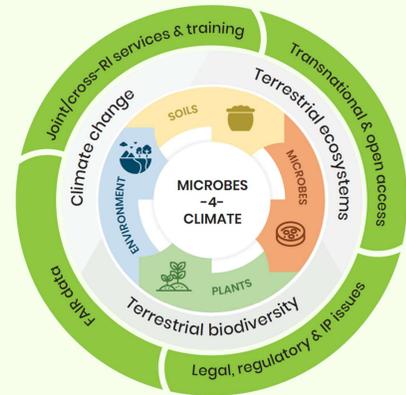


## Introduction

Microbes are key for the health of the biosphere yet are not usually considered in the context of climate change. Our understanding of how climate change impacts the assembly and functioning of microbiomes remains limited, particularly regarding the impacts on microbe–plant–soil interactions and their consequences for crop (plant) health, growth and productivity. Gaining deeper insights into these processes is key to uncover how microbiomes may contribute to ecosystem resilience and help buffer plants against climate-induced stress.



## The Microbes4Climate (M4C) project

- Budget: €14.5M total, with €8.5M dedicated to **Transnational Access (TNA)**.
- Duration: Feb 2024-Jan 2029.
- Goal: **accelerate cross-disciplinary research on microbiome–plant–soil–environment interactions in the context of climate change**, with focus on agricultural and (agro)forestry ecosystems through M4C’s TNA program.

### What is the M4C’s TNA program?

M4C’s TNA program offers researchers and innovators **free access** (via project selection) to **more than 100 services** provided by a cluster of 5 complementary Research Infrastructures (MIRRI-ERIC, ELIXIR, AnaEE-ERIC, LifeWatch-ERIC, EMPHASIS) bringing together 31 partners from 13 countries.

### Advance your research with M4C

- One catalogue with **more than 100 services** integrated into an **online platform** named Collaborative Working Environment (CWE) where more detailed information can be found on:
  - Service catalogue
  - TNA application system
  - Data access and management
- Saves time: no need to search for providers individually.

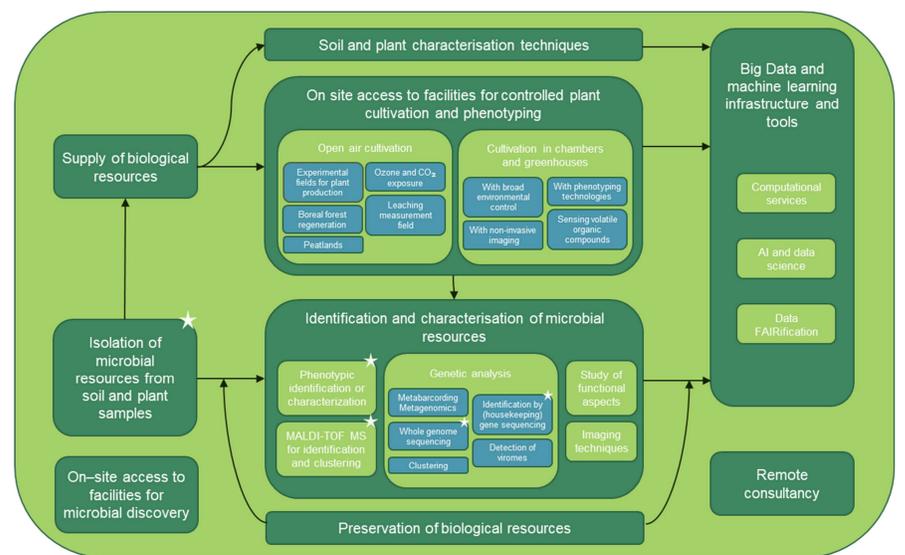
### 100+ services available

- Supply of biological resources: 4 services.
- Preservation of biological resources: 3 services.
- Isolation of microbial resources from soil and plant samples: 5 services.
- Identification and characterization of microbial resources: 38 services.
- Soil and plant characterization technologies: 7 services.
- On-site access to facilities for microbial discovery: 12 services.
- On-site access to facilities for controlled plant cultivation and phenotyping: 32 services.
- Big Data & machine learning infrastructure and tools: 28 services.
- Remote consultancy: 5 services.

M4C services

- Culturomics: bacterial isolation, purification and dereplication of bacterial isolates.
- Bacterial identification by 16S rRNA gene sequencing.
- Clustering of bacterial isolates by MALDI-TOF MS protein profiles.
- Bacterial identification by MALDI-TOF MS / 16S rRNA gene sequencing.
- Whole-genome sequence analysis, assembly and identification of pure bacterial strains.
- Antimicrobial susceptibility testing (AST).

BCCM/LMG services



General scheme of how the catalogue categories are connected; BCCM/LMG services are situated in categories marked with an asterisk.

### The TNA process and application requirements



- M4C will launch several TNA calls for project proposals.
- **Who can apply?** PhD students, postdocs and researchers affiliated with academic institutions, non-profits, industries or companies.
- Applicants must apply for **at least two services**, each from a different RI or M4C access provider. Priority will be given to cross-disciplinary projects, integrating microbes and the environment (plants, soil, etc.) to address climate change.
- Access requests must be for services located in a different country from the applicant’s institution, unless the provider is an intergovernmental organization such as CABI, a Joint Research Centre (JRC), or an ERIC (European Research Infrastructure Consortium).
- Proposals must be written in English and submitted via the TNA portal.
- Applicants must **consult the facility/service managers** before submitting proposals to ensure feasibility.

Interested? Apply for TNA for free access to services!



microbes4climate.eu



cwe.microbes4climate.eu

