Observations and simulations

Changes in surface mean winds together with the occurrence of extreme wind events have direct socioeconomical and environmental impacts across Sweden. Understanding the mechanisms that drive wind variability is crucial so that future wind scenarios can be constructed and adaptation strategies can be developed. Therefore, this thesis focuses on near-surface winds, ones of the less studied climate variables, and it explores how they have varied and changed across Sweden during the past decades. By analysing meteorological observations and climate model outputs, both mean and gust wind speeds are investigated to identify the physical processes behind their origins and to attribute their past variations and changes.



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