

SDS Forecasts at TSMS



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Dust plays a major role in several aspects of the Earth System.

Dust aerosols transported from the surrounding deserts (Sahara, Arabia, etc.) and semi-arid areas have great importance for the climate, human activities, land and marine ecosystems and health.

For these reasons, the various modeling studies for the dust transport forecast has been carried out.



Dust Storm (SDS) at Mardin



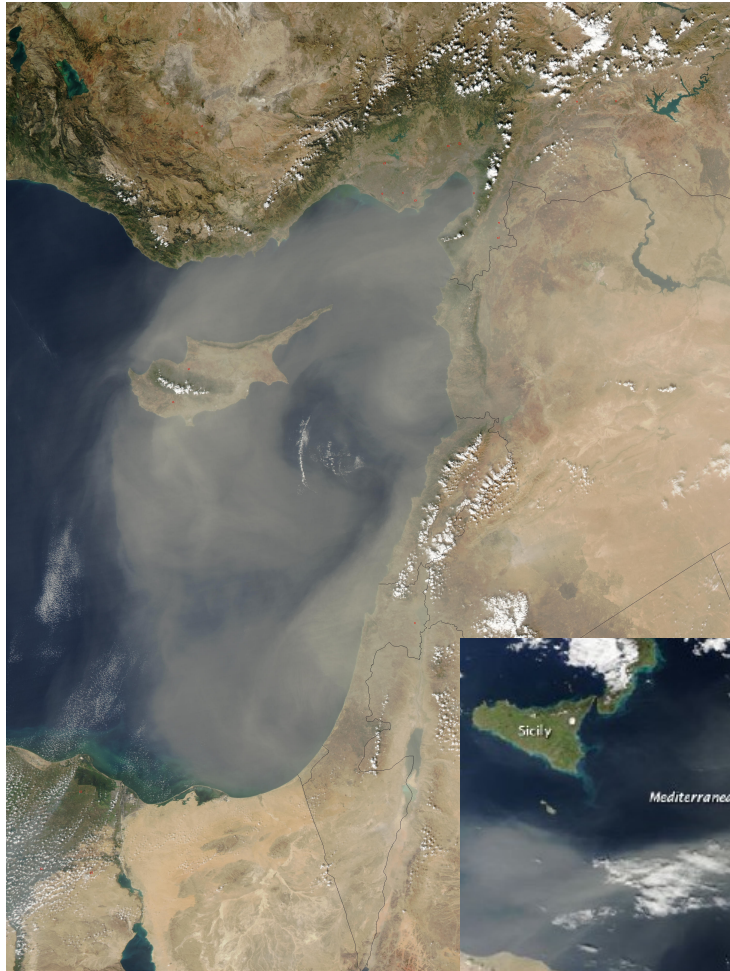
Dust Storm (SDS) at Kuwait



Sand and Dust Storm (SDS) - Main Source Areas



Dust Transport



Dust Transport Model (BSC-DREAM8b)

The BSC-DREAM8b dust transport model has been established at TSMS in cooperation with Spanish Met. Service under the EU TAIEX Small Grants Program.

The operational forecasts by BSC-DREAM8b have been started in June 2010. Estimates are published at the website of our General Directorate.



<http://www.dmi.gov.tr/tahmin/toz-modeli.aspx>

3 days (72 hour) forecasts with 3 hour intervals for the Mediterranean, Middle East and Turkey

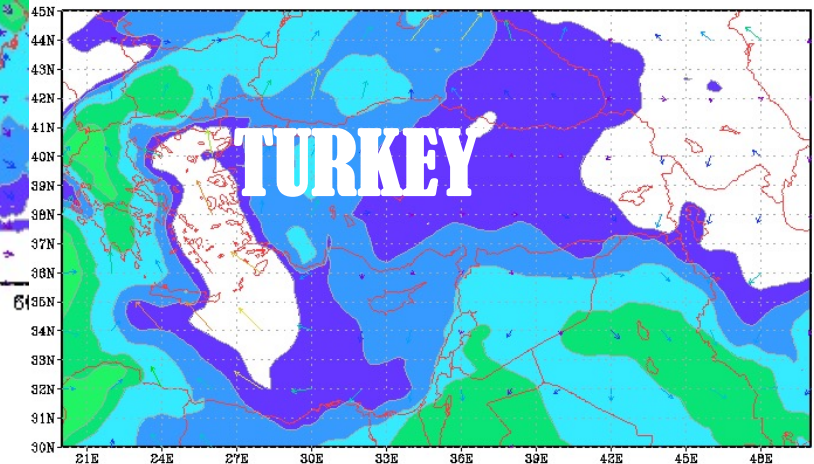
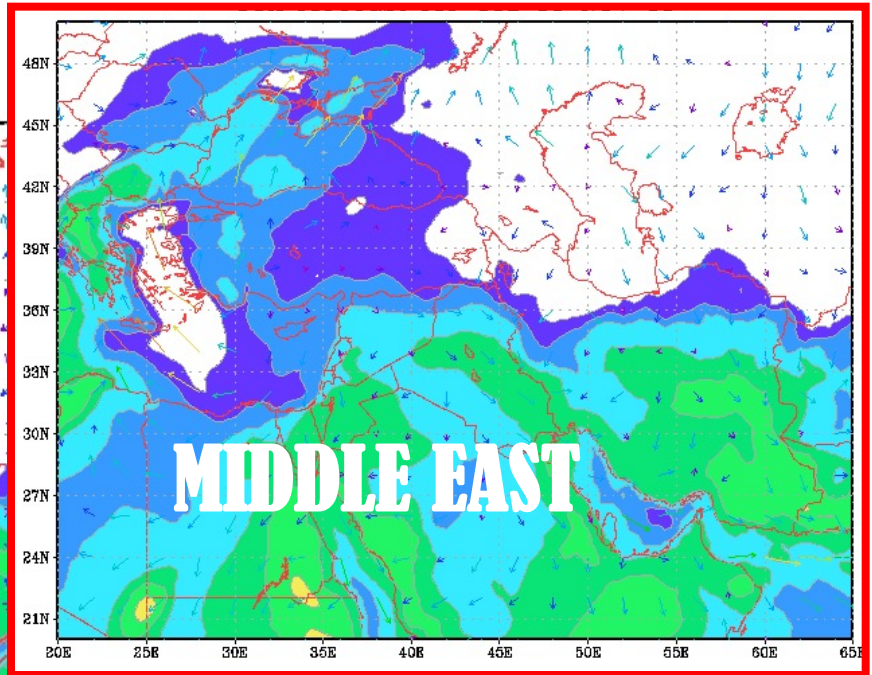
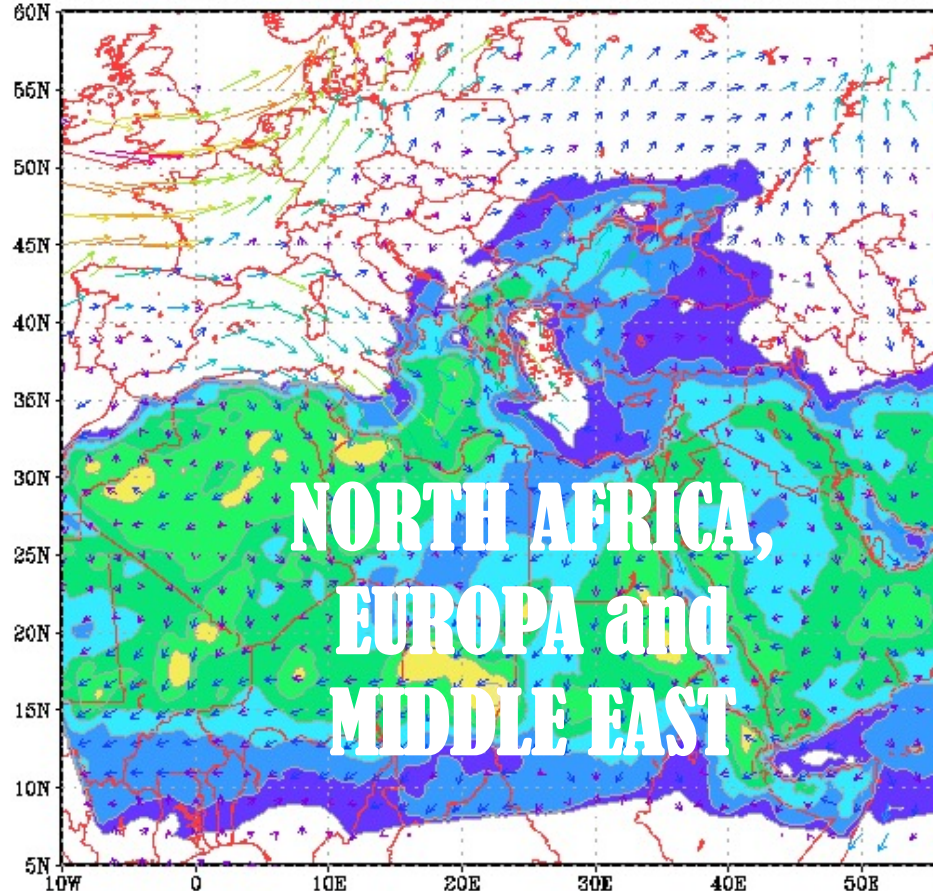
Surface concentration ($\mu\text{g}/\text{m}^3$) Dust Flux (g/m^2) Dry & Wet Deposition (mg/m^2)

Toz Tahmini																												
Gösterim Şekli	Harita		Hareketli Görüntü																									
Bölge	Avrupa		Türkiye		Ortadoğu																							
Harita Türü	Yüzey Toz Konsantrasyonu								Toz Yükleme				Kuru Çökeltme				Yaş Çökeltme											
Yüksek Seviye	1700 m. Toz Konsantrasyonu								3000 m. Toz Konsantrasyonu								5800 m. Toz Konsantrasyonu											
Saat	00	03	06	09	12	15	18	21	24	27	30	33	36	39	42	45	48	51	54	57	60	63	66	69	72			

BSC-DREAM8b Forecast Domains

DMI/BSC-DREAM8b Yuzey Toz Konsantrasyonu ($\mu\text{g}/\text{m}^3$)

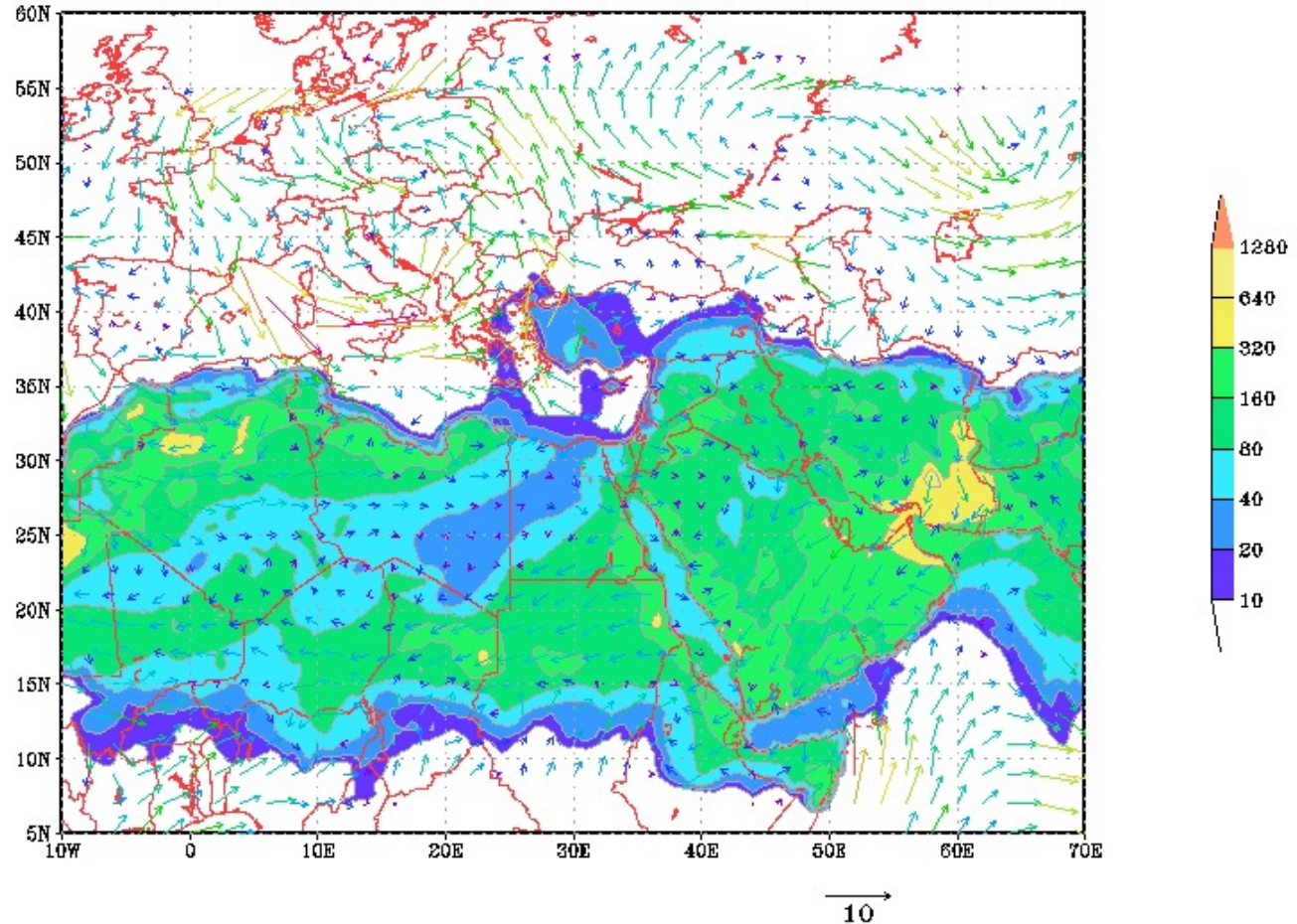
30h forecast for 18z 11 NOV 10



Internet Site of Dust Forecasts

Surface dust concentration ($\mu\text{g}/\text{m}^3$)

DMI/BSC-DREAM8b Yuzey Toz Konsantrasyonu ($\mu\text{g}/\text{m}^3$) ve 10m Ruzgar
48h forecast for 12z 26 SEP 10

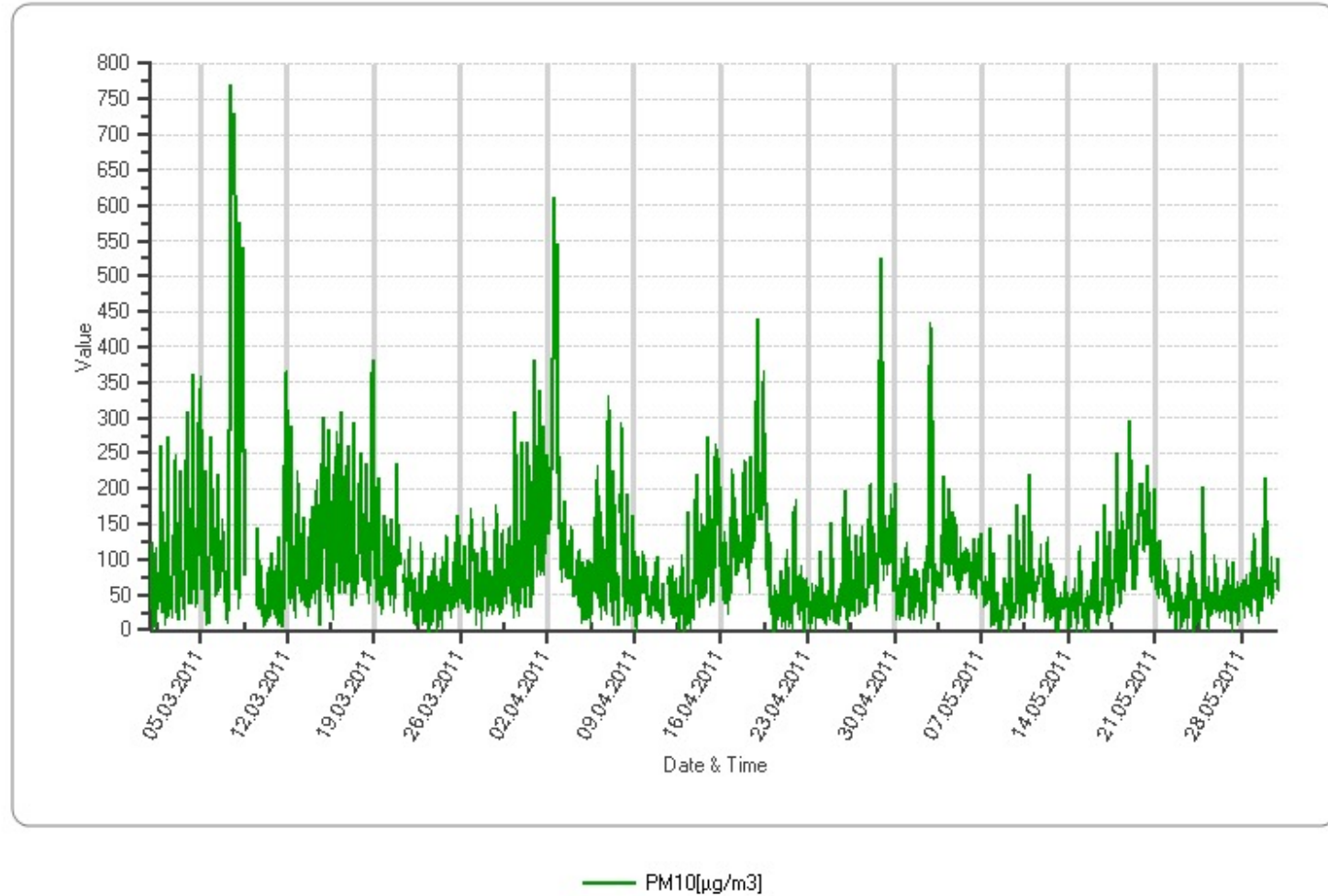


Air Quality Measurement (PM10) of Ministry of Environment and Forestry at Southeastern Anatolian Region (01.03.2011 – 31.05.2011)

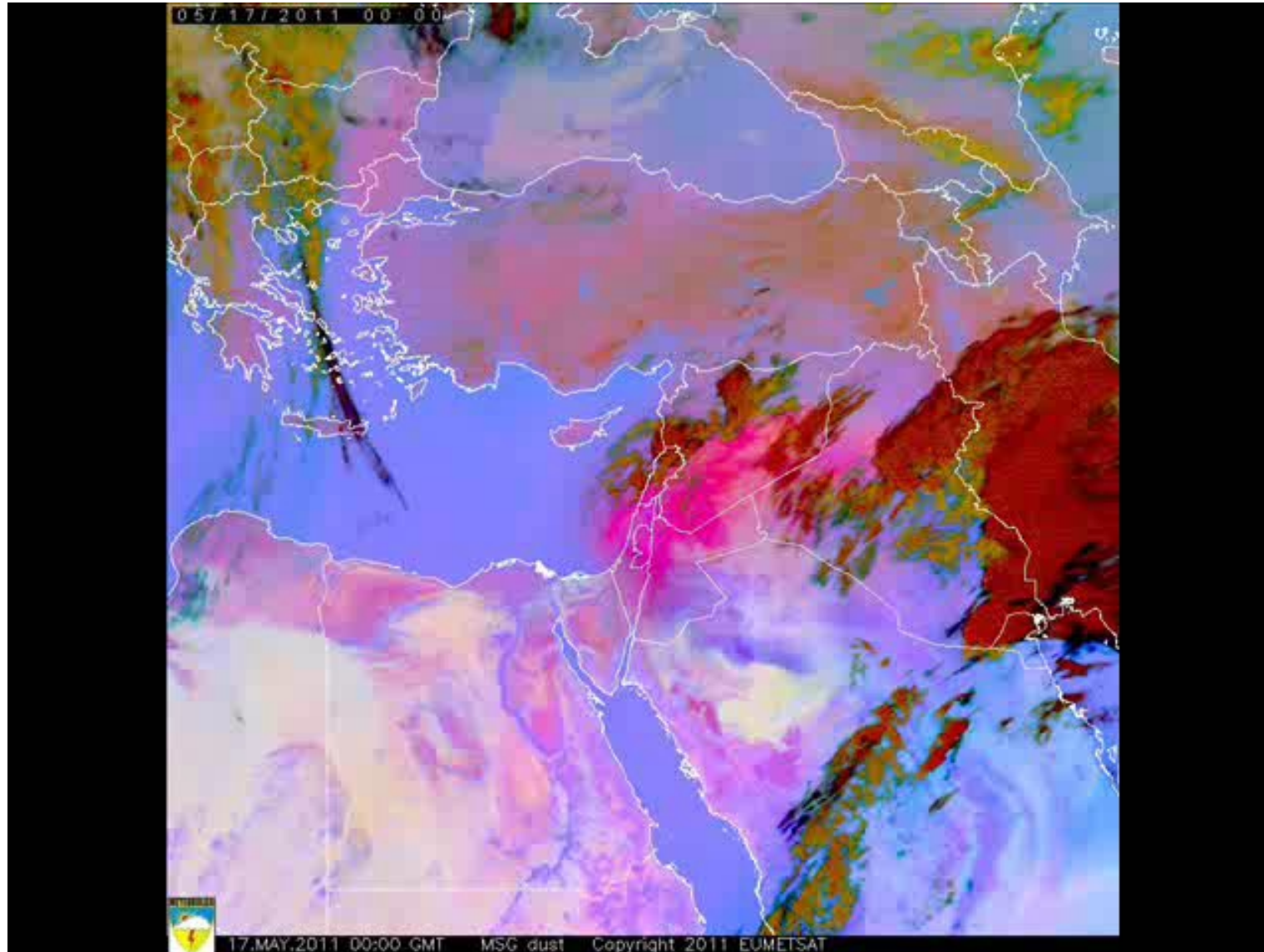
Gaziantep

Measurements of MoEF - GAZIANTEP

İstasyon:GAZIANTEP Periyodik:01.03.2011 00:00 - 31.05.2011 00:00 Rapor Türü:AVG



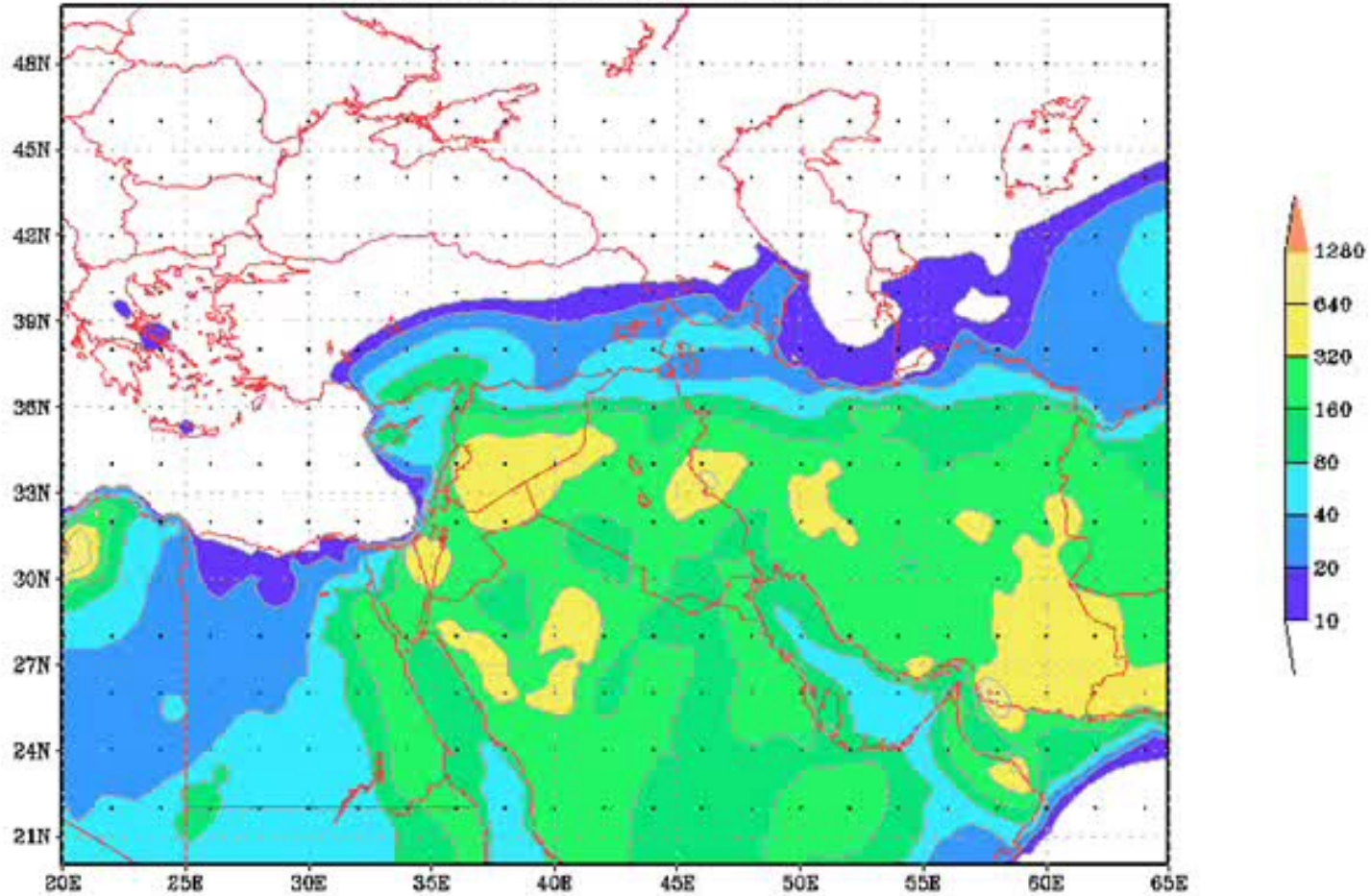
BSC-DREAM8b Dust Forecast, 2011.05.17



DUST

BSC-DREAM8b Dust Forecast, 2011.05.17

DMI/BSC-DREAM8b Yuzey Toz Konsantrasyonu ($\mu\text{g}/\text{m}^3$) ve 10m Ruzgar
0h forecast for 12z 17 MAY 11



WMO SDS-WAS

World Meteorological Organization Sand and Dust Storm Warning, Advisory and Assessment System

Sand and Dust Storm Warning Advisory and Assessment System (SDS-WAS) had been formed in WMO-AREP (Atmospheric Research and Environment Program). The establishment of the SDS-WAS project is a response to interest of more than 40 WMO members to improve capabilities for more reliable sand and dust storm forecasts.

WMO has 2 different SDS Center located at Spain and China. The responsibility area of Spain covers Europe, North Africa and Middle East. China is responsible from Asia Region.

Dr. Nickovic will give detailed information about SDS-WAS.

On the other hand, **Regional Cooperation on Environment and Meteorology** between Turkey, Iraq, Iran, Syria and Qatar has been started with the 1st Ministerial Meeting in Ankara, Turkey (28- 29 April 2010).

The training course named “Meteorological Services, Sand and Dust Storm (SDS), Forecast and Early Warning System” and “Erosion Preventing Techniques and Controlling Methods and Forestry” was organized by Turkish State Meteorological Service (TSMS) as scheduled in the “Action Plan” signed during the 2nd Ministerial Meeting in Tehran, Iran (26-29 September 2010).

2nd. Training Course on WMO SDS-WAS

(Satellite and Ground Observation and Modelling of Atmospheric Dust).

Date and Venue: Training will be held at Antalya, 21-25 Nov. 2011.

Organized by : World Meteorological Organization (WMO), European Organization for the Exploitation of Meteorological Satellites (EUMETSAT), Barcelona Supercomputing Center (BSC), Spanish Meteorological Service (AEMET) and Turkish State Meteorological Service (TSMS)

Invited Countries:

Turkey, Iran, Saudi Arabia, Qatar, Kuwait, Iraq, Syria, Jordan, Lebanon, Yemen, Oman, Arab U. Emirates, Mauritania, Senegal, Ethiopia, Chad, Cape Verde, Burkina Faso, Tunisia, Egypt, Libya, Sudan, Morocco, Algeria, Spain and ACMAD (African Centre of Meteorological Application for Development)

Thanks a lot for your kind attention...



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