



G20 OECD-BNCT WORKSHOP
Bioeconomy in the OECD countries
Presidency of council of Ministers
July 16, 2021

Panel 2:
Targets and monitoring tools: towards
a common framework to monitor
progress in the bioeconomy



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**Some comment on the metrics of
the SA Bioeconomy**



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1. Objectives versus indicators:

The Strategy target: a significant contribution of the bioeconomy to the GDP.

- Decadal targets (DSI Decadal Plan) & MT targets (Strategy) & Annual targets (APP).
- Overarching focus of government is on addressing poverty, unemployment, and inequality. The Strategy thus seeks to assist in developing household food security, reducing the impacts of the disease burden, encouraging entrepreneurial opportunity, and relevant skills & capacity development, together with the establishment of an enabling System of Innovation.
- Early stage 'bioeconomy': innovative companies are start-ups or SMEs, for which data (from existing socio-economic data sets) is often not available.
- There are very few medium to large biotech companies to absorb smaller & entrepreneurial companies, so the development trajectory is necessarily more complicated.
- The link between innovation inputs and the strengthening of the bioeconomy is somewhat tenuous.
- Current metrics: Innovation Input measures, Innovation Output measures, and the more economic measures including economic growth, employment, investment and export measures).



2. Managing complexity and interlinks:

SA has three well established institutions:

- The Centre for Science, Technology and Innovation Indicators (at the Human Sciences Research Council),
- The Centre for Research on Evaluation, Science and Technology (at the University of Stellenbosch), and
- Quantec, a consultancy specialising in economic and financial data.

However, such mechanisms often do not detect early stage companies (SMMEs), which is a key feature of biotech development. While surveys have been undertaken, the dynamic nature of start-ups/spin-outs means that obtaining reliable data is complicated. Given the importance of SMMEs in employment (a priority for SA), this remains problematic.



What kind of cooperation is needed/you suggest between countries and actors active in this field, such as the FAO, JRC Bioeconomy Observatory, in order to reach consistent and comparable country assessment and results?

There is no universally agreed-upon definition of the term “bioeconomy” (OECD, 2018). It is critical to recognize differences in the priorities, and interpretation of, ‘bioeconomy’ which makes inter-country comparisons difficult and potentially meaningless (eg. some countries emphasize circularity/sustainability, others (bio)technological advancement). Nevertheless, there may well be some metrics that could be universally applied.

There is, however, a certain complementarity in the different approaches: one seeks to improve the low carbon ‘footprint’ of industry, and the other would welcome industry and job creation. There needs to be far greater interaction across the globe to enable and develop this, to harness biotechnology for global sustainability (including socio-economic and environmental). This potentially could be led by organisations such as the FAO.