

REQUEST FOR ADDITIONAL RESOURCES IN THE CURRENT YEAR FOR AN EXISTING SPECIAL PROJECT

Please submit the completed form via <https://www.ecmwf.int/en/support>

MEMBER STATE: ITALY

Principal Investigator¹: PAOLO STOCCHI

Affiliation: ISAC-CNR

Address: Via Pietro Goberti, 101, 40129 Bologna

Project title:

.....
High resolution (1.8 km) atmospheric reanalysis, obtained by dynamically downscaling ERA5 reanalysis with the Italian convection permitting meteorological model MOLOCH

Project account: SPITSTOC

Additional computing resources requested for year		2025
High Performance Computing Facility	[SBU]	An interval between 5,000,000 and 7,000,000 should be sufficient
Total DHS Data storage capacity	[GB]	Between 10,000-15,000
EWC resources		
Number of vCPUs	[#]	
Total memory	[GB]	
Storage	[GB]	
Number of vGPUs ³	[#]	

Continue overleaf

¹ The Principal Investigator is the contact person for this Special Project

Technical reasons and scientific justifications why additional resources are needed

Currently, for the project in question, approximately half of the available SBU for 2025 has already been consumed. We are requesting additional computing resources because we need to extend our simulations by four more years, from 2020 to 2024.

Initially, our project aimed to generate reanalyses covering the period 1990–2020, and we had produced data only up to 2016. However, to capture recent years of severe drought in Italy—critical for our research on drought events in the Po River basin—we now plan to extend the dataset up to 2024. This dataset is essential as it provides precipitation and temperature fields used to drive hydrological models.

Additionally, our initial request underestimated the computational resources needed, as it did not fully account for the significant processing time required for post-processing model outputs. Therefore, we are requesting additional SBU to complete the planned simulations and extend the reanalysis period as intended.