WP1 - Knowledge base for the Black Sea

- Objectives : To establish the knowledge base needed to increase the ecosystem resilience **building on the past and ongoing projects/initiatives**, to maintain a data management framework throughout the project and harmonize methodologies
  - Identification of needs in data and information to analyse ecosystem functioning
  - Increase the data readiness of BRIDGE-BS multistressors through further integration of Black Sea Database using existing databases gathering also unpublished partner's datasets
  - Support the harmonization of datasets, data sampling efforts, assessment methodologies for ecological status evaluation, including data integration from different sources and interoperability
  - Bring together various types, levels and sources of data in such a way that they can be made compatible and comparable, and thus useful for decision making
  - Exchange of data for the WP2, WP3 and WP4 to be used for developing integrated modelling frameworks.
  - Promote the transfer and usability of data and information services for science, policy community and Blue Growth sectors through establishment of Blue Economy Observatories

Existing Research Infrastructures

- ## SeaDataNet RI

  - A pan-European infrastructure set up and operated for managing marine and ocean data in cooperation with the NODCs and data focal points of 34 countries bordering the European seas

  - Managing physical, chemical, biological, marine litter, bathymetry and geosciences data as well as all the related metadata on Cruises, Observatories, Projects, Organisations…

  - Providing Standards, Services and Tools for data users and data managers

- ## EMODnet thematic portals

  - Providing added values on the data with generation of aggregated datasets relevant to EU Marine directives and to Global challenges, providing open access to High Quality data and products

  - Some of the thematic data portals of EMODnet rely on SeaDataNet infrastructure (Chemistry, Bathymetry) o, others have key links with SeaDataNet (Physics, Biology)
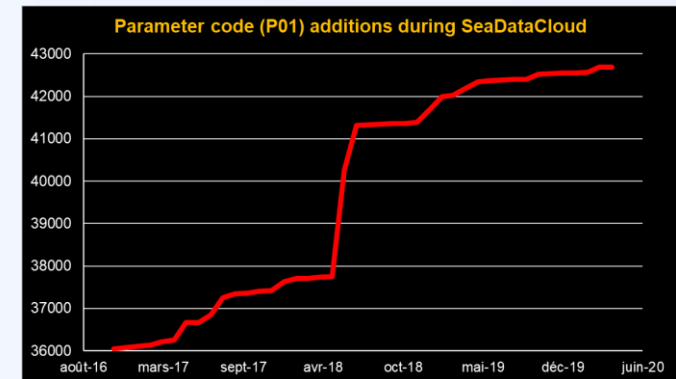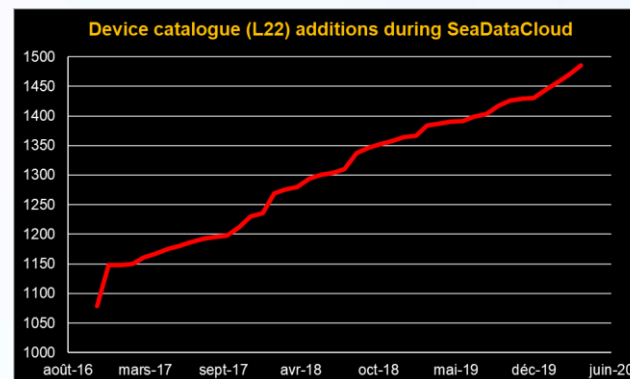
sdn-userdesk@seadatanet.org – www.seadatanet.org

What does SeaDataNet could provide to BRIDGE?

- ## Metadata linked catalogues

EDMERP
Projects

EDMO
Organisations

CSR
Cruises

EDIOS
Observatories

CDI
Data

EDMED
Data sets

SeaDataNet

What does SeaDataNet could provide to BRIDGE?

- ## Standards and vocabularies
    - ### Metadata formats for all catalogues
        - ISO19115 and ISO19139
    - ### SeaDataNet data transport formats
        - ASCII (Ocean Data View, and MedAtlas)
        - NetCDF (CF compliant)

    ➔ Relying on controlled vocabularies governed by NOC-BODC (UK) and used in many other international or national initiatives

What does SeaDataNet could provide to BRIDGE?

- Tools for the data centres – data managers

  – To be connected to the infrastructure and to be able to duplicate data in the cloud (Replication manager)

  – To follow the data downloading by users : MySeaDataCloud

  – To generate the metadata at the SDN standards : MIKADO

  – To generate the data files at the SeaDataNet standards : NEMO

  – To check the compliance of the data files : OCTOPUS

  – To quality check the data: ODV

What does SeaDataNet could provide to BRIDGE?

- ## Tools for users and data scientists

  - All catalogue search interfaces

  - To visualise data, plot, analyse : ODV

  - To interpolate data : DIVA

  - to publish your data using Sensor Web standards

  - To publish marine data (and get a DOI) : SEANOE

  - To work on datasets in the cloud environment : **SDN Virtual Research Environment (VRE)**

    - prototype available and used by the regional product leaders of the SDC project

What does SeaDataNet could provide to BRIDGE?

- Black Sea Data Centres already connected to SDN infrastructure may be able to help
  - Partners of SeaDataNet
    - NIMRD (Romania)
    - IO-BAS (Bulgaria)
    - METU_IMS (Turkey)
    - RIHMI-WDC, SIO-RAS (Russian Federation)
    - UkrSCES (Ukraine)
    - TSU-DNA (Georgia)
  - Connected via other projects
    - IFR and University Saint Ivan Rilski (Bulgaria), SRI-RAS (Russian Federation), Istanbul university, Ankara university and KTU (Turkey), NEA (Georgia), IGS and DHMO (Ukraine), NIMGG and SC Marine Research SARL (Romania)