



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

Panel 1:
Bioeconomy strategies in the different
OECD countries: comparison of their
objectives, priorities, governance and
implementation guidelines



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Japan's Bioeconomy Strategy's Featuring Points

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1. Which sectors comprise your national bioeconomy? (i.e., agriculture, livestock, aquaculture, fisheries, forestry, food industry, industrial biotechnology and biorefineries – plus the use of products in the pharmaceutical, cosmetic, chemical, textile, energy industries, municipal biowaste and wastewater valorisation, composing, etc.) and the **reasons for their selection;**

Featuring point (1) Bio-based market expansion

- Identified **market segments** with **significant expected growth** leveraged by Japan's strengths with **2030 target**
- **Promotion measures** will be made for segments below

Bio-manufacturing	32.5T yen (2018) → 53.3T yen <ul style="list-style-type: none">➢ Engineering biology-based biofoundry and biorefinery➢ R&D support for bio-plastics		
Primary production	0.8T yen (2018) → 2.7T yen <ul style="list-style-type: none">➢ Automated agriculture, employment of latest genome editing technology-based breeding➢ Large wooden architecture design and construction		
Health care	26.5T yen (2020) → 36.3T yen <ul style="list-style-type: none">➢ Bio-drug (incl. vaccines) development and production systems➢ Large-scale genome database		



Aim for approx. 50% increase of current market size by 2030, **total 92T yen**



2. How is the strategy on bioeconomy in your country implemented? (Please provide details on the coordination and cooperation across your ministers, national governance of the bioeconomy strategy and national investments allocated to sustain it). Did your country develop an Implementation Action Plan following the Bioeconomy Strategy definition?

Background and supporting structure for strategy formulation

- **Bioeconomy** promotion is essential for both “**sustainable economic development**” and “**solving societal challenges**”

Our definition →

“ A concept of expanding sustainable, renewable and circular economy and society by utilizing biotechnology and biological resources ”

- Japan aims to “**realise the most advanced bioeconomy society by 2030**” as overall target and formulated **Bioeconomy Strategy 2019**
- This strategy is **reviewed every year** to cope with changes (i.e., pandemic, climate change)

SUGA Yoshihide
Prime Minister



Integrated Innovation Strategy Promotion Committee Chaired by Chief Cabinet Secretary

Expert panel

(Organized by the leaders of industry/academia)

Chair: **NAGAYAMA Osamu**
President
Japan Bioindustry Association



KOBAYASHI Noriaki
Senior Executive Officer
Kirin Holdings

NAGAI Ryoza
President
Jichi Medical Univ.

FUJITA Tomohiro
CEO, Chitose Group
Professor
Kyoto University

YOSHIZAWA Nao
Attorney at law/
Patent Attorney
Uruma Law Offices

Guide,
advice

Team meeting

Report ↑ ↓ Order

Task force

CAO, METI, MAFF, MHLW, MEXT, MOE,
MLIT and other relevant ministries

The strategy is compiled at **expert panel and task force** and adopted at **committee**



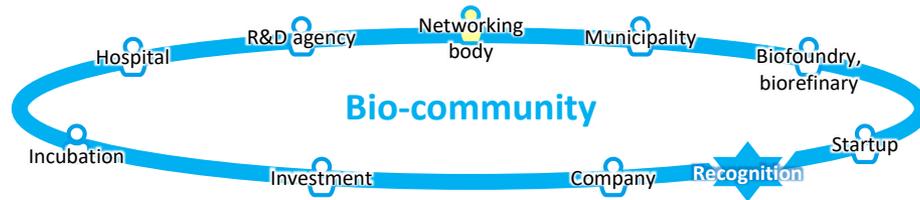
3. What are the missing policies, current needs and opportunities for your national bioeconomy?

Please provide below the web links to the most relevant documents associated to your national strategy.

Japan's Bioeconomy Strategy (in Japanese)
<https://www8.cao.go.jp/cstp/bio/index.html>

Featuring point (2) Bio-community formation

- **Speedy R&D to market introduction with investment** by gathering large companies, startups and investors **under one roof**
- Established **recognition system to virtually create under roof bio-community** and attract human resources and investment to provide new products and services



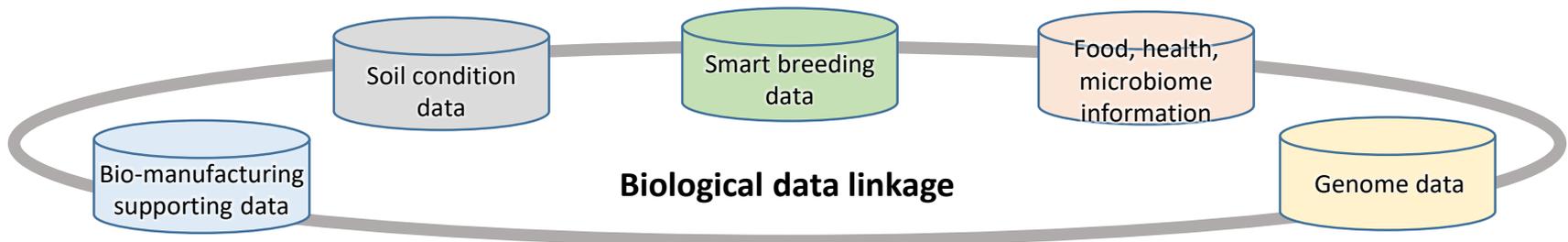
- Create “**Global Bio-communities**” in Tokyo and Kansai (Kyoto, Osaka and Hyogo) by the end of FY2021
- Created “**Regional Bio-communities**” in June in four unique regions (Hokkaido, Tsuruoka, Nagaoka and Fukuoka) as a start and will expand



Form bio-clusters nationwide and **build unique value chains** in respective areas

Featuring point (3) Data platform establishment

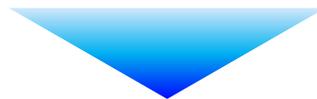
- **Importance of data collection and analysis** is increasing with **bioinformatics progress** (recognised worldwide due to the pandemic)
- As **biological data varies** among fields such as food, health care, agriculture, biomass and biotechnology, large number of data sets is available but **difficult to standardise**
- **Provide guidelines for biological data linkage and usage** and create common platform for accelerating R&D and market introduction by the end of FY2022



Development and enrichment of data platform for R&D projects



Provision of guidelines for data linkage and usage



Create environment that enables **practical and applicable data linkage** covering diverse fields

Summary

- As worldwide attention is paid to biology due to changes in situation such as the pandemic or climate change, **promoting bioeconomy is ever more important**
- Japan's Bioeconomy Strategy has three featuring points to “**realise the most advanced bioeconomy society by 2030**”
 - **Promote market segment measures** in the fields of bio-manufacturing, primary production and health care to achieve **92T yen market size** by 2030
 - **Create outstanding bio-communities by the end of FY2021** and attract human resources and investment and enable new products and services
 - **Draw up guidelines for data linkage and usage by the end of FY2022** and establish R&D and market introduction platform
- **International collaboration is essential** to promote bioeconomy, and there is **high potential for creating synergies** among states sharing fundamental values