GUIDANCE for submitting Data Rescue Project proposals

Data Rescue includes the following steps (based on the WMO Guidelines on Climate Data Rescue WCDMP-No 55):

1 Locating and inventorying climate records to be rescued
2 Preserving and storing the records in well-organized, ordered and protected shelves or boxes;
3 Imaging the paper into electronic files like in GIF, TIF, JPEG, formats etc. using scanners and/or digital cameras.
4 File management of the images, including locating and naming the files with intelligible filenames and folder structure, and validating the imaged files (view and check)
5 Keying the data into a computerized database using simple computer table sheets or preferably using a Climate Data Management System. Some archives would need special imaging and transformation into digital values, based on OCR or special software, this is the case of strip charts, diagrams or weather maps;
6 Quality checking of the keyed climate data. The rescued climate data will not be of any use unless proper quality checking and verification process have been performed.

INFORMATION REQUIREMENTS: In order to submit Data Rescue project proposal for WMO funding, project submissions should include quantitative information on the existing climate archives to be rescued. This information will help in assessing the need for resources in terms of money, manpower and time. The project proposal should include the following minimum information:

1- Identification of the project target Stations for which Data Rescue is proposed with their geographical and history Metadata
2- For each Station, identify the category of archives (See appendix) to be rescued and what climate elements are included in the archives, i.e Temperature, Precipitation, Pressure, Humidity, Evaporation, Wind, Visibility, Cloud Cover, Thunder, Hail, Fog, Sunshine; Tide and Swell (for marine data) and any other derived climate parameters, such as averages, extreme values, frequencies, etc.
3- For each station, provide for each category of records summary statistics including the total number of historical records to be rescued and the period of coverage.

CONDUCT OF DARE ASSESSMENT: It is advised that the National Meteorological and Hydrological Service (NMHS) conduct its own DARE assessment on regular basis, as this would help the NMHS to get a comprehensive and updated knowledge of the data availability, gaps and needs. It provides an opportunity to build skill in handling DARE projects but also to improve the documentation and the management of the archives as part of Quality Management. However some NMHSs, due to the lack of personnel or skill, they may prefer to hire an expert or a company to do this work. Nevertheless a climatologist from the NMHS should take part of the project team to ensure DARE ownership and sustainability after the projects ends.

Appendix: Category of Standard Climatological Records for DARE project proposal. The Acronyms are provided to ease organizing the submission of information using word tables or excel sheets.

<u>Surface data climatological archives</u>

- Daily Climatological Reports (DCR)
- Monthly Climatological Summaries (MCS)
- Annual Climatological Publications (ACP)

- Daily Weather observation Reports (DWR)
- Daily river and lake water level
- River discharge report
- Tide gauge reports
- Sea and river current ,
- flood stages reports

Strip Charts (SC) and Diagrams

- Rainfall Strip Charts (RSC)
- Temperature Strip Charts (TSC)
- Humidity Strip Charts (HSC)
- Pressure Strip Charts (PSC)
- Sunshine Diagram (SD)
- Stream flow charts (SFC)
- Wind charts (WC) (primary for imaging)

Upper air data

- Daily Radio-Sonde Report (DRSR)
- Daily Wind Profile Report (DWPR)
- Monthly Radio-Sonde Summary(MRSS)
- Monthly Wind Profile Summary (MWPS)
- Annual Upper Air Publication (AUAP)

Marine Climatological Archives

- Marine Climatological Summaries (MCS)
- Ship log books

Other type of archives

- Daily weather maps (surface and altitude),
- Weather observations reports (METAR, SYNOP, CLIMAT,…),
- Obsolete electronic archives such as those available on 9track magnetic tapes and old floppy disks, punch cards, microfiches.
- Station history files
- Daily observation timing
- Others to be specified