



ManUniCast: A Community Weather and Air-Quality Forecasting Teaching Portal

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Manunicast was borne out of the needs of our teaching program: students were entering a world where environmental prediction via numerical model was an essential skill, but were not exposed to the production or output of such models. Our site is an educational testbed to explain to students and the public how weather, air-quality, and air-chemistry forecasts are made using real-time predictions as examples. As far as we know, this site provides the first freely available real-time predictions for the UK. We perform two simulations a day over three domains using the most popular, freely available, community atmospheric mesoscale and chemistry models WRF-ARW and WRF-Chem:

1. a WRF-ARW domain over the North Atlantic and western Europe (20-km horizontal grid spacing)
2. a WRF-ARW domain over the UK and Ireland (4-km grid spacing, nested within the 20-km domain)
3. a WRF-Chem domain over the UK and Ireland (12-km grid spacing)

Called ManUniCast (Manchester University Forecast), we offer a suite of products from horizontal maps, time series at stations (meteograms), skew-T-logp charts, and cross sections to help students better visualize the weather and the relationships between the various fields more effectively, specifically through the ability to overlay and fade between different plotted products.

<http://www.manunicast.com>

This presentation discusses how we funded and built ManUniCast, the struggles we faced, and its use in our classes.