Description of the consortium partners and their collections:

Scientific outputs of all Institutions can be consulted at the Flanders Research Information Space (FRIS) at https://researchportal.be/en

Meise
Botanic Garden


Our herbarium collections


The collection of living plants


Seed bank

Meise Botanic Garden (MeiseBG) is the coordinator of DiSSCo Flanders. It is an internationally renowned centre of excellence for collection-based plant research and conservation and contributes with its know-how in both physical and digital collection management. It hosts about 4 million preserved items, among which about 3.1Mio herbarium sheets of vascular plants, 0.35Mio fungi including lichens, 0.4Mio bryological and 0.15Mio algal collections. The outdoor (92 ha) and indoor living collections comprise over 25K accessions from about 17K plant taxa from around the globe, including numerous rare and endangered species that are cultivated for research and conservation and important wild relatives of coffee and bananas with high economical importance. The seed bank of MeiseBG conserves more than 6.6K accessions, notably of endangered Belgian flora, the endemic plants of the Copper Hills in Katanga and a unique collection of wild beans and bananas. There are over 10K DNA extracts and 25K cryopreserved collections stored for molecular analyses. MeiseBG is mass digitizing its entire preserved collection of herbarium sheets in the framework of the DOE! project financed by the Flemish government. Citizens contribute to mobilise additional collection data through the crowdsourcing platform DOEDAT. MeiseBG staff is expert in collection management, biodiversity information standards and active member of TDWG.

RESEARCH INSTITUTE
NATURE AND FOREST

Research Institute for Nature and Forest (INBO) is the Flemish research and knowledge centre for nature and its sustainable management and use. INBO conducts research and supplies knowledge to policy makers and stakeholders. Through its scientific research, INBO supports all agencies in the Flemish government dealing with open space, as well as organisations involved in nature conservation, forestry, agriculture, hunting and fishery. INBO publishes its scientific results as open data for international reporting. It participates in several international research networks including LTER, ALTER-Net and LifeWatch. INBO will notably act as liaison between the biodiversity research field and collection data. Furthermore INBO houses a living collection of native trees and shrubs from Belgium, a soil sample archive (15K) that will enrich the Earth Science collections within DiSSCo, and a DNA sample collection including material from rare species of high conservation priority in Europe and Flanders. Staff of INBO are experts in Biodiversity Informatics and a number of employees of the Belgium Biodiversity Platform, acting as the country's GBIF node, are stationed there.

Vlaams Instituut voor de Zee
Flanders Marine Institute

Flanders Marine Institute (VLIZ) promotes accumulation of marine knowledge and data in marine research in Flanders, focusing on oceans, seas, coastal and tidal systems. The target groups for knowledge accumulation are the marine research community as well as educational institutions, the general public, policymakers and the industry (within the scope of the blue economy). Among the core activities of VLIZ are Supporting networks of marine scientists and other concerned parties, as well as representing the Flemish marine research community in the international marine scientific circles. Next to these core activities, several ongoing activities at VLIZ are highly relevant to DiSSCo. VLIZ as a member of the LifeWatch ESFRI is both the regional contributor with activities related to the observatories and data archaeology, and responsible for the development of the Species Information Backbone. Besides taxonomic information, this backbone provides access to a range of additional information, including species traits, specimen information, distributions, and habitats, linking and providing direct access to literature and to databases such as GBIF, CoL, GenBank, BHL, EOL and BoLD. All activities within the LifeWatch Species Information Backbone are offered as in-kind contributions to DiSSCo: interlinking such data with collection data will broaden the research applications and potential of the collections within DiSSCo. VLIZ will contribute to DiSSCo with a marine core repository collection. This repository contains marine sediment sample collections of great importance in ocean research. They are used for research in climate, environment, many other marine geological studies, and for education.

KMDA

KONINKLIJKE MAATSCHAPPIJ VOOR DIERKUNDE VAN ANTWERPEN

Royal Zoological Society of Antwerp (KDMA) manages three zoological gardens in Flanders (ZOO Antwerpen, ZOO Planckendael, and ZOO Serpentarium), the De Zegge nature reserve in Geel, and the Flanders Meeting and Convention Center Antwerp. The KMDA Centre for Research and Conservation plays a leading role in the global zoo community in terms of scientific research and conservation of threatened animal species and their habitats. In DiSSCo, KDMA will play a key role in terms of zoological living collections, as well as genetic, tissues and cell collections.. The living collections comprise 9K individual animals of 662 species, as well as an arboretum. Furthermore, they play an important role as a link with the European Association of Zoos and Aquariums (EAZA) and the wider zoo community. KMDA hosts one of the four physical locations of the EAZA BioBank. which is linked to the Zoological Information Management Software (ZIMS); one centralized online database for the global zoo community which contains many millions of individual records of about 20K different species. Their experience with the data management systems used in this domain will be valuable for the implementation of DiSSCo.

ILVO
Institute for Agricultural and Fisheries Research

Flanders Research Institute for Agriculture, Fisheries and Food (EV-ILVO) is an internationally recognized scientific institute that stands for multidisciplinary, independent research and specialized service provision in all fields related to agriculture, fisheries and food in Flanders. EV-ILVO will contribute to DiSSCo with collections of marine fauna (1.5K) and dried reference sediment samples for metals and grain size (0.3K) in the North Sea, otoliths (10K) and finclipsfrom fishes (1K), marine environmental samples for eDNA (0.2K), marine invertebrate specimens and their DNA (1K), seed collections and genetic resources from agricultural crops (1K) and living plant cultivars (0.5K), biobanks and genetic resources of crop pests such as nematodes, mites, fungi and bacteria (8.5K) and isolates and genetic resources of bacteria and fungi linked to the food and agriculture industry (10K). EV ILVO also has long-term series from measurements of shrimp fisheries catches (>100 years) and macrobenthos community composition in the North Sea (>20 years), which can be linked to DiSSCo, while addressed in other Infrastructures on biomonitoring.

UNIVERSITEIT GENT


Ghent University (UGent) houses several institutional collections, including the zoological museum, a botanical garden and herbarium, as well as several smaller collections linked to biological and geological labs. In March 2020, UGent will open the new Ghent University Museum (GUM), which will showcase their unique collections to the wider public and engage in increased educational purposes. The staff of UGent is experienced in collection management and will disclose its collections to DiSSCo as an important contributor. Beside the known and inventoried collections, the smaller and potentially orphan lab collections will also be part of the project, like for example biological, medical and histological slide collections. Based on the Academic Heritage inventory (2012), UGent has as a rough estimation of the following collection items in the scope of DiSSCo : rocks and minerals (50K), Museum Morphology (7K), Veterinary collections (?), Animal Pathologies (1K), Pharmacy (0.46K), Botanical Garden including the herbarium (0.41Mio), Microorganisms (75K), Museum Zoology (50K), Museum History of Medicine (?).

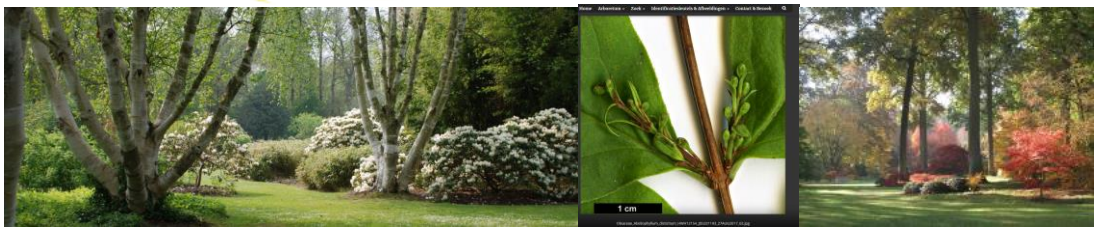
Universiteit Antwerpen

University of Antwerp (UA) has several collections in the scope of DiSSCo. They will also, next to the institutional collections, address lab collections in an updated inventory and assessment for DiSSCo. Based on the Academic Heritage inventory (2012), the following collections are in the scope of DISSCo : Veterinary (3K), Anatomy (0.7K), Pathologies (0.2K), Zoology (12K), Herbarium (4,7K, hosted in MeiseBG), mineral and rocks (0.1K), Mouse and Rats traps (0.3K), Educational biology (70), Preparations Biology (9K), Crystal models (50), Natural History (50).

KU Leuven (KU Leuven) has a large variety of collections across different biological and geological related disciplines in scope of DiSSCo, as well as scientists acting as curators and data managers. Like with the other universities, both classical and smaller lab collections will be considered. KU Leuven will participate in DiSSCo with the following collections: Soil monoliths, lacquer profiles and samples and Legacy soil maps (1.1K), Rocks (10K), Mineralogy (10K), Paleontology (100K), Prehistory (10K), Zoology Museum (6K), agricultural models (10) (inventory is based on the AcadeAmic Heritage inventory (2012). The soil samples, Paleontology collection and Zoology Museum are partly inventoried and digitized. The staff of KU Leuven has experience with collection management and digitization.

VRIJE UNIVERSITEIT BRUSSEL

Vrije Universiteit Brussel (VUB) has relatively small collections and will also address its small lab or orphan collections within DiSSCo. Aware of the importance of collections, but knowing that the staff member in charge will retire soon and facing a rather low probability of a replacement, the VUB wishes to do an as complete as possible inventory and within DiSSCo decide on the workflow on how to deposit most of the collections elsewhere for safekeeping and better accessibility for scientific re-use, rather than invest in local repositories. The herbarium is hosted by MeiseBG. Based on the Academic Heritage assessment of 2012, following collections of the VUB are in scope of DiSSCo: Didactical collections (0.62K), Medical didactical collections (0.78K), Pharmacy and medicine (pm), Pharmacy institute (30), biochemical samples medical (3), Museum Anatomy (pm), Cellular and molecular immunology (2), preserved collections (1K), leaf tissues and DNA (10K).



Botanic Gardens and Arboreta Association (VBTA) is a Belgian association with legal status in Flanders (seat in MeiseBG). On board are the largest botanic gardens of Belgium, as well as several smaller arboreta. From the 21 gardens listed, 19 are situated in Flanders. In total, it is estimated that they harbor more than 30K different species of plants. Based on the information available for the gardens not listed above as part of the other consortium members, up to 25K herbarium specimens are present. The living collections are expressed in different metrics: number of individual plants (especially when counting trees), number of taxa or number of accessions. In the early 2000 a federal project called PlantCol, coordinated by MeiseBG, set the first steps to federate these valuable living botanic collections in Belgium under one portal. DiSSCo is the occasion to update this portal to modern standards and mobilize the data using standard metrics. VBTA will be associated Flemish partner for the proposal.