A web portal for statistical downscaling and datasets access of seasonal forecast based on GRID middleware

D. San-Martin (1), A. S. Cofino (1) and J.M. Gutierrez (1)

(1)Applied Meteorology Group. Department of Applied Mathematics and Computer Science, University of Cantabria. Santander ,(SPAIN).

Weather forecast is a complex multi-disciplinary problem which requires a cascade of different scientific tools, from earth system models to high-dimensional statistical and data-mining algorithms. The demand for high-resolution predictions is continuously increasing due to the multiple applications in hydrology, agronomy, etc., which require regional meteorological inputs. To fill the gap between the coarse-resolution outputsproduce by global circulation models and the regional needs of applications, a number of statistical downscaling techniques have been proposed. In this paper we describe a Web portal which integrates the necessary tools with Grid middleware allowing for distributed data access and computing. The portal is part of the ENSEMBLES EU-funded project and allows end users to interactively downscale seasonal predictions using a web browser. Both the architecture and the usage of the portal are described.