Targeted observations for the Mediterranean. First results from the 2008 Eurorisk-PREVIEW campaign
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One of the objectives of the Second Phase of the MEDEX Project on cyclones that produce high impact weather in the Mediterranean includes the test of using targeted observations for improving the forecast of damaging weather events in the Mediterranean basin. The first MEDEX campaign was planned for autumn 2008. The coincidence of this field campaign with the last months of the real-time trial for Eurorisk-PREVIEW project and the partial convergence of objectives of both projects finally carried out to the use of the DTS facilities, developed by ECMWF in partnership with the UK Met Office for Eurorisk-PREVIEW, in order to assess the feasibility of operational adaptive observations for the Mediterranean. In this poster the first results of the campaign, referred to the Mediterranean, are summarized.

Forecast products
- ECMWF: Deterministic, EPS probab. charts, EFI, Ensemble Mean/Spread, Ensemble quartiles charts
- UKMO MOGREPS 15: Ensemble Mean / Spread, Ensemble quartiles charts

Case proposal
1. Severe life threatening with large degree of associated uncertainty
2. High uncertainty in the forecast but less severe conditions
3. Severe weather conditions with low uncertainty in the forecast

SAP calculation
Case Accepted ➔ SAP request automatically submitted
Cases with the same verification time (same weather event) and different target times ➔ Selection of optimal time for targeting

Extra observation proposal
Decision on weather events for targeting: Events with potential large societal / economic impact (DTS Userguide, v.1.2)

Usefulness of targeted observations: Western, Central Mediterranean

Usefulness of targeted observations: Western Mediterranean

Usefulness of targeted observations: Eastern Mediterranean

Summary
- The trial campaign of Eurorisk-PREVIEW in the Mediterranean, for autumn 2008, has allowed to check the usefulness of targeted observations for improving the forecast of high impact weather events.
- 54 Mediterranean events have been targeted and documented by means of a total of 675 observations deployed.
- The first evaluation of the results allows to be optimistic in the use of targeted observations in cases of high impact weather events or large uncertainty in the forecasts.
- The smaller size of the perturbations in the Mediterranean, the importance of the mesoscale forcing mechanisms and the presence of large areas untargetable over North Africa make difficult the targeting of some cases.
- The studies about the impact of the observations will clarify the improvement that targeted observations introduce in the forecast of high impact events

Bibliography

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