



The HyMeX database

Guillaume Brissebrat (1), Nizar Belmahfoud (1), Jean-Luc Boichard (1), Sophie Cloché (2), Thomas Delacour (2), H  l  ne Ferr   (1), Laurence Fleury (1), Laurent Labatut (3), Karim Ramage (2), and Fran  ois Andr   (1)

(1) SEDOO, OMP Data Service, Toulouse, France, (2) ESPRI, IPSL Data Center, Palaiseau, France, (3) URA GAME, CNRS/M  t  o-France, Toulouse, France

The HYdrological cycle in the Mediterranean Experiment (HyMeX) international project aims at a better understanding and quantification of the hydrological cycle and related processes in the Mediterranean, with emphasis on high-impact weather events, inter-annual to decadal variability of the Mediterranean coupled system, and associated trends in the context of global change. The project includes long term monitoring of environmental parameters between 2010 and 2020, intensive field campaigns, use of satellite data, modelling studies, as well as post event field surveys and value-added products processing. The project gathers together a rich collection of datasets that can be used for any data calibration or cross-validation study.

The HyMeX data management system has been designed and developed in the context of the Mediterranean Integrated STudies at Regional And Local Scales program (MISTRALS) data portal. The MISTRALS data portal is a distributed system, that enables users to access datasets produced by every project (HyMeX, ChArMEx, MerMEx...) and managed by different data centres.

The HyMeX database relies on a strong collaboration between OMP and IPSL data centers. Local observation data (ground-based stations, mobile platforms, questionnaires...) are managed by OMP team while gridded data (satellite products, model outputs, radar data...) are managed by IPSL team.

The HyMeX database contains a wide variety of datasets:

- 250 hydrological, meteorological, ocean and soil in situ datasets.
- 45 radar datasets.
- 25 satellite products.
- 95 atmosphere, ocean and land surface model outputs from operational (re-)analysis or forecasts and from research simulations.
- 5 post event survey datasets.

All the datasets are documented in compliance with metadata international standards. Many in situ data have been inserted in a relational database, in order to enable more accurate data selection and download of different datasets in a shared format. Radar datasets and many model outputs have been homogenized and converted into the NetCDF format. All the data can be accessed at <http://mistrals.sedoo.fr/HyMeX>.

The website offers the usual, but user-friendly functionalities: registration procedure, data catalogue, web interface to select and access data... At present, the website counts about 520 registered users and processes more than 80 data requests every month. Every scientist is invited to visit the website, register and use the HyMeX datasets. Do not hesitate to contact databasecontact@hymex.org.

Another website has been designed in order to meet the operational needs for the HyMeX campaigns: <http://sop.hymex.org>. This day-to-day charts and report display website offers a convenient way to browse meteorological conditions and data during the campaign periods.