



COST 733 – WG4: Applications of circulation type classifications

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Circulation type classifications have a long history in meteorology and climatology. Thereby, the usage of classifications has widened in recent decades, covering multiple applications in a wide range of fields. The main objective of COST 733 is to achieve a general numerical method for assessing, comparing and classifying typical weather situations in different European regions. To accomplish this goal, five different workgroups are established, each with their specific aims. In this framework, the main task of Workgroup 4 (WG4) in COST 733 implies the testing of the selected subjective and objective circulation type methods for various classifications. Specific attention is paid to a comprehensive selection of the applications, the performance of the selected applications and intercomparison and final assessment of the application results. Afterwards, final recommendations are passed on to Workgroup 2, responsible for the development of a general circulation method.

At present, various classification methods are used in many fields of atmospheric and climatological sciences for a large spectrum of purposes, making the classification methods one of the most important fields in synoptic and statistical climatology. Workgroup 4 addresses the following application topics: air quality, climate change and variability, hydrology, risks and hazards, forest fires and climatological mapping. Workgroup 4 participants test all of these topics, each in their specific field and their geographical area of interest. Furthermore, topics on phenology, mesoscale modelling on air quality, biometeorology and agriculture are also addressed in collaboration with COST 725, 728, 730 and 734 respectively. A more detailed overview is presented here, with a comprehensive listing of all surveys done within the COST733 framework, and some examples of the application-wise testing of the various selected circulation pattern methods.