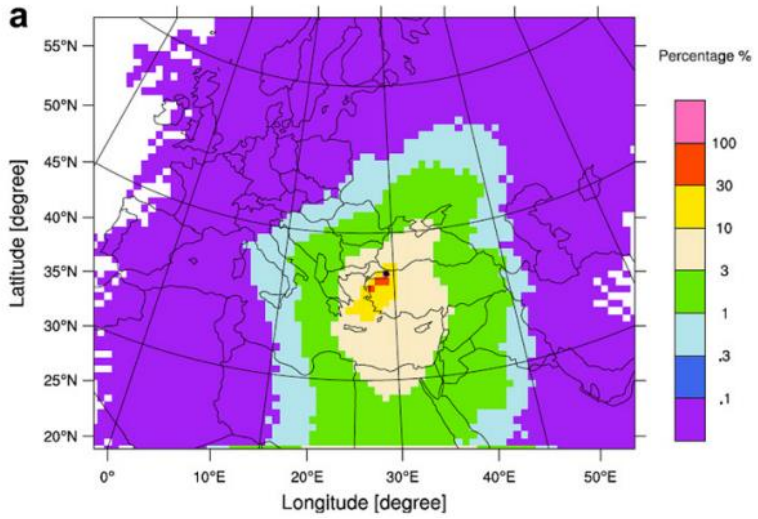

Εικόνα 1: Map for the probability of arrival of trajectories starting from Istanbul, over the 30-years period based on NCEP 6-hourly meteorological data at 2.5resolution. Dot point indicates the city of Istanbul).

Γεγονός: The city of Istanbul is hosting almost 17% of Turkey's population. Since the southern part of the Greater Istanbul area (GIA) is the most urbanized, further growth will intensify pressure on industrial and residential uses in the northern part of the metropolitan region, where the natural protection areas and the watersheds are located (OECD, 2008). Average wind speed is highest in winter and lowest in summer with annual average of about 2.7 m s-1. The humidity is high during all seasons (Ezber et al., 2007). The heating effect due to urbanization was found to produce two-cell structure during summer, one on the European and one on the Asian side of the city. The cells extend to about 600e800 m height in the atmosphere over the city and combine aloft (Ezber et al., 2007). (πηγή: http://www.sciencedirect.com/science/article/pii/S1352231010010162?via%3Dihub)

Fourth September 2011 was a typical Etesian day with strong-channelled northeasterly surface winds >15ms-1 over the archipelago (Tyrlis and Lelieveld, 2012). Under such conditions, the afternoon marine atmospheric boundary layer was around 1000, 700 and 500m in the north, SW and SE (southeast) Aegean (Tombrou et al., 2015; Dandou et al., 2014). Most aerosol mass over the AS during the Etesians is associated with the transport of aerosols and their precursors from outside Greece. Therefore, developing abatement strategies to reduce aerosol levels in the EM is both a national and transnational task. Key findings from the current and similar applications can provide information on the origin of air parcels and the contribution of local and exogenous sources, thus on the effective design of air policies. (πηγή: https://www.atmos-chem-phys.net/15/8401/2015/)

Θέση πηγής: 

1. Υπολογίστε την εξέλιξη της διασποράς του θυσάνου κατά την ημέρα της Ετησίας (μελτεμιού)
2. Υπολογίστε την οπισθοτροχιά των αέριων μαζών που βρίσκονται στο Αιγαίο (37° 48' 11'' N, 25° 02' 33'' E) την ίδια ημέρα.

Χρήσιμα links (NOAA/ARL READY)
https://ready.arl.noaa.gov/index.php
https://ready.arl.noaa.gov/HYSPLIT.php
https://ready.arl.noaa.gov/hypub-bin/dispasrc.pl
https://ready.arl.noaa.gov/hypub-bin/trajtype.pl?runtype=archive