

❖ **General rules (update 14.5.2020)**

In the case of parameters related to nutrients, contaminants and pigments, concentrations equal to “0” must be flagged “6”, which means: “The level of the measured phenomenon was less than the limit of detection (LoD) for the method employed to measure it. The accompanying value is the detection limit for the technique or zero if that value is unknown”.

❖ **Important issues for dataset preparation of eutrophication (update 17.2.2020)**

As required by a range of data users, it is strongly desirable to have, in the same file, data of temperature, salinity (and density) together with data on nutrients, dissolved oxygen, chlorophyll-a, pH. This means: CTD data corresponding to depths of discrete bottle samples.

It is recommended to keep data related to the same matrix together, as provided by originators, and not separate different parameters.

Conversely, data related to different matrices should be splitted.

❖ **Important issues for dataset preparation of contaminants (update 05.3.2020)**

- It is strongly recommended to use preferred measurement units

In order to harmonize measurement units, a bibliographic analysis of most widely used measurement units for classes of contaminants in the different matrices has been performed. EU directives (2013/39/UE; Comm. Dec. EU 2017/848) have been taken into account to define following short list of «preferred units»:

- Water: µg/l (for dissolved phase)
 - Sediment: µg/kg of dry weight
 - Biota: µg/kg of wet weight (mussel in dry weight)
- Check of consistency of primary variables, especially in sediment and biota datasets (eg. Vertical coordinate for sediment must be COREDIST)
 - Separation of data related to different matrices into different dataset collections
 - Check for consistency between measured variables (P01) and measurement units
 - Check metadata availability:
 - Temporal and spatial (position, sampling depth, station bottom depth) information must be available

Guidelines for harmonization and format control on datasets of contaminants

- If datasets derive from monitoring data, please use the field project to provide this information. This is very relevant (good example: Monitoring of ecological water quality of rivers, coastal and transitional waters of....; or: Marine Strategy Framework Directive monitoring in...)
- If datasets derive from data from long-term monitored stations (eg. National monitoring carried out in the same location over years), it is advisable to consider doing one CDI for several years of measurements (eg. every 5 or 10 years of data, depending on the frequency of the measurements). This will avoid having different CDI for the same sampling station, that would hide the information about the “long-term” monitoring.

Furthermore, in order to be correctly used, data of contaminants need to be accompanied by relevant metadata associated to the datasets:

- For water: Depth must be always provided, also in timeseries data; in this case it can be provided as a parameter (not the primary variable)
- For sediment: Depth below seabed – COREDIST must be always provided, also in timeseries data; in this case it can be provided as a parameter (not the primary variable)
- Additional useful data: proportion of sizes of particles (eg. % clay), parameters related to granularity, water content, organic matter content and sedimentation rates. Due to heterogeneity in grain size, missing information on grain size, as well as lack of indication of station depth and of sample thickness strongly affect QC of contaminants in the sediment matrix. Organic carbon, aluminium content, wet weight/dry weight ratio and grain size are relevant supplementary data required for QC and for the application of normalization procedures.
 - For biota: parameters related to the biometrics (biota sizes, sample ids, sex, life stage...), water and lipid contents, wet weight/dry weight ratio, depth are very relevant for normalization procedures, comparability and QC.
- If possible, P01s must include the relevant information associated to the technique used, the analyzed grain size in case of sediment, the species and related information for biota, the dissolved fraction for water....