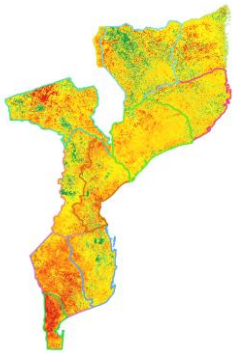
BiNoMo Biodiversity Network of Mozambique

A unified open portal to biodiversity data
for research, dissemination and planning



ITALIAN AGENCY FOR DEVELOPMENT COOPERATION

STVDIVM VRBIS

UNIVERSIDADE EDUARDO MONDLANE

Ministério da Terra, Ambiente e Desenvolvimento Rural

MUSEU DE HISTÓRIA NATURAL
UNIVERSIDADE EDUARDO MONDLANE
MAPUTO . MOÇAMBIQUE

CB-UEM Centro de Biotecnologia

IIAM Instituto de Investigação Agrária de Moçambique

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Biodiversity

"**Biological diversity** means the variability among living organisms from all sources including, *inter alia*, terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are part; this includes diversity within species, between species and of ecosystems."

- Biodiversity is a key asset for human communities, and a direct subsistence resource for half of the world's population;
- Primary biodiversity data (e.g., direct observations of species) are abundant, but badly organized;
- Good quality primary biodiversity data are needed for conservation, planning and scientific research.

Convention on Biological Diversity

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Use of Biodiversity data

- Reporting to International Conventions (e.g. CBD)
- Elaboration of conservation strategies for endangered species or management strategies for alien species
- Assessing the conservation status of endangered species according to IUCN Categories and Criteria
- Participation to international projects and initiatives
- Data archives for future research/management projects

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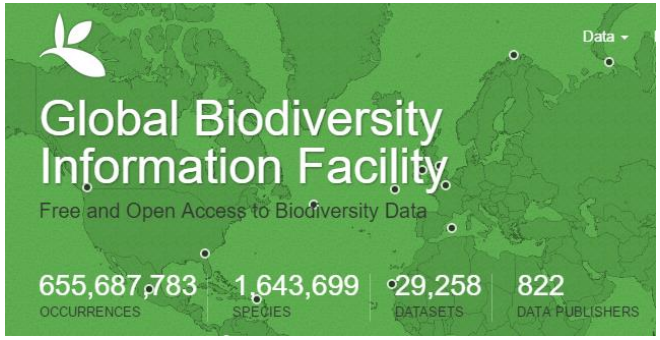
Catalogue of Life

GBIF
Global Biodiversity Information Facility



eol
Encyclopedia of Life

IUCN

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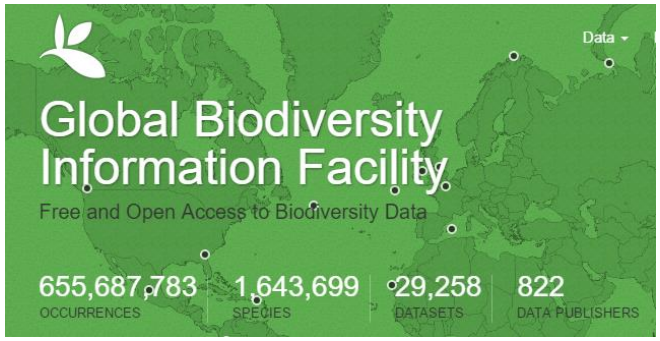


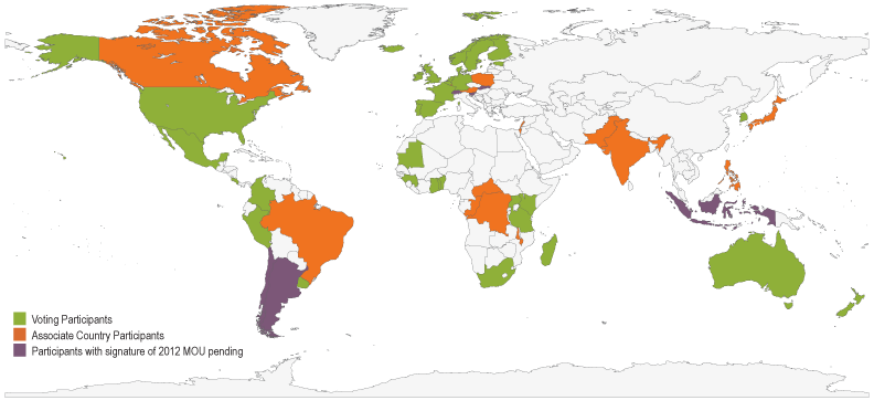
GBIF
Global Biodiversity Information Facility

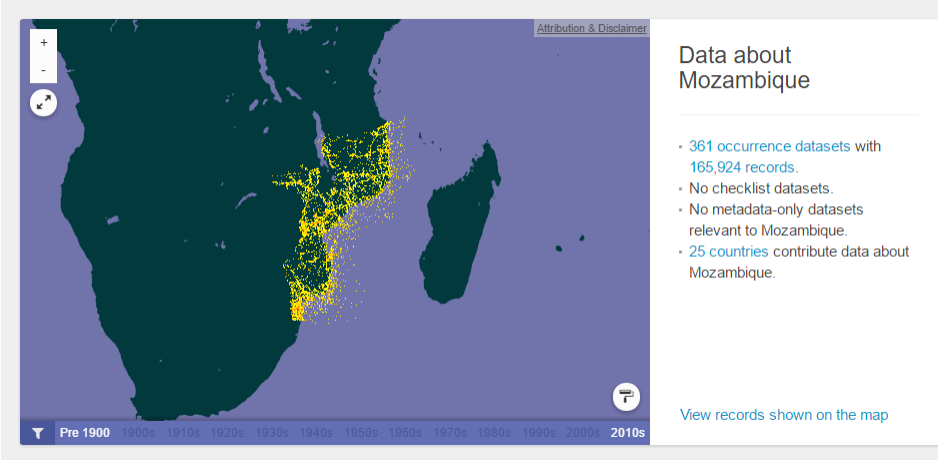
The Global Biodiversity Information Facility (GBIF) is an international open data infrastructure, funded by governments.

It provides a single point of access to hundreds of millions of records, shared freely by hundreds of institutions worldwide.

More than 1,400 peer-reviewed research publications have cited GBIF as a source of data,

Many GBIF Participant countries have set up national portals using tools, codes and data freely available through GBIF to better inform their citizens and policy makers about their own biodiversity.





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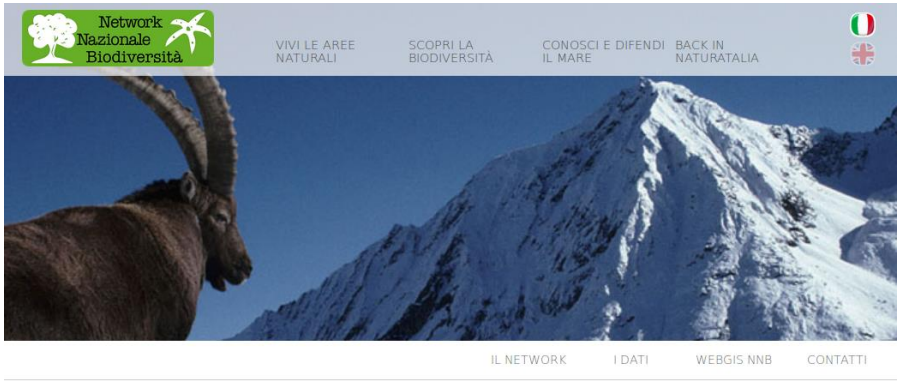
The Biological Collection Access Service (BioCASE) is a transnational network of primary biodiversity repositories. It links together specimen data from natural history collections, botanical/zoological gardens and research institutions worldwide with information from huge observation databases.

One of the main uses cases for the BioCASE Provider Software is data provision to the Global Biodiversity Information Facility (GBIF) . Currently roughly 35 million specimen and observation records are fed into the GBIF network, which can be accessed and downloaded through the GBIF data portal.

Previous experiences



Italian National Biodiversity Network (NNB)

Biodiversity National Network of Albania (BioNNA)

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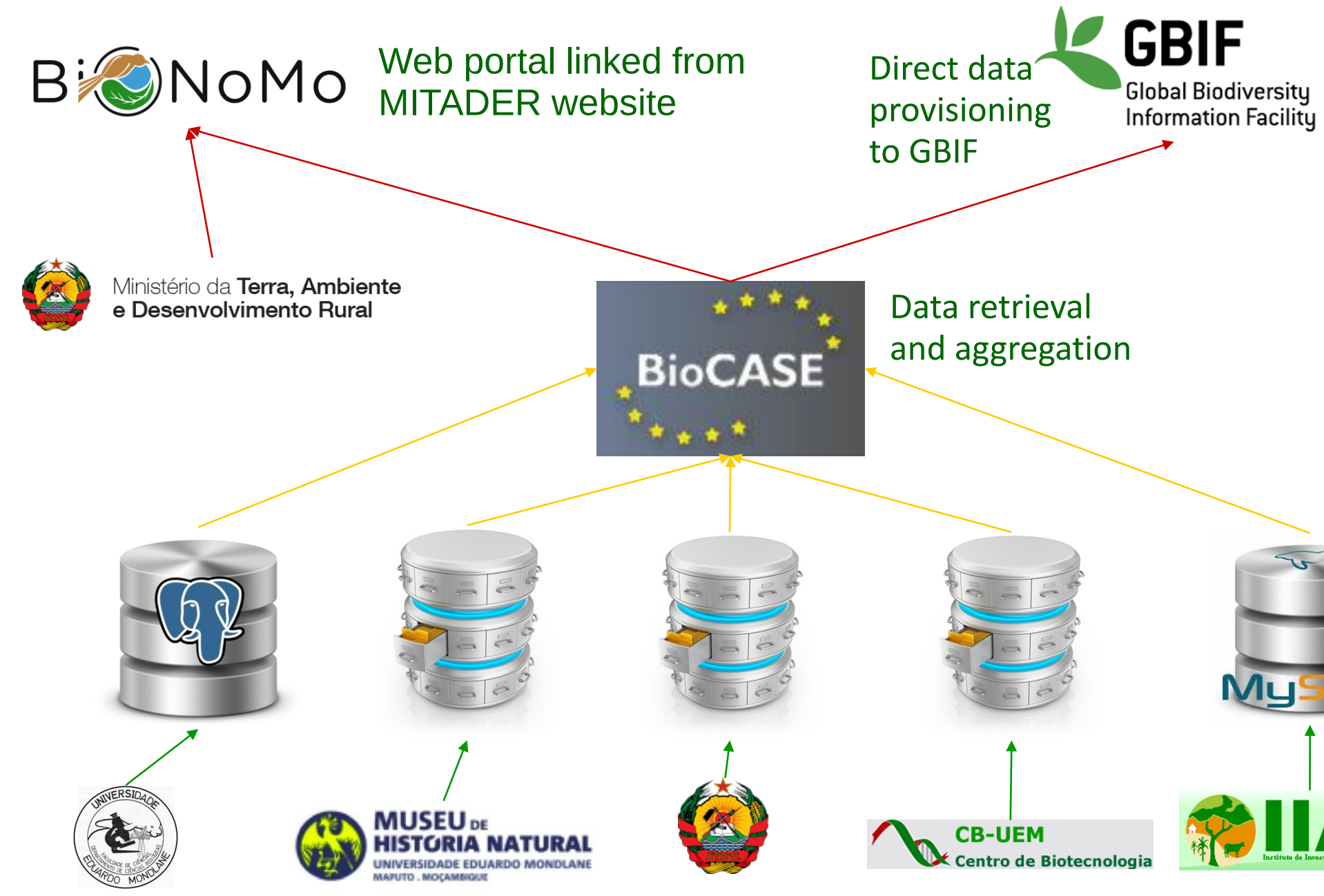
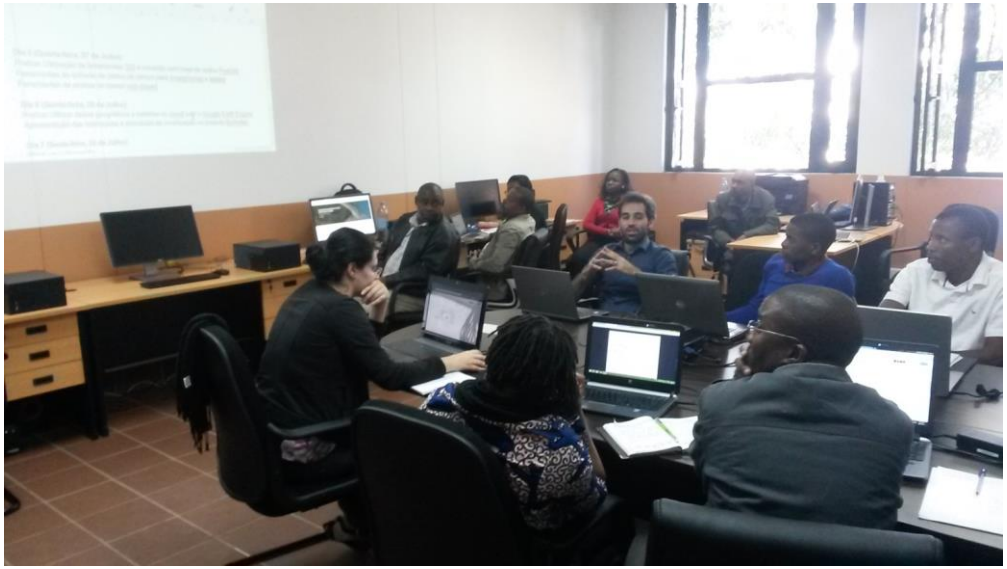
Structure and data flow



Activities – What we have done

- ✓ 3 training courses (2 introductory, 1 advanced) held at the UEM Departments of Biology and Informatics

- ✓ 30 participants among technicians from partner institutions and UEM students



Introductory course Round 1: Jul 21 – 29, 2016
Introductory course Round 2: Oct 20 – 28, 2016

Theory:

- Data Base Management Systems (MySQL, PostgreSQL)
- Digitalization of biological collections
- Table creation and linkage
- Data georeferencing
- Web systems to search and analyze data

Practice:

- Data analysis with Free Software
- Field data collection with Free Mobile Software
- Use of georeferenced data for mapping and management

Advanced course: Nov 22 – Dec 01, 2016

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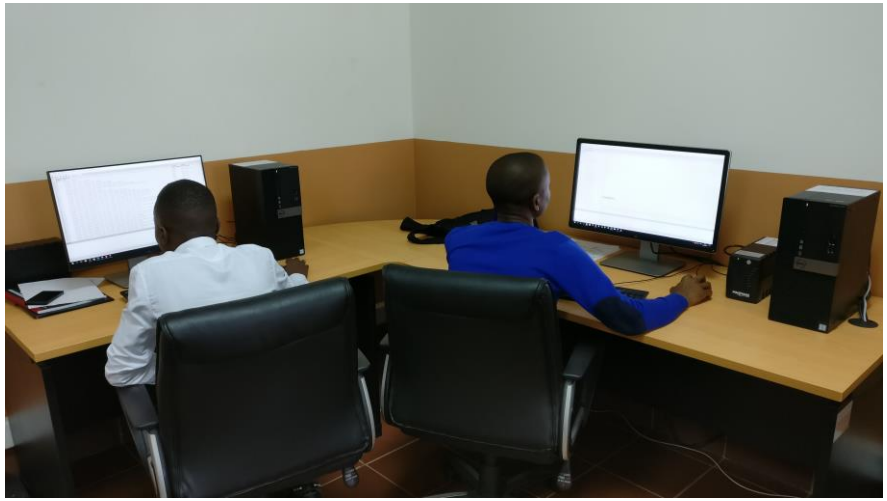
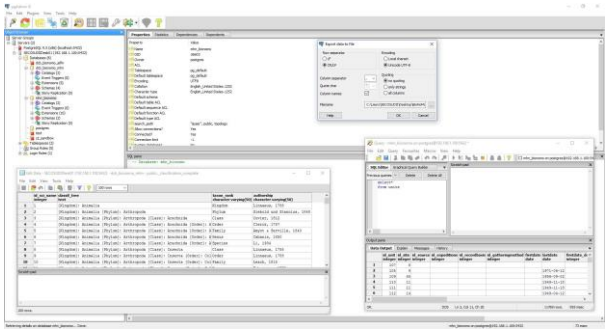
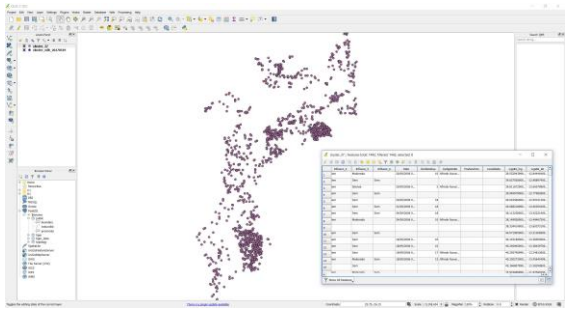
Activities – What we have done

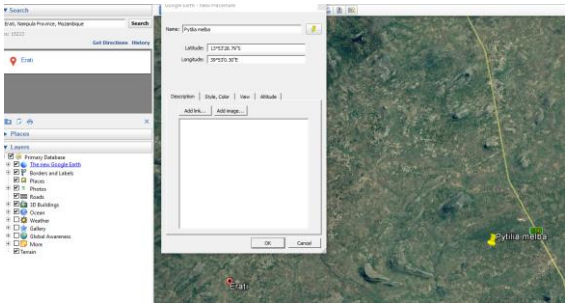
- Provision of equipments and establishment of digitalization teams at partner institutions



- Data digitalization, maintenance, updating and quality control
  - Georeferencing
  - Taxonomy update
  - Information mapping compliant with international standards (ABCD, DwC)







Activities – What we have done

BiNoMo

Web Portal (pilot version)

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Activities – Next steps

- Continue uploading / updating existing field / collection data
- Improve the functionalities of BioNoMo portal
- Training local experts on the statistical analysis of biodiversity data
- Inclusion of new data providers in the network
- Linking with Southern African and International initiatives (SANBI, BioCASE, GBIF)

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Thank you for your attention