Supporting Information for

Multi-scale dynamics and mesoscale predictability of the catastrophic September 2022 Marche (central Italy) flood

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Contents of this file:

Figures S1 and S2

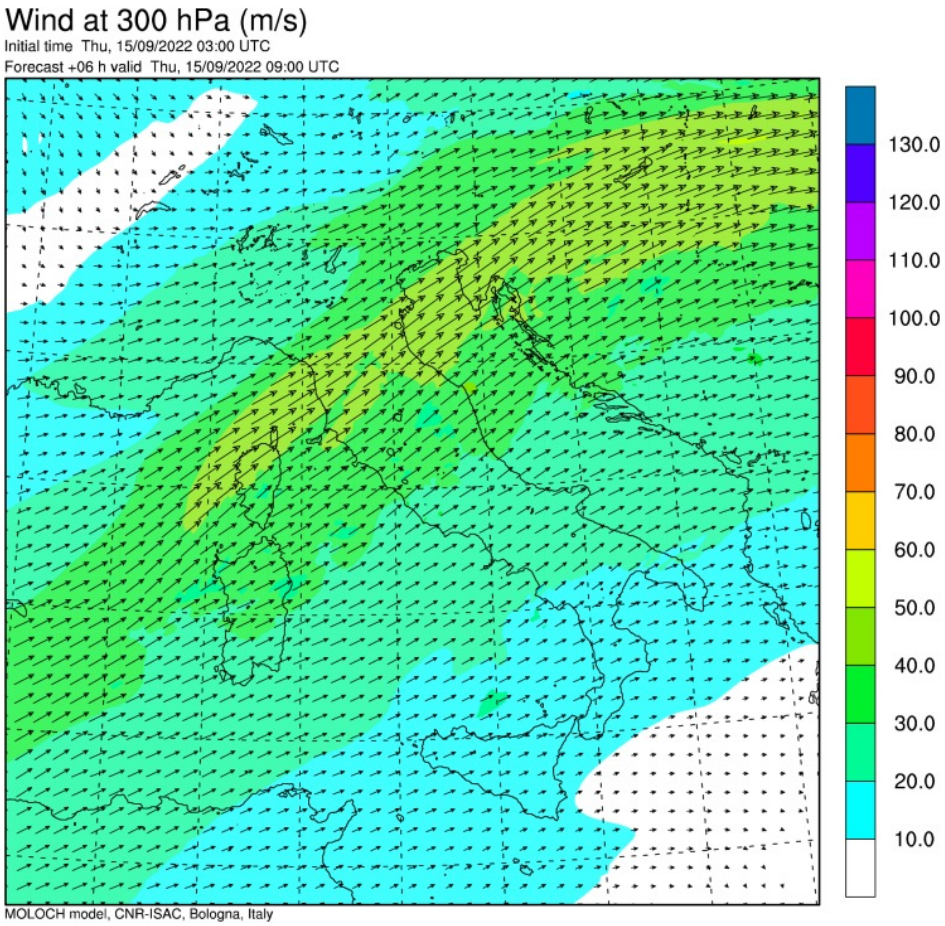

Figure S1. Wind field at 300 hPa on 15 September 2022 at 09:00 UTC, derived from the MOLOCH model. *Source: CNR-ISAC (*www.isac.cnr.it/dinamica/projects/forecasts/*).*

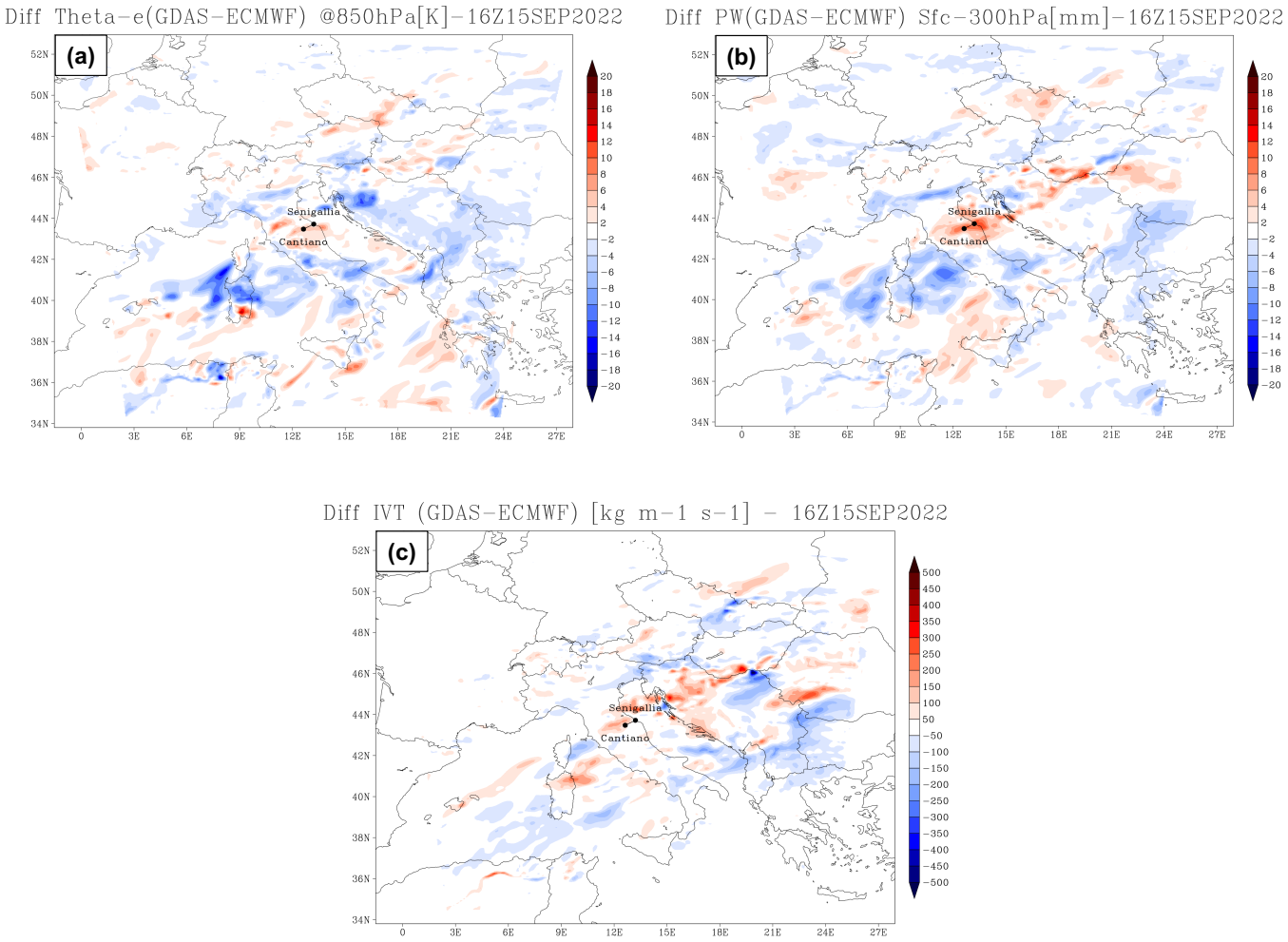

Figure S2. Differences in atmospheric fields between the GDAS- and ECMWF-forced runs on 15 September 2022 at 16:00 UTC: (a) Equivalent potential temperature (θ_e) at 850 hPa [K]; (b) Precipitable Water (PW) [mm]; and (c) Integrated Vapor Transport (IVT) [$kg\ m^{-1}s^{-1}$].