



## Ten years of tornadoes and waterspouts in Italy

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We present an updated spatial and temporal distribution of tornadoes and waterspouts that developed over Italy in the period 2007–2016. The database is based on the European Severe Weather Database (ESWD) and an ongoing research from the Italian media by the authors. A quality verification process followed, as each reported case in ESWD was double checked, while additional cases have been identified. That quality analysis revealed that reports in newspapers are often not trustable, showing a general confusion of the media between tornadic events and downbursts. Sources based on the web, and in particular amateurs' forum, were found much more reliable. Uncertain cases have been inserted in the database only when the limited information available on those can plausibly be associated to tornadoes.

Italy experiences an annual mean of 32 tornadoes and 49 waterspouts based on 2007–2016 data. In terms of seasonal temporal analysis, tornadoes (waterspouts) occurs more frequently during summer (autumn) followed by autumn (summer). On a monthly basis, tornadoes (waterspouts) are more frequent during August (September) followed by October (November). The spatial analysis reveals the presence of specific areas where the risk of tornadic occurrence and of strong/severe events is higher. In particular, almost 15% of all tornadoes events and 21% of all waterspouts events occurred over Lazio region.