building.

Objectives:

- Map trade and trade policies to support climate resilient bioeconomy which contributes to implementing NDCs, NAPs and NBSAPs
- Assessment of mandatory and voluntary standard that facilitate market access for bioeconomy products
- Provide access to reliable trade-related data on trade, biodiversity and non-plastic substitutes that support evidence-based policies and decision making
- Trade and Bioeconomy/Biodiversity community of practice
- Develop market intelligence tools for bioeconomy products

Working Group 4 – Sociobioeconomy and Community Benefits

Co-leads WRI + TBC

- **Goal:** Strengthening culturally grounded and environmentally regenerative socio-bioeconomic models led by local and traditional communities, ensuring that their benefits are equitably distributed.
- Builds on: FAO Sustainable Bioeconomy Guidelines; UNESCO LINKS; CBD ABS; ACTO Sociobioeconomy Platform; African/ASEAN program

Objectives:

- Recognize and make socio-bioeconomy visible within international bioeconomy strategies and frameworks, including within the outcomes of the Metrics, Financing Mechanisms, and Market Development Working Groups
- Map & profile at least 100 socio-bioeconomy projects (inventory and case typologies).
- Develop a Socio-bioeconomy Toolkit (benefit-sharing, traditional knowledge protection and valorization, community enterprise models, food and nutrition security) linked to WG2 instruments.

- Pilot demonstration projects (technical assistance to community-led production, regenerative agriculture, or bio-based value chains).
- Facilitate cross-regional learning networks (annual exchanges) and global advocacy.
- Publish a Global Socio-bioeconomy Report (models, lessons, policy recommendations).
- Framework links: SDGs 1, 5, 8, 10; CBD/GBF Target 22 (equity & participation).

By 2028: A Global Socio-bioeconomy Network connecting regional hubs, with documented models and government-usable toolkits; gender/youth participation, and benefit-sharing agreements tracked.

Levers assessment:

- **Risk-informed decision-making:** Medium maturity ▾
 - *Rationale: The Bioeconomy Challenge will establish a global baseline reducing information asymmetry across sectors. This enables risk-based planning for governments, regulators, and investors, reducing policy/market uncertainty.*
- **Technology shifts:** N/A ▾
 - *Rationale:*
- **Knowledge & Capacity building:** Medium maturity ▾
 - *Rationale: Several initiatives for the development of solutions, especially on metrics and policy frameworks, exist. (E.g. Friends of Bioeconomy Group). Opportunity to consolidate knowledge and scale training globally through the Bioeconomy Challenge network.*
- **Inclusive decision-making governance & design:** Medium maturity ▾
 - *Rationale: Appetite for a multilateral bioeconomy debate from international players building on GIB/G20 results.*
 - *Opportunities for Global south cooperation and multistakeholder engagement*
- **Standards & Taxonomies:** Low maturity ▾

- *Rationale: Existing efforts are fragmented and non-harmonized—e.g., FAO analysis is still in preliminary versions, as well as the Brazilian PNDBio is still in early-stage in building a national bioeconomy information/metrics system. Mainstream ESG frameworks (e.g., TNFD, PRI) partially address bioeconomy risks/opportunities but do not cover the full scope of the G20 HLPs or sector-specific needs.*
- **Supply:** Medium maturity ▾
 - *Rationale: Regenerative agriculture and restoration of degraded land are bioeconomy activities that have supply potential. Biofuels, biodiversity products, and other sustainable products. Need to scale and connect demand.*
- **Demand:** Medium maturity ▾
 - *Rationale: Untapped markets for Biofuels, cosmetics, pharmaceuticals, superfoods, and other bioeconomy products. Opportunity to stimulate demand through standards and markets enablers. Beyond specific products, the demand for financial products is also a lever.*
- **Public/private finance:** Medium maturity ▾
 - *Rationale: Engagement of the financial sector and emergence of large-scale investment mechanisms e.g. Tropical Forests Forever Facility (TFFF); [Bioeconomy Restoration Coalition](#); [Nature Investment Lab](#); [Earth Investment Engine](#); [Capital for Climate and others](#)*
- **Partnerships and collaboration:** Medium maturity ▾
 - *Rationale: GIB has raised its profile and there are relevant networks in a few countries. E.g. [World Bioeconomy Forum](#); [IACGB](#); [Bioeconomy Coalition of Africa](#); [Pan-Amazon Network for Bioeconomy](#); [Latin American Network for Bioeconomy](#)*
- **Policy & regulatory:** Low maturity ▾
 - *Rationale: Local regulations and bioeconomy potential to leverage NDC implementation and create policy incentives (e.g. procurement, tax, industrial policy, positive subsidies, etc.) to enable emerging bioeconomy sectors to scale. A list of nations who are already developing bioeconomy policies will be presented in PAS final version.*
- **Public opinion:** Low maturity ▾
 - *Rationale: Civil society, academia, financial sector, and business demand for concrete 10 HLPs' metrics to avoid bioeconomy greenwashing and recognize nature's central role in decarbonization and green economic transition. Also, public opinion and*

political are key levers to the potential of sustainable commercial strategies to promote nature as a driver of inclusive growth and development.

Expected impact of this plan on the 2030 targets (if any): **Medium** ▾

- The impact is systemic and multiplicative: by design, progress in the bioeconomy advances climate, nature, and development goals at the same time. This plan is an accelerator mechanism for 2030 targets. It operationalizes the G20 High-Level Bioeconomy Principles into actionable strategies for SDG/NDC implementation. It intends to provide a toolkit with metrics, finance, markets, and inclusion to bridge the ambition gap.
- The plan's impact will be demonstrated through the tangible contribution of its working groups, with specific targets, which will be defined and agreed during their initial phases to ensuring they are realistic, ambitious, and aligned with member capacities and co-financing availability.

Summary of 2028 Impact Pathways

By 2028, this plan aims to unlock measurable progress through four main impact pathways in its working groups:

- Embed bioeconomy indicators into multilateral and investment reporting systems.
- Mobilize public and private capital for measurable, inclusive bio-based solutions.
- Reduce barriers to trade and expand global markets for bioeconomy goods and services.
- Deliver direct benefits to local communities through socio-bioeconomy models strengthening their recognition in national and international arenas, as well as political visibility and economic opportunities, also promoting successful cases, pilots, knowledge exchange and capacity building.

In essence, this plan supplies the critical implementation infrastructure—the "connective tissue" of metrics, finance, markets, and social practice—that makes achieving 2030 targets more feasible and accelerated. It empowers governments, the private sector, and communities to deliver verified, on-the-ground results mapped directly to the SDGs, NDCs, and the Kunming-Montreal Global Biodiversity Framework

Output	Action Scope	Action	Type of action	Implementation Lever	Responsible	Time horizon	Stakeholder engagement	Committed Stakeholders
Platform Launch & Initial Governance	Global	Formal appointment of Steering Committee, Secretariat, WG Co-Leads	Existin... ▾	Risk-infor... ▾	Secretariat + Steering Committee	Nove... ▾	Multi-st... ▾	Founding members MDBs/DFIs, governments
Initial Member Mobilization	Global	Onboard a critical mass of members (target: 5+ active members per WG)	New a... ▾	Partnershi... ▾	Secretariat & All WGs	Nove... ▾	Multi-st... ▾	Companies, Financial Institutions, Research Centers, CSOs
Adherence to G20 Principles	Global	Secure at least 100 new organizations adhering to the G20 High-Level Principles.	New a... ▾	Policy & re... ▾	Secretariat & All WGs	Nove... ▾	Multi-st... ▾	All non-state actors, Initiatives
Towards a Global Bioeconomy Monitoring Framework (GBMF) - Proposal	Global	Consultation towards a core set of indicators agreed upon for voluntary adoption	New a... ▾	Standards... ▾	WG1	Nove... ▾	Multi-st... ▾	WG1 Members/ Secretariat/ Steering Committee

Output	Action Scope	Action	Type of action	Implementation Lever	Responsible	Time horizon	Stakeholder engagement	Committed Stakeholders
Stakeholder Consultation & Impact Tracker Launch	Global	Conduct a public review with input from 50%+ of members and release an open "impact tracker"	New a... ▾	Knowledg... ▾	Secretariat	Nove... ▾	Multi-st... ▾	All Platform Members, Academia, CSOs
Present the updated version of the Global Bioeconomy Roadmap	Global	Present a preliminary version of the Roadmap to the bioeconomy network	New a... ▾	Partnershi... ▾	Secretariat & All WGs	Nove... ▾	Multi-st... ▾	UNFCCC, CBD, G20, All Platform Members
Present the results of the first stage of implementation of the Global Bioeconomy Roadmap	Global	Present a proof-of-impact MRV report to the international bioeconomy community	New a... ▾	Partnershi... ▾	Secretariat & All WGs	Nove... ▾	Multi-st... ▾	UNFCCC, CBD, G20, All Platform Members
Pilot Project Implementation	Regional (e.g., Amazon, Africa)	Launch 3-5 pilot projects in forest/nature-rich countries to demonstrate success.	New a... ▾	Supply ▾	Secretariat & All WGs	Nove... ▾	Multi-st... ▾	Project Developers, Communities, Investors
Present the impact report of the Global	Global	Present a proof-of-impact report to	New a... ▾	Partnershi... ▾	Secretariat & All WGs	Nove... ▾	Multi-st... ▾	UNFCCC, CBD, G20, All Platform Members

Output	Action Scope	Action	Type of action	Implementation Lever	Responsible	Time horizon	Stakeholder engagement	Committed Stakeholders
Bioeconomy Roadmap		the multilateral system.						
Assess trade and trade policies and measures to advance a sustainable bioeconomy through free trade agreements, and national plans (e,g, NAPs, NDCs, circular economy and bioeconomy strategies, National Biodiversity Strategies and Action Plans (under the Convention on Biological Diversity))*	Global	Assess trade and trade policies and measures to advance a sustainable bioeconomy	New a... ▾	Policy & re... ▾	WG3	Nove... ▾	Multi-st... ▾	UNFCCC, CBD, WG Members, National governments, and others

Preliminary list of events during COP30 to launch the Bioeconomy Challenge and kick-off WGs discussions

Date	Time	Event Name/Description	Zone/Venue	Lead/Partner
Nov 10	5:00-7:00 pm.	Amazon Forever Station - Bioeconomy Challenge potential announcement with partners and IDB President	Museu Goeldi	IDB
Nov 14	6:30-7:30 pm.	Market Development WG Launch (workshop format)	ISO Pavillion	UNCTAD
Nov 17	12:30-2:00 pm.	The Bioeconomy Challenge: translating G20 High Level Principles into systemic action through a roadmap for a global bioeconomy (Plenary format)	Blue Zone SE Room 3	SBC/MMA
Nov 18	3:30-4:30 pm.	The Bioeconomy challenge: setting the global parameters for bioeconomy (Bioeconomy Metrics WG – Roundtable format)	Blue Zone Room Axis 2	FAO