

Atmosphere monitoring Service (MACC/-II)

Data and information
security policy

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Helping
Europe
respond to
climate
change and
poor
air quality

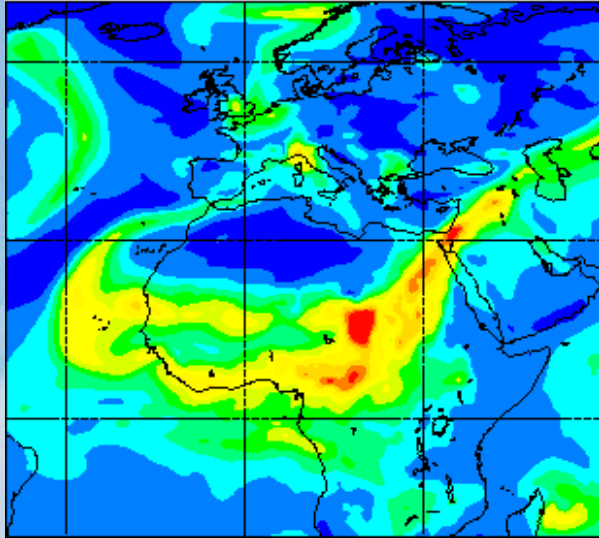


- The relevance for security aspects of the data produced has not been a concern so far in MACC and MACC-II.
- Some products are of potential interest for security but:
 - outside of Europe, resolution is relatively coarse ($> 100\text{km}$) and some downscaling/downstream element is probably needed in the chain for having a full “strategic” value.
 - we do not operate any on-demand or specific service, apart from large environmental events (volcanoes, large fires...) and, outside of routine time-critical production, we are not dimensioned to operate in rush mode.
 - responding to certain type of applications and user requirements involves in general developments and validation / quality and fit-for-purpose assessment activities. Armed forces is not a users' segment that we have been addressing so far.

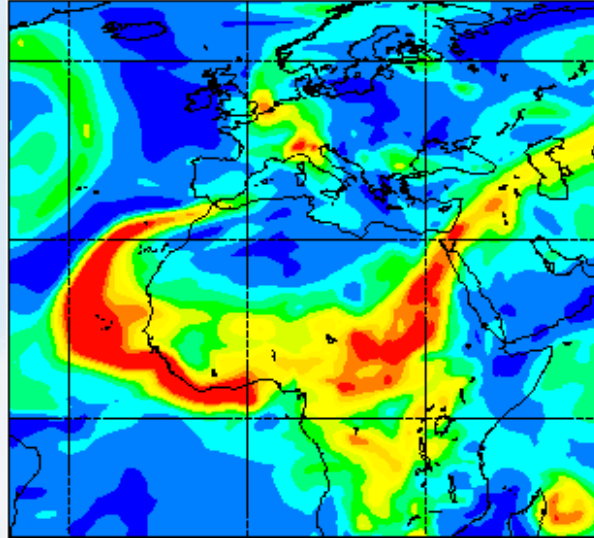
Wind-blown dust

Example : Assimilation of MODIS AOD at 550 nm, Saharan dust outbreak, 06-03-2004

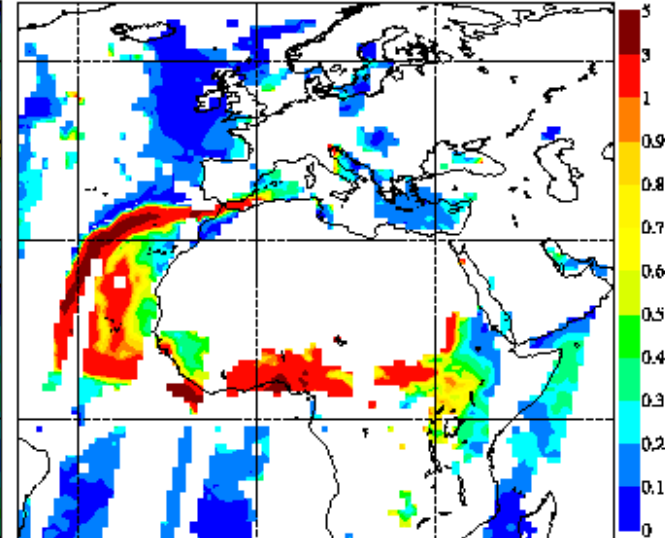
Model simulation



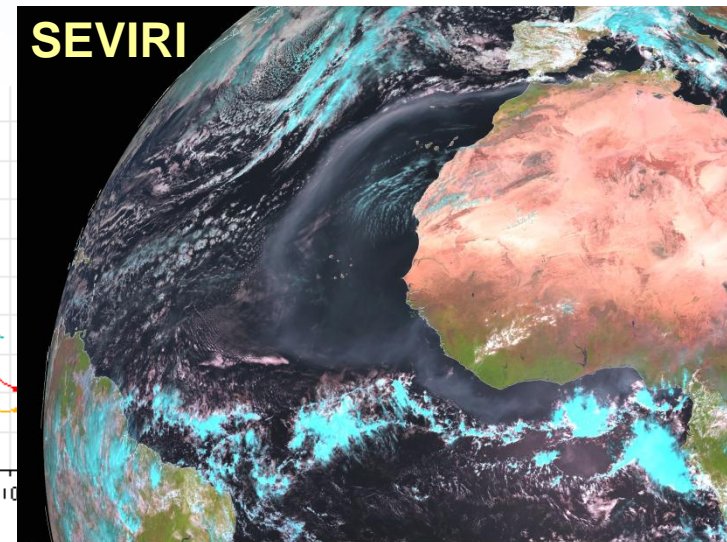
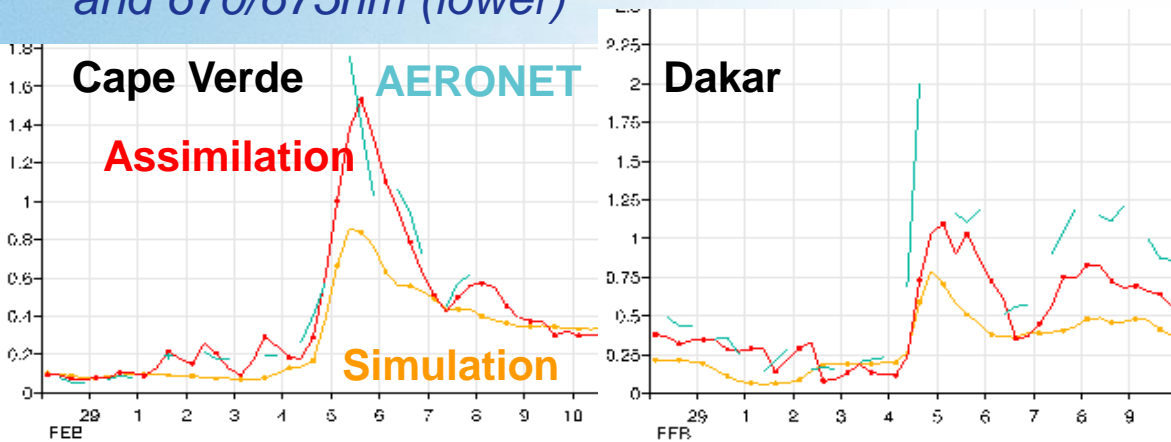
Assimilation



MODIS



*Aerosol optical depth at 550nm (upper)
and 670/675nm (lower)*



Morcrette et al., 2009, *JGR*; Benedetti et al., 2009, *JGR*

Dust forecasting

BBC Low graphics Help

NEWS **LIVE** BBC NEWS CHANNEL

News Front Page

Page last updated at 10:42 GMT, Wednesday, 23 September

Desert dust storm chokes Sydney



Sydney's red dust has been blown from the outback

A large stretch of Australia's east coast, including the largest city Sydney, has been shrouded in red dust blown in from the desert outback.

Visibility in Sydney was so bad that flights were diverted and harbour ferry traffic disrupted.

ABC News NewsRadio Now playing Video

News Home Just In Australia World Business Entertainment Weather

Dept admits error in air quality forecast

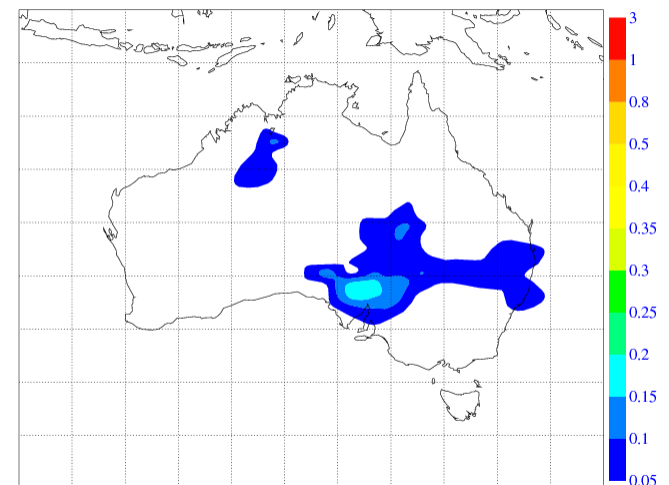
Posted 11 hours 54 minutes ago
Updated 11 hours 51 minutes ago

The New South Wales Environment Department has admitted its forecast for air quality in Sydney today was wildly wrong after a dust storm prompted hundreds of emergency calls due to breathing difficulties.

Audio: Respiratory expert Dr Christine Jenkins speaks to ABC Local Radio (ABC News)

Until this morning, the department's website was forecasting conditions would be good.

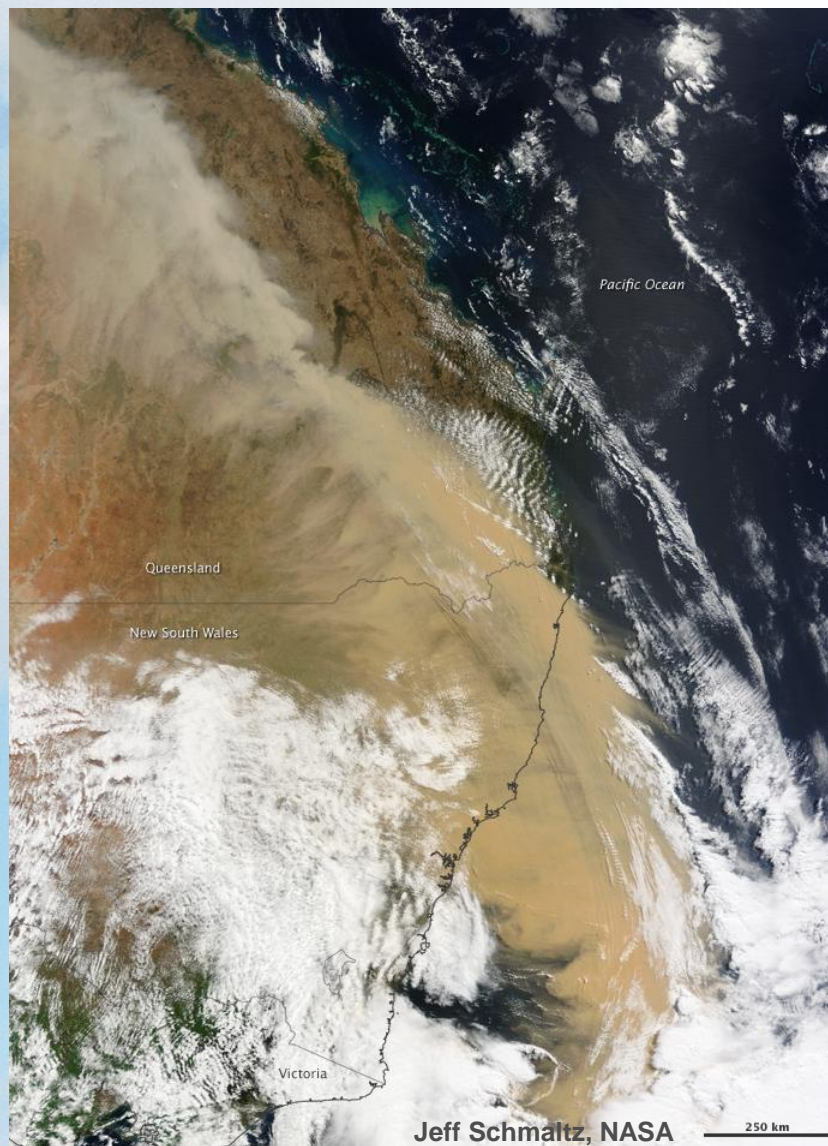
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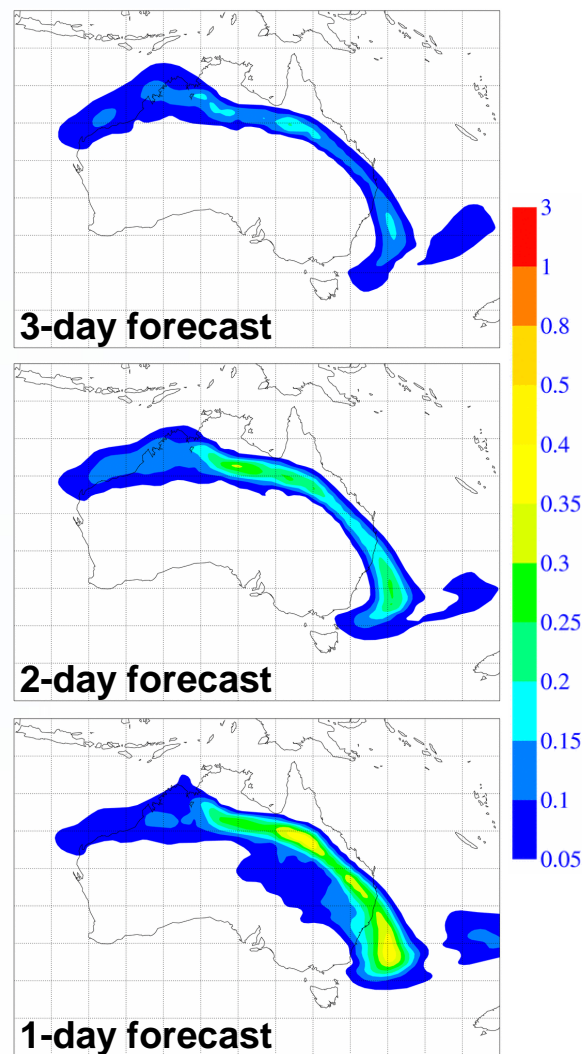
MACC dust aerosol optical depth

SEVENTH FRAMEWORK PROGRAMME

Australian dust storm



Dust aerosol optical depth 00UTC 23 September

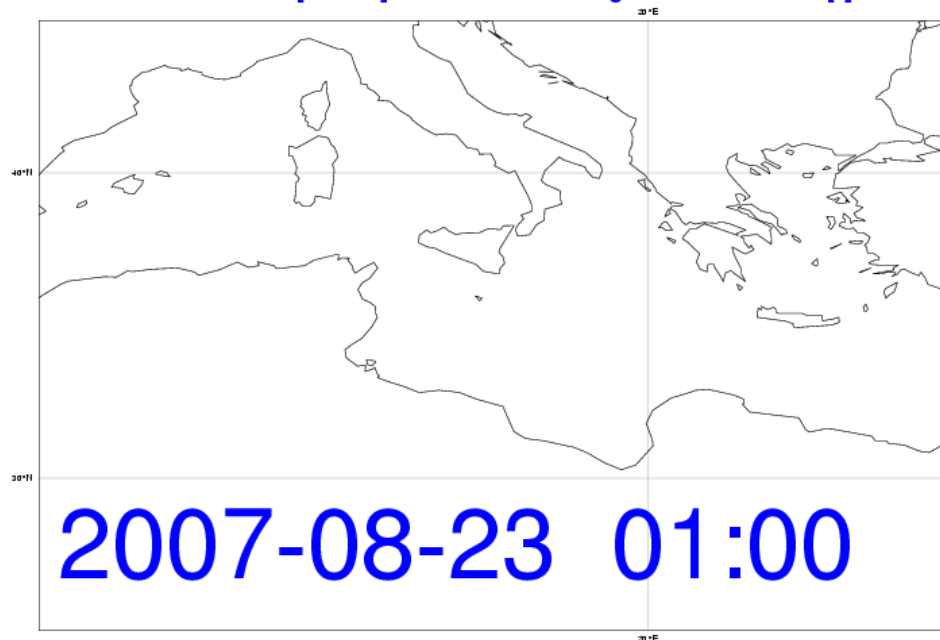


Wildfires

Example : Fires in Greece and Algeria, August 2007

Observed Fire Radiative Power (from MSG/SEVIRI) is converted to emitted aerosol.

Observed Fire RP [W/m²] and Modelled Organic Matter OD [-]





- Long-standing tradition in meteorological data sharing between countries worldwide.
- Medium-range forecasting is global by nature: global data is needed to make forecasts (“butterfly” effect). Limiting access to data can backfire.
- Forecast data is produced in several centre worldwide (of varying skill and resolution indeed).
- No approaches so far regarding data restrictions. But ECMWF data is (certainly) used by its Member States to serve their Forces.

Concluding remarks

- Very limited experience regarding addressing security requests (for providing or denying data).
- Publicity and transparency on the GMES services (method, tools, validation results, large consortia...) goes against stealth. Though there is strategic value to the existing services (or to what could be developed using the “machinery” that we have put in place), making services specifically for security would require ad hoc arrangements, which are not in the scope.
- Denying access to our data can backfire, as the quality of our products rely on data acquired worldwide.

Website:

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