



## **New methods for downscaling climate information based on a joint empirical-statistical and dynamical downscaling approaches**

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The global climate community has produced a wide range of results from atmospheric-ocean general circulation models, which are considered as the primary source of information on the future climate change. However, there are still gaps between the spatial resolution of climate model outputs and the point-scale requirement of most of climate change impact studies. Thus, empirical-statistical downscaling (ESD) and dynamical downscaling (DD) techniques continue to be used as alternatives and various models have been made available by the scientific community. Several comparative studies have been done during the last decade, dealing with downscaling local weather variables such as temperature and precipitation over a region of interest. Accordingly, in this work, new methods and strategies based on merging ESD and DD results will be proposed in order to increase the quality of the local climate projections with a special focus on seasonal and decadal precipitation and temperature based on CMIP3/5 experiments. A new freely available ESD R-package developed by MET Norway is used and will be also presented.