

ATLASea

an atlas of marine genomes

Priority research programs and equipment (PEPR)

Funded by the France 2030 framework program

Administered by the National Research Agency

Led by the CNRS and the CEA



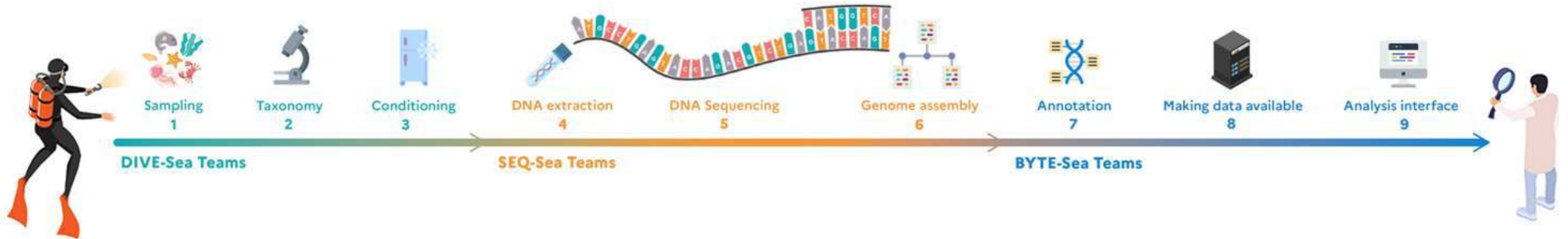
Financing: €41 million
Duration: 8 years
Start : March 2023

Coordination :
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ATLASea: general objectives

ATLAS Marine genomes: 4,500 species from the French coast

- Targeted Project WHEEL-Sea (CNRS): Coordination of the programm. improve and support teaching and training in the field of biodiversity.
- Targeted Project DIVE-Sea (MNHN): Sampling expeditions along the French mainland and overseas coasts and interactions with marine stations. Banking of samples.
- Targeted Project SEQ-Sea (CEA): Preparation of high quality DNA, sequencing, assembly and structural annotation of genomes at Genoscope.
- Targeted Project BYTE-Sea (IFB): IT infrastructure for data storage, integration, display and sharing.



- Calls for 3 pilot projects on 2 key themes: = 1st semester 2025
 - Study of metabolic pathways leading to molecules of interest (bioinfo + wetlab)
 - Study of ecosystems subject to invasions

ATLASea: DMP and data type

DMP:

the first version was fairly simple because there was little diversity in the data, but the 3 AMI perspective includes a great deal of diversity in the data (varied omics).

- Sampling data -> museum database & gbif
- Sample prep , DNA extraction and sequencing protocol (wetlab) -> IO protocol for the wetlab
- Genome assembly, annotation and comparison protocols: analysis pipeline (shell, python, snakemake, nextflow) -> git repositories (pepr); published on galaxy, Workflowhub)
- Code managed in git
- raw data, assemblies -> ENA (European Nucleotide Archive) public status repositories: no embargo
- Derived data (gene trees, function catalogues): no dedicated repositories, “DOI sation” in Research Data gouv

ATLASEa: interactions expected with ODATIS/DATA TERRA

Correlatives analysis between genomic data and environmental data:

mixing functional genomics and occurrence data ,

- eco functional role of species ,
- gene-function correlation and location in the ocean
- Link with the gene catalogue created from metatranscriptomic data (TARA expeditions (MATOU))

In the context of the PIA IFB MUDIS4LS - PIA DATA TERRA GAIADATA

- Implementation Studie 2 : support for researchers on marine genomics data management - metadata link to the work done under DATA TERRA ;