

## “European bioeconomy policy: stocktaking and future developments”

### Response of the Microbial Resource Research Infrastructure (MIRRI) to the European Commission public consultation

The **European Commission Bioeconomy Strategy** recognises the opportunities and the challenges related to a sustainable and circular bioeconomy – one which “*valorises and preserves ecosystems and biological resources, drives the renewal of our industries and the modernisation of our primary production systems through bio-based innovation, involves local stakeholders, protects the environment and enhances biodiversity*”. The **Microbial Resource Research Infrastructure (MIRRI)** fully appreciates this view, as it is in line with its **Vision** of “*a greener, healthier and more sustainable world, based on the preservation, study and valorisation of microbial resources and biodiversity*”, as well as with its **Strategic Research & Innovation Agenda 2021-2030 – Microbial Resources for a Green, Healthy and Sustainable Future** (available at [www.mirri.org](http://www.mirri.org)). In this context, the present document provides MIRRI’s feedback to the European Commission public consultation on “**European bioeconomy policy: stocktaking and future developments**”.

Besides their essential role for life on Earth, microorganisms have historically been used by humankind for its benefit – for example, in food processing and preservation processes – and, in today’s world, **microbial resources are an invaluable asset for the bioindustries and the bioeconomy**, crossing domains of application as diverse as agro-food, health and well-being, new materials, environmental bioremediation, valorisation of waste and by-products, or energy production.

In fact, just to mention a few examples, microbes are the source of or are utilized for the production of: sustainable, nutritious and safe food and feed products; innovative medicines and therapeutic solutions, including vaccines and antibiotics; renewable, biobased chemicals and materials, including biopesticides and biofertilizers that are safe, effective alternatives to harmful chemical substances, as well as clean, advanced biofuels. Microbes are utilized in the biological management of agricultural soils and crops, in processing and upgrading residues, side-streams and organic wastes, and in the bioremediation of polluted sites or contaminated effluents. Microbes play a key role in the overall functioning of ecosystems, contributing to healthy and fertile soils, to clean water, and to the mitigation and adaptation to climate change.

**The preservation and provision of microbial resources for research, biotechnological and bioindustrial purposes greatly relies on the so-called microbial domain Biological Resource Centres (mBRCs)**, which are therefore considered as an essential part of the infrastructure underpinning biotechnology and the bioeconomy. According to the definition by the Organisation for Economic Co-operation and Development (OECD), “*Biological Resource Centres (BRCs) consist of service providers and repositories of the living cells, genomes of organisms, and information relating to heredity and the functions of biological systems. BRCs contain collections of culturable organisms (e.g. microorganisms, plant, animal and human cells), replicable parts of these (e.g. genomes, plasmids, viruses, cDNAs), viable but not yet culturable organisms, cells and tissues, as well as databases containing molecular, physiological and structural information relevant to these collections and related bioinformatics. BRCs must meet the high standards of quality and expertise demanded by the international community of scientists and industry for the delivery of biological information and materials. They must provide access to biological resources on which R&D in the life sciences and the advancement of biotechnology depends.*”

In other words, the mBRCs serve the bioscience and the bioindustry communities by providing access to valuable microbial resources, associated data and services. In order to accomplish all their potential, **the importance of the mBRCs for the advancement of research and innovation in life sciences and biotechnologies, as well as for a sustainable, competitive and resilient bioeconomy, must be recognised, both at European and at national/regional level.**

MIRRI currently brings together 50+ mBRCs, culture collections and research institutes from ten European countries and one associated country, thus achieving a high representativeness of Europe's holdings of microbial resources. The European Strategy Forum on Research Infrastructures (ESFRI) already recognises MIRRI as a pan-European distributed Research Infrastructure for the preservation, systematic investigation, provision and valorisation of microbial resources and biodiversity, having included MIRRI in its Roadmap since 2010. **Research Infrastructures are fundamental pillars for the European Research Area** and they are essential to deliver the impacts of major European strategic referentials – such as the European Green Deal, the Bioeconomy Strategy, the Farm to Fork Strategy, or the Zero Pollution Action Plan, to mention a few examples –, as well as the United Nations Sustainable Development Goals.

**Considering the fundamental relevance of microbial resources for the advancements in the life sciences and biotechnologies, as well as for numerous primary production and bioindustrial sectors, MIRRI recommends that all policies, strategies, plans and other future frameworks with an impact over these fields and the overall Bioeconomy must recognise that microbial domain Biological Resource Centres (mBRCs) and related Research Infrastructures are key contributors to Europe's competitiveness and strategic autonomy. At the national/regional level, this includes having mBRCs and related Research Infrastructures recognised as key research and innovation players in the Smart Specialisation Strategies and in the Roadmaps of Research Infrastructures, whenever applicable. In this context, MIRRI will always be available to work with public authorities and other stakeholders in relevant consultation and policy-making activities.**

#### About MIRRI:

The Microbial Resource Research Infrastructure (MIRRI) is the pan-European distributed Research Infrastructure for the preservation, systematic investigation, provision and valorisation of microbial resources and biodiversity. It brings together 50+ microbial domain Biological Resource Centres (mBRCs), culture collections and research institutes from ten European countries and one associated country, namely: Belgium, France, Greece, Italy, Latvia, Netherlands, Poland, Portugal (headquarters), Romania, Russia and Spain. MIRRI serves the bioscience and the bioindustry communities by facilitating the access, through a single point, to the broadest range of high-quality microorganisms, their derivatives, associated data and services, with a special focus on the domains of Health & Food, Agro-Food, and Environment & Energy. By serving its users, by collaborating with other research infrastructures and by working with public authorities and policy makers, MIRRI contributes to the advancement of research and innovation in life sciences and biotechnology, as well as for a sustainable, competitive and resilient bioeconomy.



#### MORE INFORMATION & CONTACTS:

[www.mirri.org](http://www.mirri.org)  
<https://www.linkedin.com/company/microbial-resource-research-infrastructure/>  
[info@mirri.org](mailto:info@mirri.org)

**MIRRI European Headquarters**  
University of Minho, Campus of Gualtar  
Pedagogic Complex 3, Floor 0  
4710-057 Braga, Portugal