

# *An idealised concept for a Global Bioeconomy*

## **Implementation Platform: Purpose, Requirements, Functions, and Governance**

The purpose of this document is to initiate **G20** discussion on how Global Bioeconomies could be advanced in a rapid, impactful and significant manner. This should neither be seen as a proposal nor as a template, but rather as a means of provoking **G20** thinking on how the challenges to the planetary boundaries could be addressed.

### **1. Background**

The **G20 Initiative on Bioeconomy (GIB)** 10 High-Level Principles (HLPs) on Bioeconomy are introduced with a statement that the members “Recognis[e...] the remarkable potential of bioeconomy to contribute to building a sustainable future and fostering economic growth for all [...]”<sup>1</sup> This document invites considered input from **GIB** delegates on the criteria to be adopted in designing an idealised structure to advance global bioeconomies, the key functions to be managed by the structure, and the possible governance of the structure.

### **2. Possible Purpose Statement**

Leveraging global goodwill and support, the proposed **Global Bioeconomy Implementation Platform** will spearhead and coordinate international, evidence-based initiatives to promote, advance, and accelerate the development of bioeconomies worldwide. These efforts will be strategically aligned with the **GIB**’s HLPs, ensuring coherence and shared purpose across regions.

A core objective of the platform is to catalyse private sector investment in bioeconomy ecosystems, fostering environmental sustainability, economic resilience, and social equity for both the planet and its people. This will be complemented by public sector engagement to shape enabling and socially-responsive policies, drive research and innovation, build human capital, and strengthen institutional capacity.

All activities will be guided by a set of agreed-upon criteria and functional pillars, ensuring transparency, accountability, and measurable impact from the start.

### **3. Summary Critique of Effectiveness and Impact of Various Global Fora/Structures Advancing Change** (covering a sample including the World Economic Forum, G7 and G20, United Nations (UN) agencies, UN biological diversity and climate change conventions, and the Intergovernmental Panel on Climate Change.)

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<sup>1</sup> 10 High Level Principles on Bioeconomy, chapeau.

While these institutions have noble intentions and have achieved some progress, they are often criticised for being slow-moving, politically compromised, and structurally inadequate to meet the scale of today's crises.

General challenges:

| Type        | Challenge                   | Impact on Effectiveness   |
|-------------|-----------------------------|---|
| Strategic   | Geopolitical tensions       | Undermine trust and cooperation across blocs                        |
|             | Legitimacy & representation | Marginalised voices weaken global buy-in                            |
|             | Over-reliance on consensus  | The need for unanimity can suppress bold or controversial findings. |
| Tactical    | Institutional inertia       | Legacy structures resist reform and innovation                      |
|             | Lack of enforcement         | Most fora rely on voluntary compliance                              |
| Operational | Complexity of global issues | Problems like climate, migration, and AI, defy siloed approaches    |

Some further specific challenges:

- **Political filtering:** Government representatives influence final summaries, sometimes diluting scientific urgency.
- **Lack of inclusivity:** The G7 is dominated by Western powers and excludes certain emerging/rising economies.
- **Implementation gap:** Many countries sign on to biodiversity targets but fail to integrate them into national development plans or enforce them meaningfully.
- **Failure to address root causes:** Critics argue the UN conventions sidestep the structural drivers of ecological collapse—such as unchecked economic growth and industrial expansion.
- **Disconnect from local realities:** Global fora often fail to translate high-level goals into actionable, context-specific strategies.
- **Fragmented governance:** Biodiversity issues are often siloed from climate and economic agendas, despite their interdependence.
- **Limited private sector engagement:** The UN Convention on Biological Diversity has struggled to mobilise significant investment or innovation from industry.

## Sample of references for further reading

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Wikipedia contributors. (n.d.). *Criticism of the IPCC Fourth Assessment Report*. Wikipedia. Retrieved September 10, 2025, from [https://en.wikipedia.org/wiki/Criticism\\_of\\_the\\_IPCC\\_Fourth\\_Assessment\\_Report](https://en.wikipedia.org/wiki/Criticism_of_the_IPCC_Fourth_Assessment_Report)

## 4. *Possible* Requirements/Design Criteria for an Idealised Global Bioeconomy Implementation Platform

The following criteria outline the core principles that will guide the **Global Bioeconomy Implementation Platform**. They are designed to ensure the platform's strategic direction is grounded in robust evidence and ethical principles, while its day-to-day operations remain agile, inclusive, and transparent.

### Strategic Requirements

- **Leadership:** Articulate a compelling long-term vision for a sustainable bioeconomy that integrates ecological resilience, social equity, and economic regeneration, while demonstrating flexibility and dynamism in defining a pathway for bioeconomies across the planet.
- **Neutrality and Independence:** Operate free from political agendas, lobbying interests, or national biases, while harnessing political buy-in to advance socialisation of reports, recommendations, policies, targets, and other outputs. Ensure committee members disclose any conflicts of interest to uphold impartiality.
- **Ethical Stewardship and Outcome-Oriented Focus:** Uphold ethical standards in biotechnology, resource use, and community engagement. Prioritise interventions, including those based on traditional knowledge, that deliver a measurable impact on sustainability, equity, and economic growth, while respecting human rights and environmental integrity.
- **Inclusivity and Collaboration:** Ensure representation and inclusion across the climate, biodiversity and development themes, and across disciplines, geographies, genders, and sectors to enrich problem-solving. Promote cross-sector and cross-border collaboration and encourage open-source platforms to accelerate solutions and foster open innovation.

### Tactical Requirements

- **Evidence-Based Approach and Decision-Making:** Base all recommendations and interventions on robust evidence and/or peer-reviewed scientific knowledge. Prioritise data integrity and transparency in methodologies in technical assessments that inform decisions. Ensure continuous review and adaptation to ensure responsiveness to new evidence.
- **Data Security and Intellectual Property Protection:** Safeguard sensitive data through robust cybersecurity measures and ethical data governance. Respect and protect intellectual property rights to foster innovation, ensure fair access, and maintain trust among collaborators and stakeholders.
- **Resilience and Risk Management:** Anticipate risks and build resilience into bioeconomy strategies. Use scenario planning and foresight tools to prepare for uncertainty.

- **Engagement and Communication:** Engage all stakeholders to advance bioeconomy development, particularly those where links to climate, biodiversity are explicit. Communicate decisions, methodologies, and outcomes openly to ensure transparency and accountability.

## **Operational Matters**

- **Agility and Responsiveness:** Maintain flexible structures for rapid responses to emerging challenges or opportunities. Utilise streamlined decision-making protocols to avoid bureaucratic delays.
- **Efficiency and Integration:** Harness existing structures and institutions for defined functions whenever possible.
- **Adaptive Governance:** Integrate the challenges of climate, biodiversity and development holistically, and regularly review and update governance structures and functions to ensure the platform remains relevant and effective. Embrace experimentation and learning from failure. Ensure a balanced and pragmatic approach to advancing bioeconomies, ensuring social benefits while mitigating and correcting risks and harms to climate and biodiversity.

## **5. Possible Functions on an Idealised Global Bioeconomy Implementation Platform**

To effectively advance the global bioeconomy, the **Global Bioeconomy Implementation Platform** must fulfil the following key functions: strategic and policy leadership; knowledge, innovation, and capacity building; operational and stakeholder engagement. The functions are organised to first address the platform's core responsibilities and strategic direction, then to cover tactical coordination and support, and finally to detail the essential operational and administrative tasks.

### **Strategic and Policy Leadership**

- **Strategic Coordination:** Align global, regional, and national bioeconomy and related climate, biodiversity and development initiatives to foster synergies. Develop and update a global roadmap for advancement. Advance pragmatically sustainable biomass solutions as replacements for fossil-fuel based products.
- **Policy and Standards Development:** Recommend harmonised policies, regulatory frameworks, and sustainability standards. Advise on the ethical, legal, and social implications of emerging bio-based technologies. Encourage governments to incentivise the production of sustainable biomass products to replace fossil fuel-based ones.
- **Global Advocacy and Visibility:** Represent bioeconomy interests in international forums. Promote the bioeconomy as a key solution to climate change, biodiversity loss, and sustainable development, while advocating for integrated and holistic approaches.

## Knowledge, Innovation, and Capacity Building

- **Technical Reporting:** Contract and oversee technical information gathering and reporting on bioeconomy development, key challenges, possible interventions, and provide recommendations as a component of the reporting.
- **Knowledge Sharing and Capacity Building:** Facilitate the exchange of best practices, case studies, and technical expertise across countries. Support training programmes, workshops, and fellowships for scientists, entrepreneurs, and policymakers.
- **Innovation and Technology Foresight:** Identify emerging trends, technologies, and market opportunities in the bioeconomy. Promote collaborative R&D and innovation platforms across sectors.
- **Crisis Response and Resilience Planning:** Provide technical guidance on bio-based solutions during global crises (e.g., pandemics, food insecurity). Support resilience strategies for vulnerable communities and ecosystems.

## Operational and Stakeholder Engagement

- **Resource Mobilisation:** Advocate for catalytic funding and blended finance to support bioeconomy projects across the globe. Facilitate partnerships with donors, development banks, and private investors.
- **Stakeholder Engagement:** Convene multi-stakeholder dialogues involving governments, academia, industry, civil society, and youth. Ensure inclusive representation from diverse regions and disciplines.
- **Monitoring and Evaluation:** Establish metrics and indicators to track global progress toward bioeconomy goals. Oversee impact assessments and publish periodic performance reports.

## 6. *Possible* Governance Structure of an Idealised Global Bioeconomy Implementation Platform

### A. G20

- **G20** work on the bioeconomy to be continued in a format/workstream deemed most appropriate.

In addition to the normal work of the **G20-bioeconomy workstream**:

- **Role:** Political oversight, strategic guidance for the Technical Leadership Committee, and ‘socialisation’ of reports and recommendations.
- **Functions:**
  - Approves or notes annual or multi-year priorities and work plans for the Technical Leadership Committee.
  - Reviews, and endorses or notes strategic policy recommendations.

- Facilitates cross-ministerial coordination within member countries.
- Seeks input from relevant international organisations (e.g., FAO, UNEP, UNIDO, OECD, UNCBD, UNFCCC, Bioeconomy Financing Hub for Africa).

## **B. Technical Leadership Committee on the Global Bioeconomy (TLCGB)**

- **Role:** Scientific and technical analysis, reporting, policy option development, and best practice sharing.
- **Composition:**
  - Up to 30 volunteer experts nominated by **G20** members, selected through a **G20-bioeconomy workstream** approved process, and managed by the Secretariat.
  - Multidisciplinary representation (e.g., biotechnology, agriculture, forestry, agro-processing, indigenous knowledge valorisation, bio-economics, trade, finance, governance, and climate science).
  - Can consider working groups focussing on specific longer-term themes, such as Policy and Regulatory Development; Provision of Technical Guidance; Coordination of Stakeholders; etc.
  - Gender and regional balance ensured.
- **Chair and Vice-Chair:** Elected by members for a 3-year term, renewable for one further term.
- **Functions:**
  - Conducts or commissions global/regional/local assessments and foresight studies on bioeconomy trends.
  - Develops evidence-based policy options.
  - Identifies and promotes scalable best practices and technologies.
  - Identifies, develops and recommends trade policy options
  - Identifies, develops, and recommends global financing policy and administrative options
  - Engages with stakeholders (private sector, civil society, academia).

## **C. Secretariat of the TLCGB**

- **Location:** Potentially hosted by the United Nations.
- **Support:** Potentially funded – at least initially - through **G20** member champions.
- **Functions:**
  - Administrative and logistical support primarily to the **TLCGB**, but as necessary for coordination of external stakeholders to the **G20-bioeconomy workstream**
  - Coordinates country engagements, report drafting, publication, and outreach.
  - Facilitates commissioning of work by the **TLCGB**

- Maintains or ensure maintenance of a repository of bioeconomy data, regional and global stakeholders, and case studies.

## 7. Outputs and Decision-Making

- **TLCGB Thematic Reports:** Delivered annually to the **G20-bioeconomy workstream** and published four to six weeks after the **G20-bioeconomy workstream** meetings to allow consideration of **G20** comments.
- **TLCGB Policy Briefs** are considered by the **G20-bioeconomy workstream** and published four to six weeks after the meeting to allow consideration of **G20** comments.
- **Non-binding Recommendations and Guidance:** Considered by the **G20-bioeconomy workstream** and published four to six weeks after the **G20- bioeconomy workstream** meetings to allow consideration of **G20** comments.

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