

**MALE' DECLARATION ON CONTROL AND PREVENTION  
OF AIR POLLUTION AND ITS LIKELY TRANSBOUNDARY EFFECTS  
FOR SOUTH ASIA**

# **Progresses in Iran**

**(COUNTRY REPORT)**

**BANGKOK**

**25 NOV 2015**

**Masood zandi**

# IRAN (Islamic Republic)



Location: 26 - 38 N, 44 - 63 E

Population > 70 million

Total Area: 165,000,000 ha

-26.6m ≤ Altitude ≤ 5671m MSL

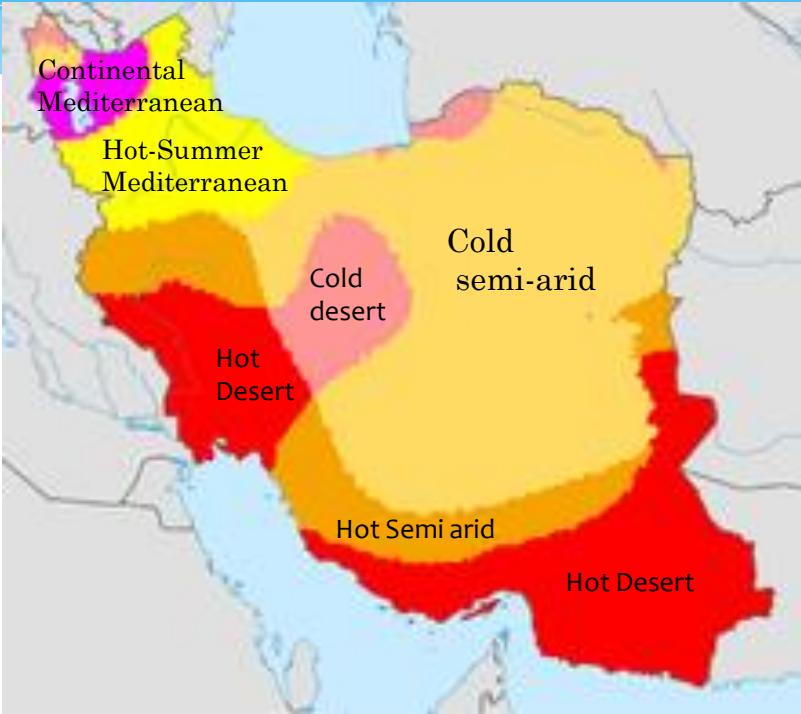
0 ≤ Precipitation ≤ 1800mm

Coastline length: 3500 km

# Topographic Map

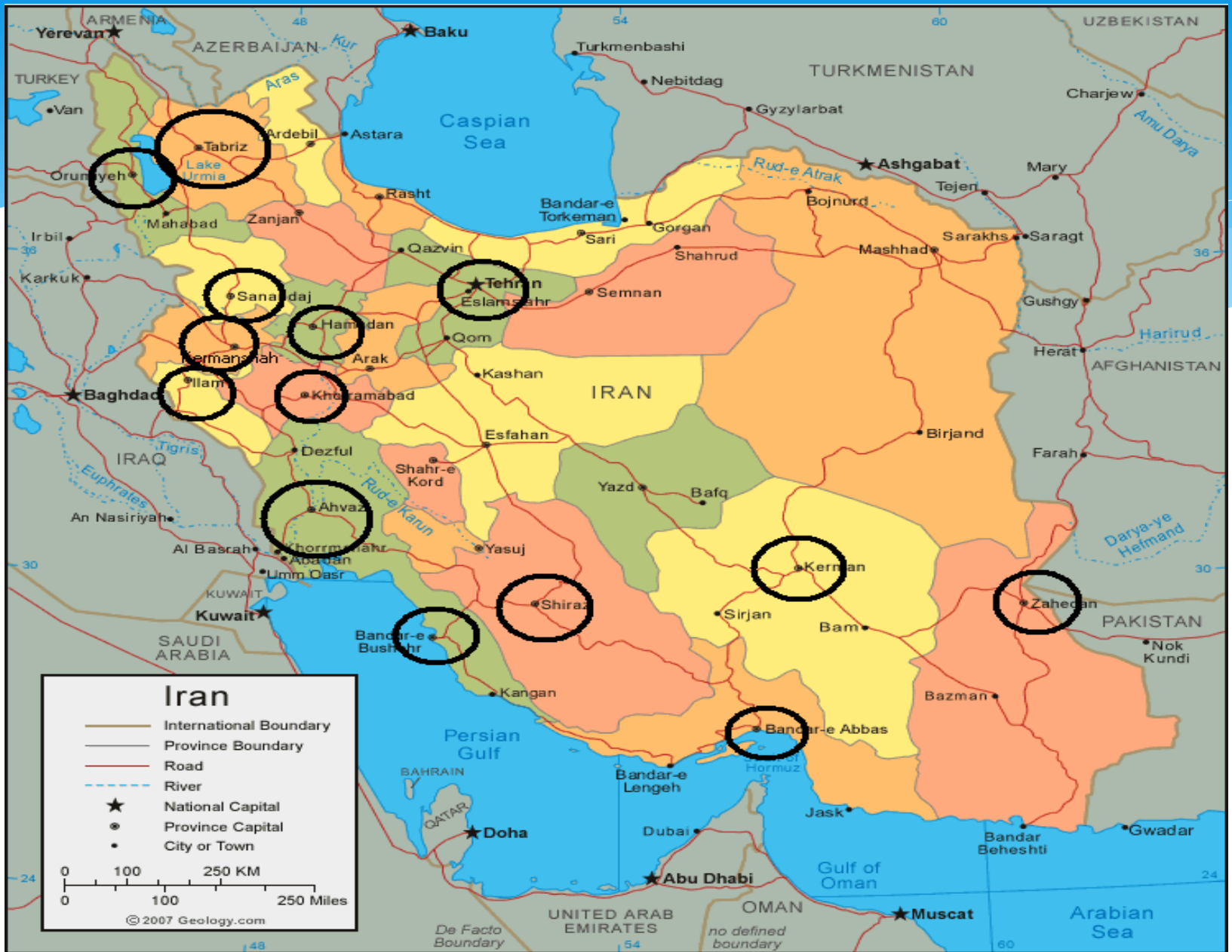


# Climate Map

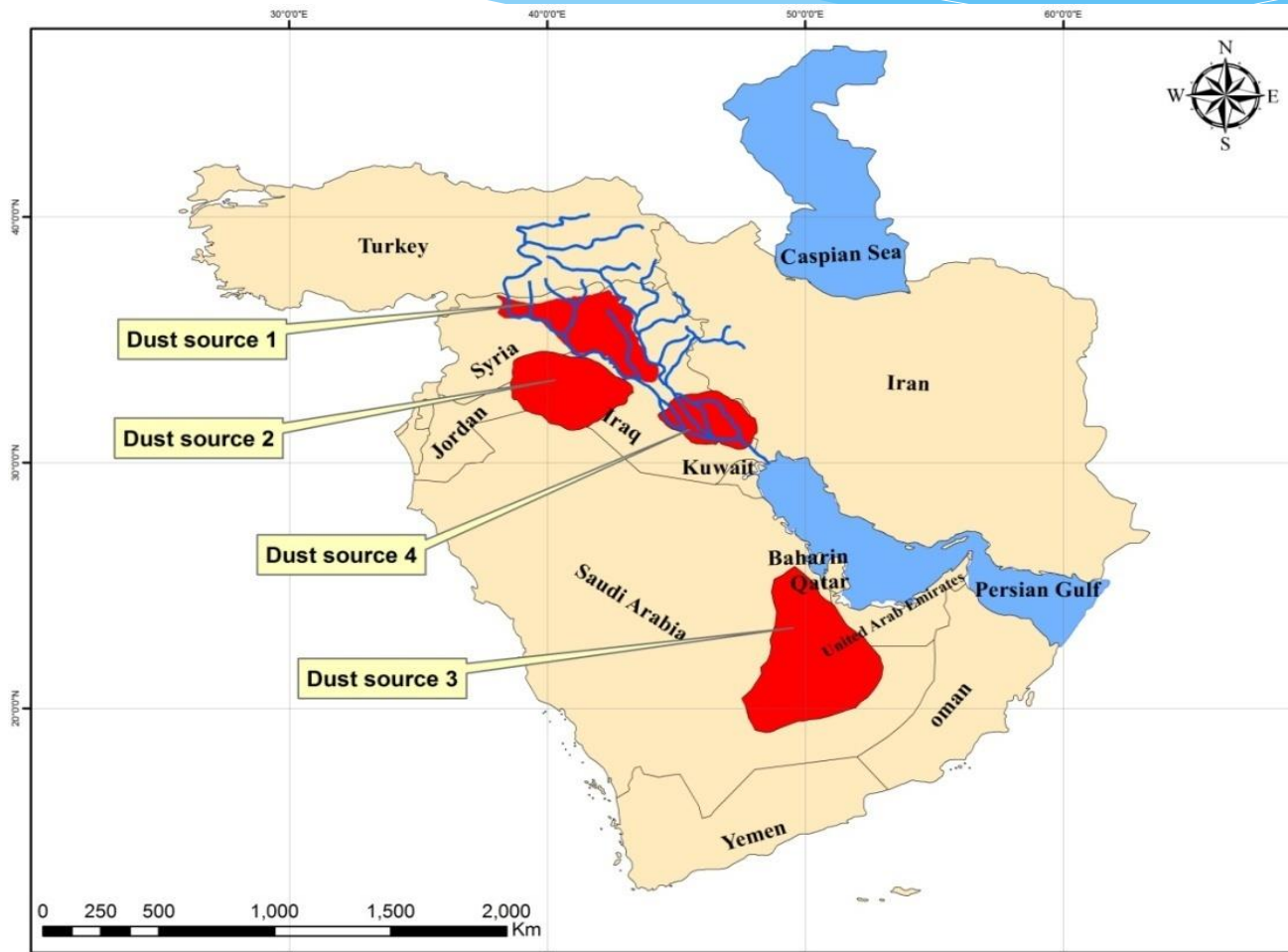


# MIDDLE EAST



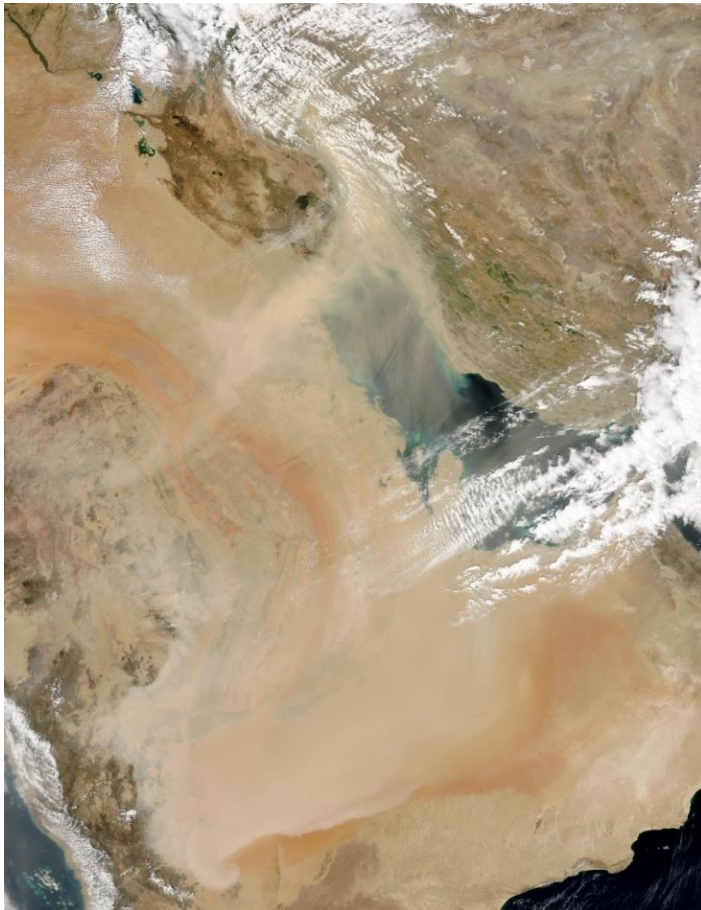


# Regional dust chains (UT-GRC, 2012)



# Major Naturally Caused Pollution Episodes

## Desert Dust Intrusion

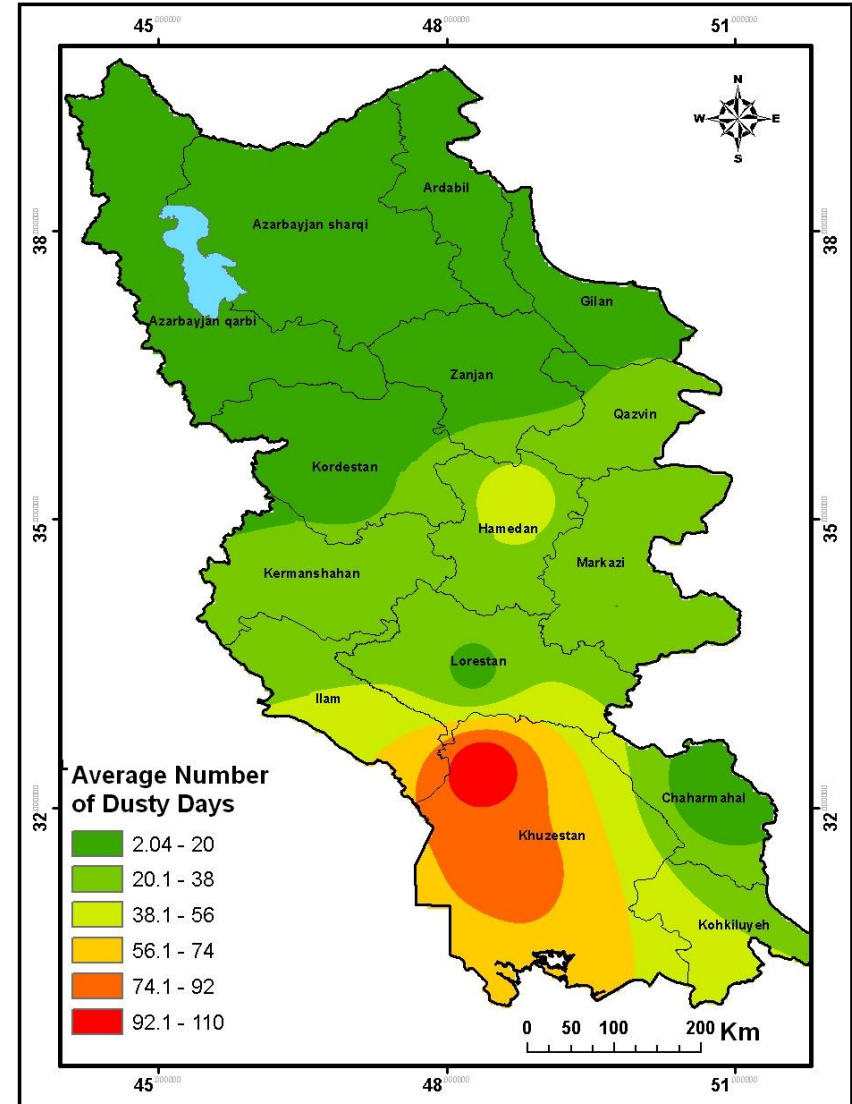


visibleearth.nasa.gov

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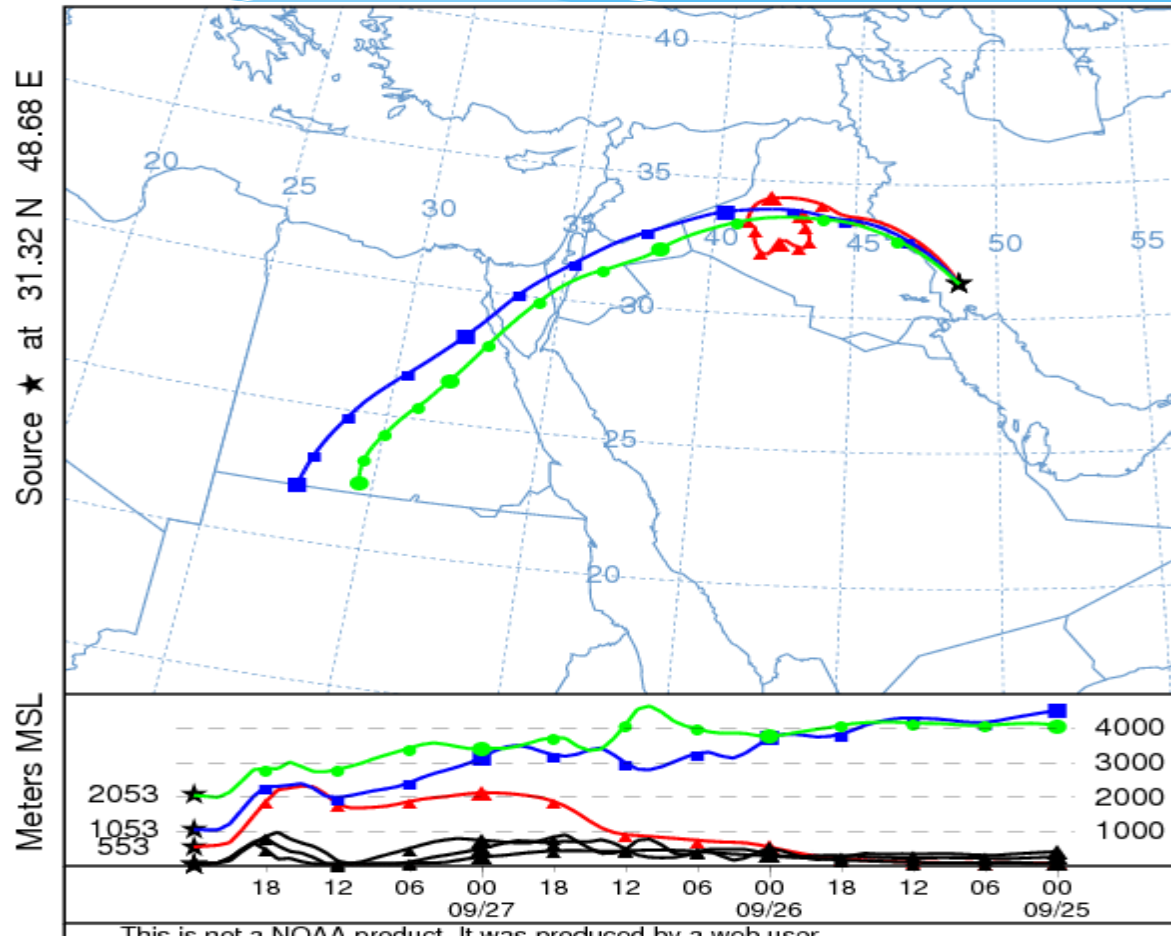


92.1 - 110



(Nasouli A. A. et al, 2009)

# Backward trajectory of HYSPLIT model



# Major Naturally Caused Pollution Episodes

## ○ Inversion Episodes

Several episodes in cold season

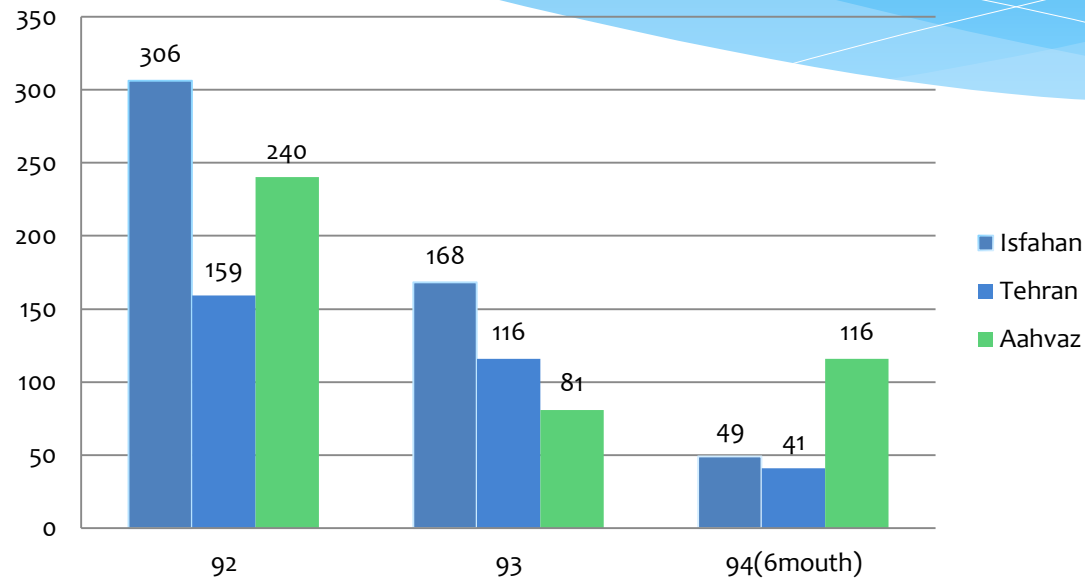


Tehran view from mountains

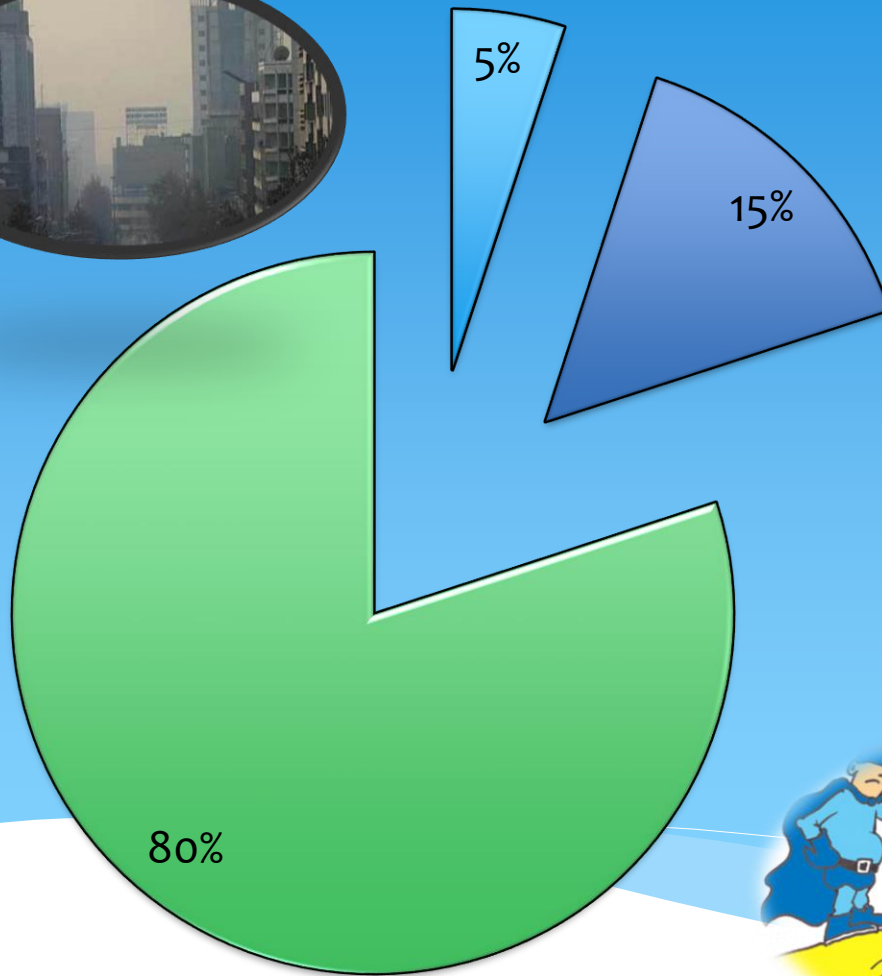
# 8 Megacities with Major Air Pollution Problems



# Number of unhealthy days 2013-2014



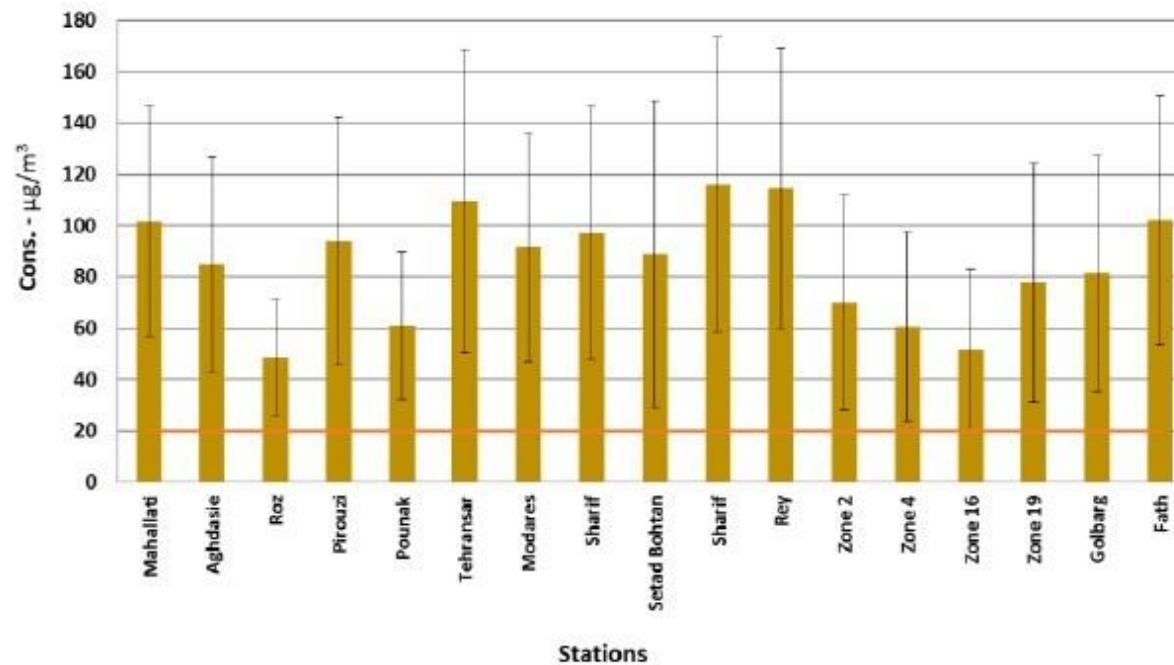
# Contribution of various sources of air pollution in Tehran



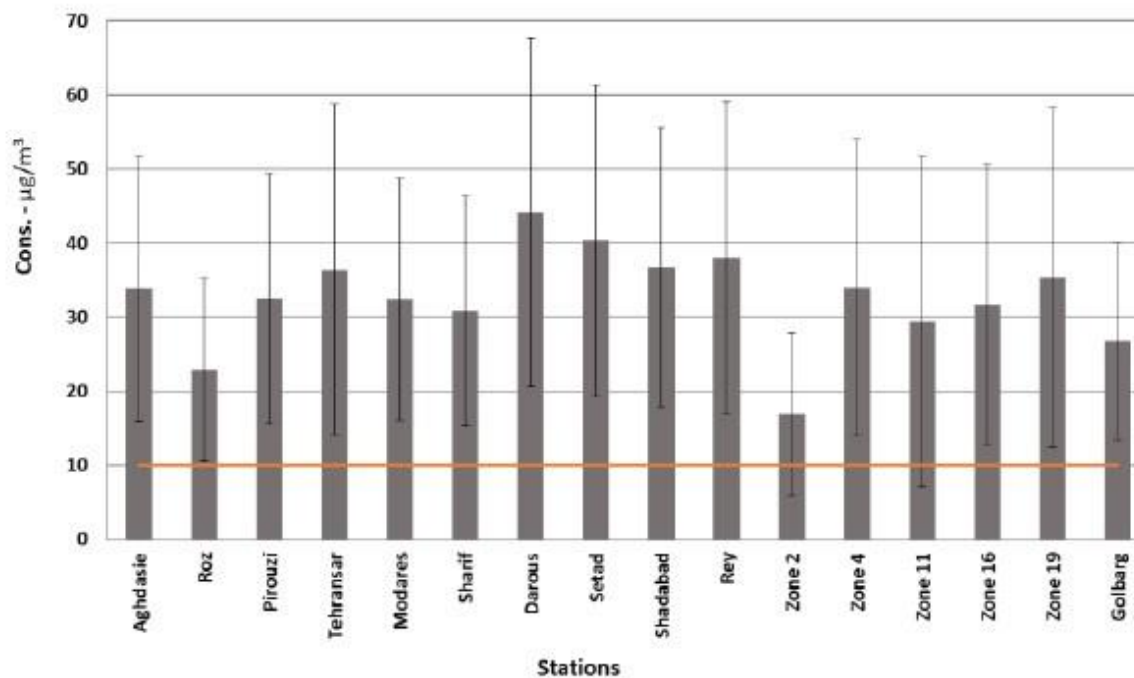
- Domestic and commercial
- Industry
- Transportation



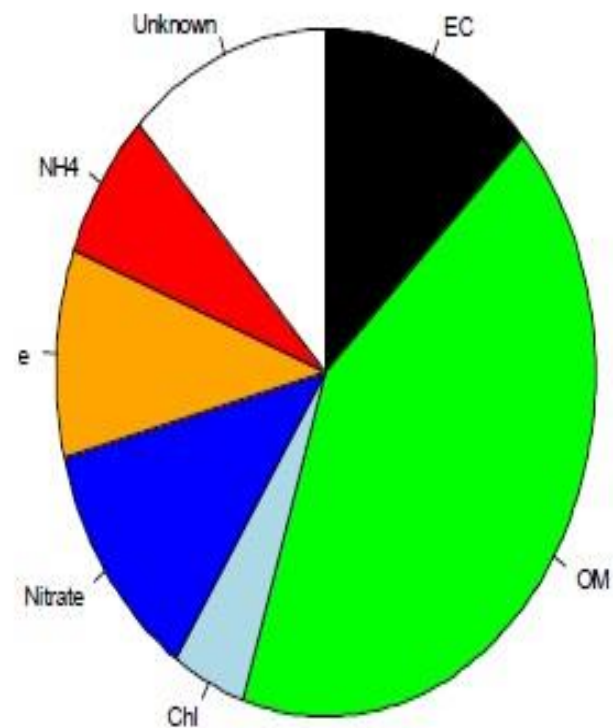
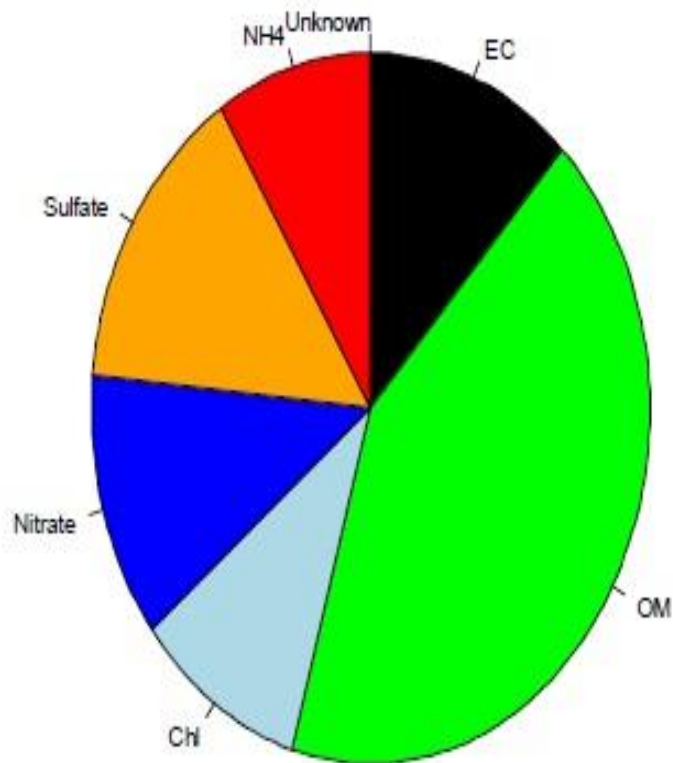
## PM10 annual average of Tehran air quality monitoring stations, March 2013-Feb 2014



## PM2.5 annual average of Tehran air quality monitoring stations, March 2013-Feb 2014



# نتایج آنالیز شیمیایی PM2.5 هوای تهران ایستگاه تهرانسر - زمستان ۱۳۹۲



# Eleven goals of the second Clean Air Action plan to reduce air pollution

- 1. Phase out of the old vehicles**
- 2. Standardization for New vehicles**
- 3. Improving fuel quality**
- 4. Development of Public transportation**
- 5. Inspection and maintenance vehicle**

Eleven subjects of the comprehensive programs to reduce air pollution in country

**6-Traffic Management**

**7-Controlling of Industrial and Other sources**

**8-Development of green spaces**

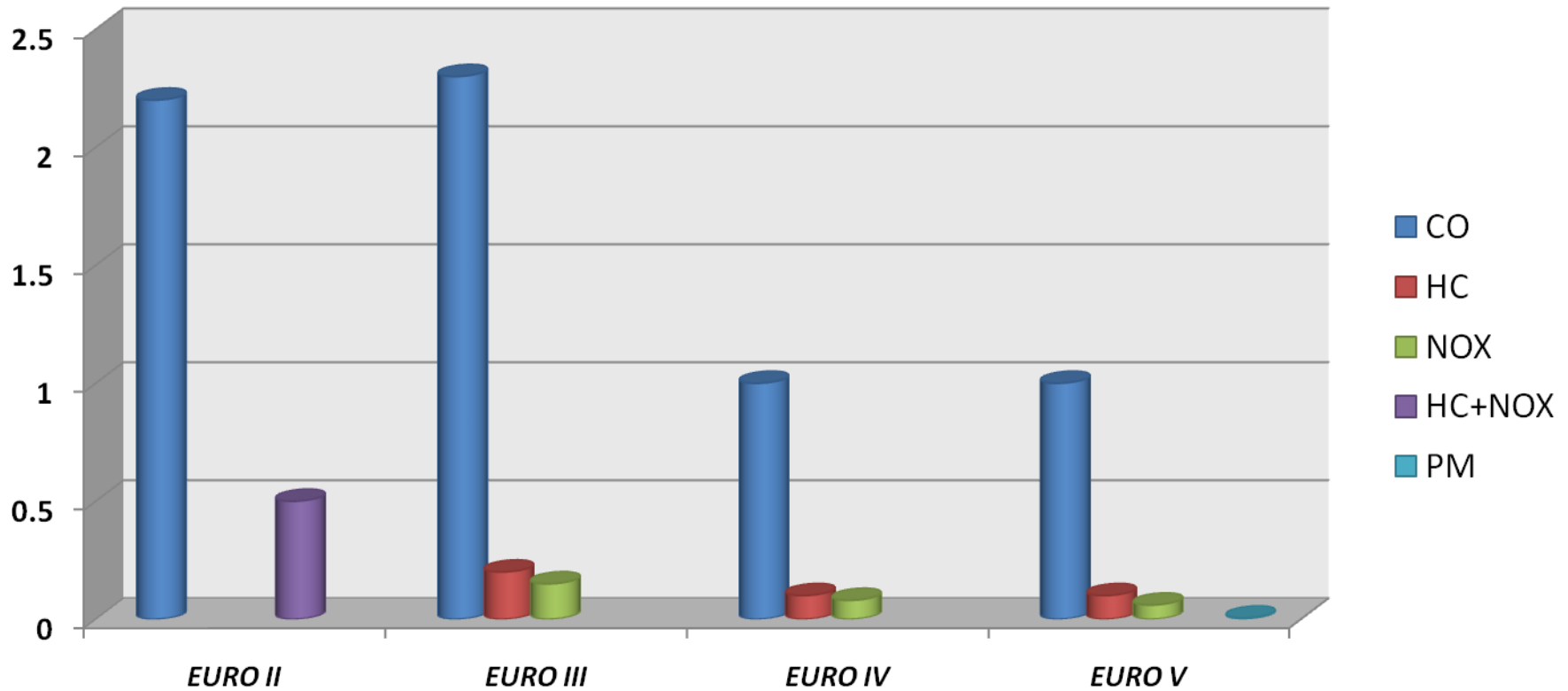
**9-Monitoring pollutants and health**

**10-General Education and Culture**

# Public transportation

- Main priority of transportation for Tehran is subway
- The first metro line was opened in 1999
- Metro of Tehran is currently about 200 km and will -
- reach to length of 705 km in 14 line
- number of daily trips in Tehran is about 17 million that 3 million have done by subway

# comparing emissions from gasoline-powered vehicles based on environmental standards EuroIV and EuroV

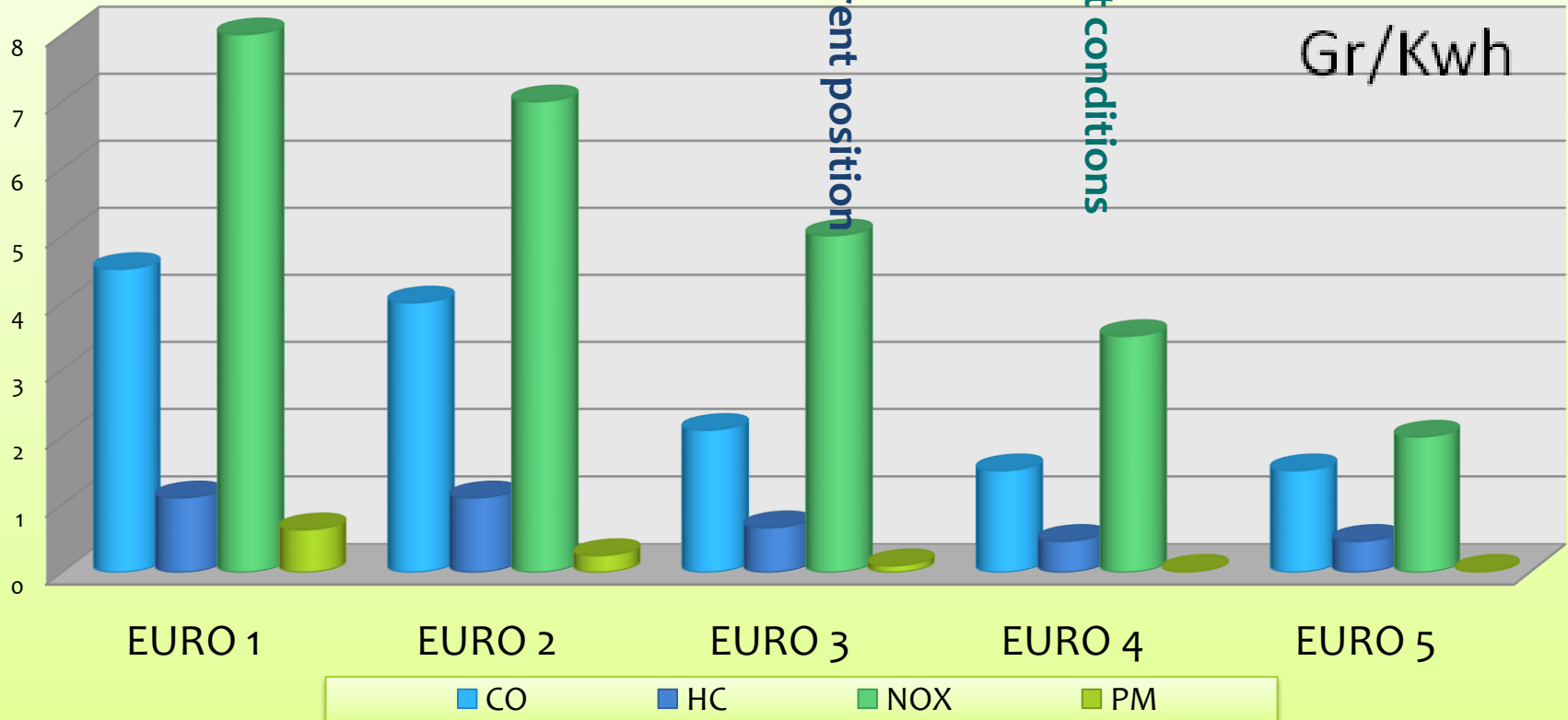


# Compare Standards

Iran's current position

Import conditions

Gr/Kwh



# Road Map for Future

<i>period</i>	2014	2015	2016	2017	2018	2019	2019	2020	2021	2022
<i>LDV (petrol)</i>	<i>EURO IV + EOBD</i>					<i>EURO V</i>				
<i>HDV (Diesel)</i>	<i>EURO 2</i>	<i>EURO 3+ DPF</i>		<i>EURO 4+DPF</i>			<i>Europe Union standard</i>			
<i>Motorcycle</i>	<i>EURO 3</i>				<i>Europe Union standard</i>					

# Expected outcomes

- Improvement of fuel standard in all of country
- To prevent the release of fuel vapors (ministry of oil ministry of industry)
- Requirement to replace the catalyst convertor (ministry of industry )
- Phasing out of old vehicle
- Installing particle filters(DPF) on diesel vehicles
- \* -Production of electric and hybrid vehicle
- \* -Production of electric motorcycle

# Expected outcomes(cont.)

- \* **Completion of environmental data bank for province industrial zones (DOE, Ministry of industry)**
  - \* **Minimizing energy consumption in industrial zones (Ministry of industry)**
  - \* **Development urban green space (Ministry of agriculture-municipality of Tehran)**
  - \* **Monitoring centers(DOE)**
  - \* **Operation of On-line monitoring system in industrial unit(DOE)**
  - \* **Developing environmental education programs (DOE)**
- Development of public transportation**

A photograph of a city street lined with tall, bare trees. A yellow bus is visible on the left side of the road, and several cars are parked or driving in the distance. The sky is clear and blue.

**Thank  
you**