

In the context of severe global warming and clearly at a crossroad, humanity is facing a daunting task. In an attempt to regain the paradise lost by intensive, and to some extent irrational, industrialisation and anthropisation, humanity is trying to salvage what is left of the environment hoping we are not already past the point of no return in this endeavour. In this respect, the purpose of the current European collaboration is pivotal to the understanding of the finely-grained meteorological patterns emerging of late, especially the extreme manifestations such as tornadoes, brief but extremely violent thunderstorms, extreme hail storms etc. as the inception point for further study and practical immediate actions against the more and more dire climate challenges humanity is obligated to overcome in the foreseeable future. We bring all of our optimism, determination, assiduousness and creativity in this pursuit of knowledge, in order to extract from the valuable basis of past meteorological data, by means of state-of-the-art machine learning and deep learning techniques, viable metainformation about mostly small-scaled meteorological phenomena in an attempt to enable future researches to properly solve the vital task humanity is now cornered to face: severe and global climate change.