# Copernicus CCS : provision of and access to NMHS in-situ data to the CDS

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### Outline

- Who are the members of EUMETNET
- What is out there ?
- From an NMHS point of view :

   What are the technical challenges
   What are the political challenges



#### EUMETNET Membership : 31 + 3





## What in-situ data is out there ?

- Actually we don't know exactly
- In-situ data are generally owned and operated nationally (and some regionally)
  - NMHSs operate extensive networks that are fit for different purposes.
     Almost all generate climate datasets but density, resolution, quality, etc.
     will vary from one network to the other and from one country to another
  - Homogenized datasets are still scarce in countries with little resources and/or capacity
- Others operate networks too : hydrological services, agronomy institutes, energy companies, roadweather operators, airports, port authorities, research institutes, ski resorts, etc.
- And non-EC countries own and operate networks too
- Differing data policies apply although PSI is applicable to EU NMHSs.
- There is no single and comprehensive metadata database
  - Standards (e.g. WIGOS, INSPIRE) are maturing but it is still a long way to full implementation everywhere
  - Who will be tasked to do so ?



#### Some technical challenges

- ECMWF will be tasked to design the CDS, a distributed Climate DBMS from a patchwork of existing C-DBMS that :
  - is as comprehensive as possible but does not create duplications of instances
  - respects the ownership (and associated data policies) of the underlying datasets
  - implements Service Levels and overall quality standards that are very different from one owner to another
  - acts as a (virtual) central repository of directory & metadata services (metadata standards INSPIRE and WIGOS are a little ≠)
  - and much more...
- Dataset operators and owners (e.g. NMSs) will need to implement interfaces to the future CDS which requires some effort and raises some issues :
  - Compatibility with existing C-DBMS systems, costs to upgrade
  - Management of discrepancies and filling of gaps



# Some political challenges (1)

- Data policy issues
  - Although EU Members apply PSI, implementation is different from one State to the other
    - This reality will surprise many but there are many valid reasons : the income from the sale of data funds part of the network.
    - If Governments do not compensate the loss of income when a free data policy is applied, networks may suffer
    - The movement towards free and open data everywhere is inevitable but will be slow; it is expected that it will take 5-10 years to achieve.
  - EUMETNET Members have agreed to licence all available data to Copernicus Services
    - There will be no information charge on the data that they own
    - Those (and we expect that others too) that do not have a free and open data policy will require that original datasets cannot be redistributed nor reconstituded (orchestra analogy) without a specific licence
  - There are some additional complexities: e.g. datasets owned by others whether operated by NMHSs or not, non EUMETNET members, institutes , etc...



### Some political challenges (2)

- EC is clearly moving into the service provision arena
  - This can create soverignty issues wrt national remits (of NMSs and other public services), subsidiarity and single authoritative voice principles
  - C3S creates a paradigm change as NMSs (and other institutes) will have to redesign some of their own climate services by taking into account (i.e. building upon) C3S services as they are deployed
- NMS community through EUMETNET prism is building a new relationship with Copernicus operators as well as the EEA (as in-situ coordinator)
  - An INSPIRE Workgroup is operating
  - An internal project has been established within EUMETNET
  - Risks have been identified
  - The scope of this project remains fuzzy



#### **Contact Details**

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