

Extreme summer temperatures in Greece

Heat waves

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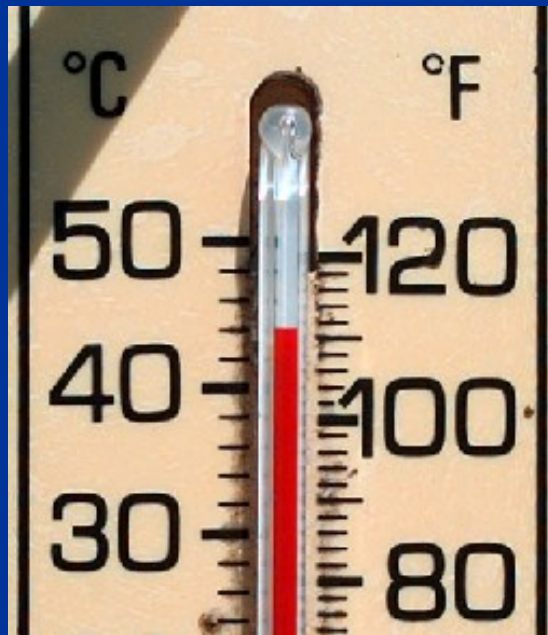
The definition criterion for a Heat Wave in Greece is:

- at least
3 consecutive days with
max
air temperature $\geq 36.5^{\circ}\text{C}$



SUMMER 2007

**3 strong and long duration
heat waves**



I) 19-28 June

- Eastern mainland and Aegean islands
- Max. temp for Athens
46.2°C
(110 year record)
- Record for energy demand



II)18-25 July

- North Greece (record Thessaloniki **44.0°C**)
- Athens **45.0°C** (the old record)
- **New** record for energy demand



**18 people died from heatstroke
due to I-II heat waves**

III)21-26 August

- West Greece
- big forest fires
- 70 deaths

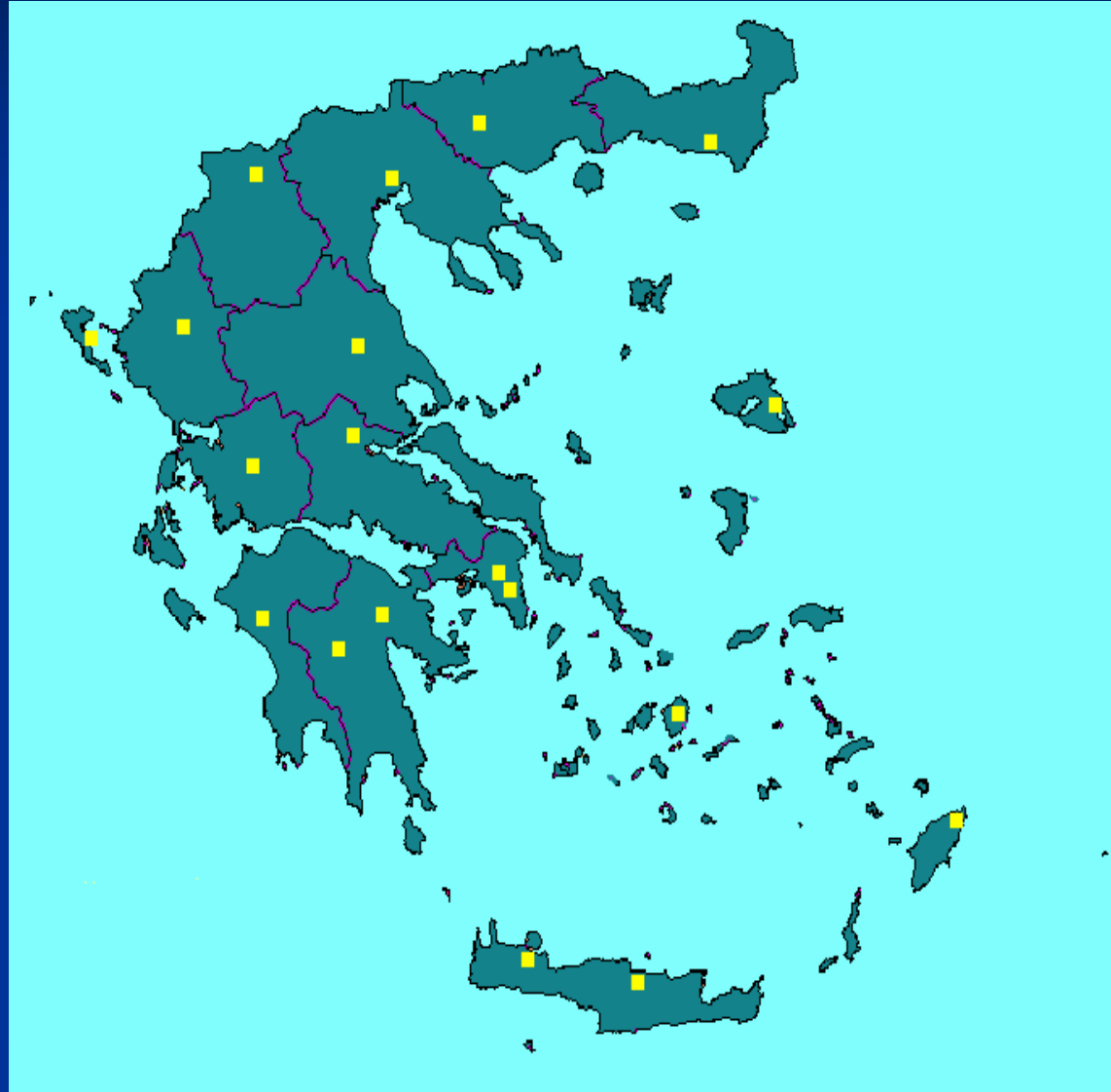


Data

- Daily

Max temperatures
from 19 stations
data 1975-2004

- (especially for
Athens,
1955-2007)



- In all stations is observed an increase over time of the number of days

with temperature $\geq 36,5^{\circ}\text{C}$

- This increase is smaller to the cities that are directly influenced from the sea

- In many stations is observed
an increase over time
of the number of days
with temperature $\geq 39,5^{\circ}\text{C}$



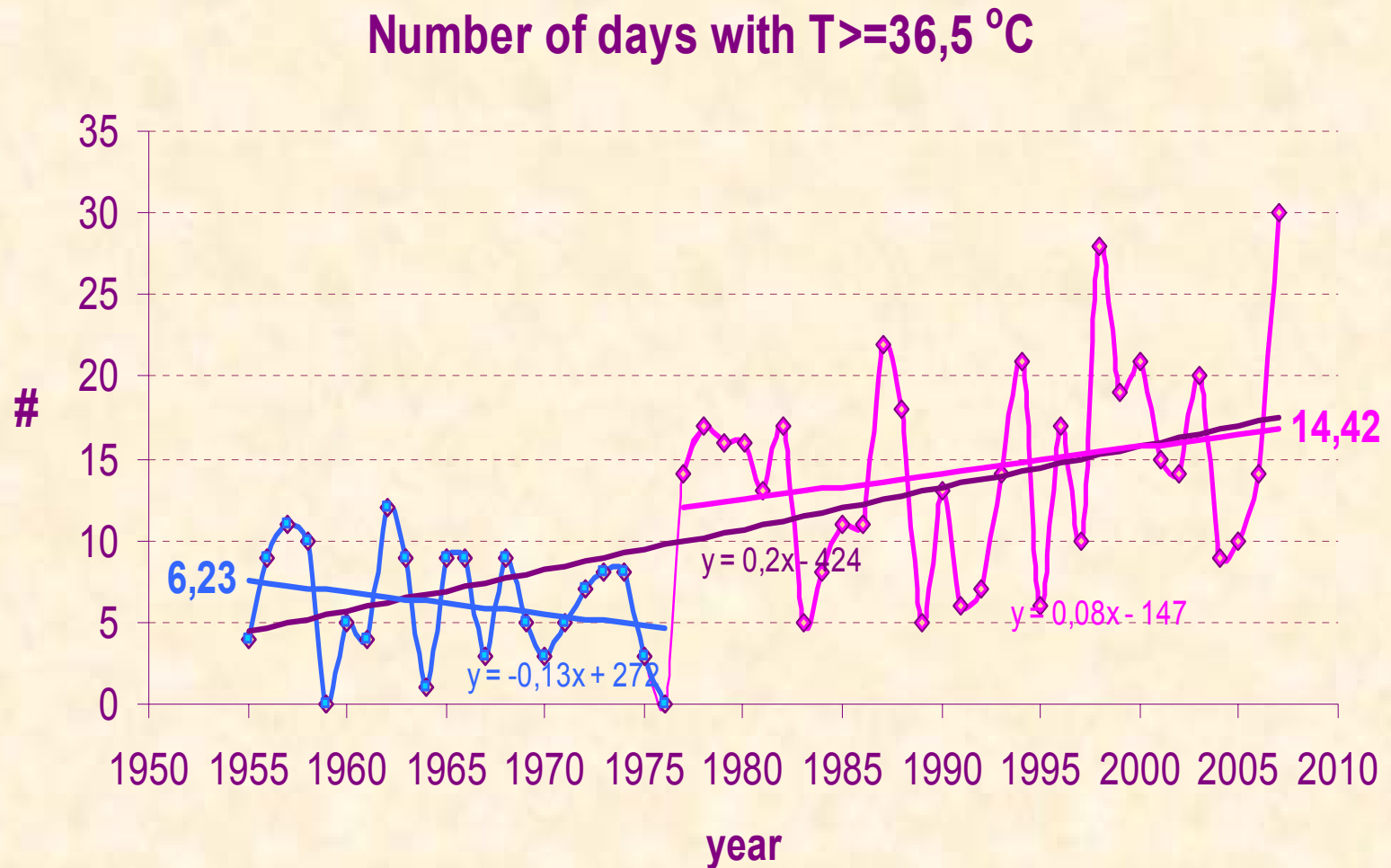
- a higher frequency of heat waves is recorded over Ionian sea and across Mainland



Athens

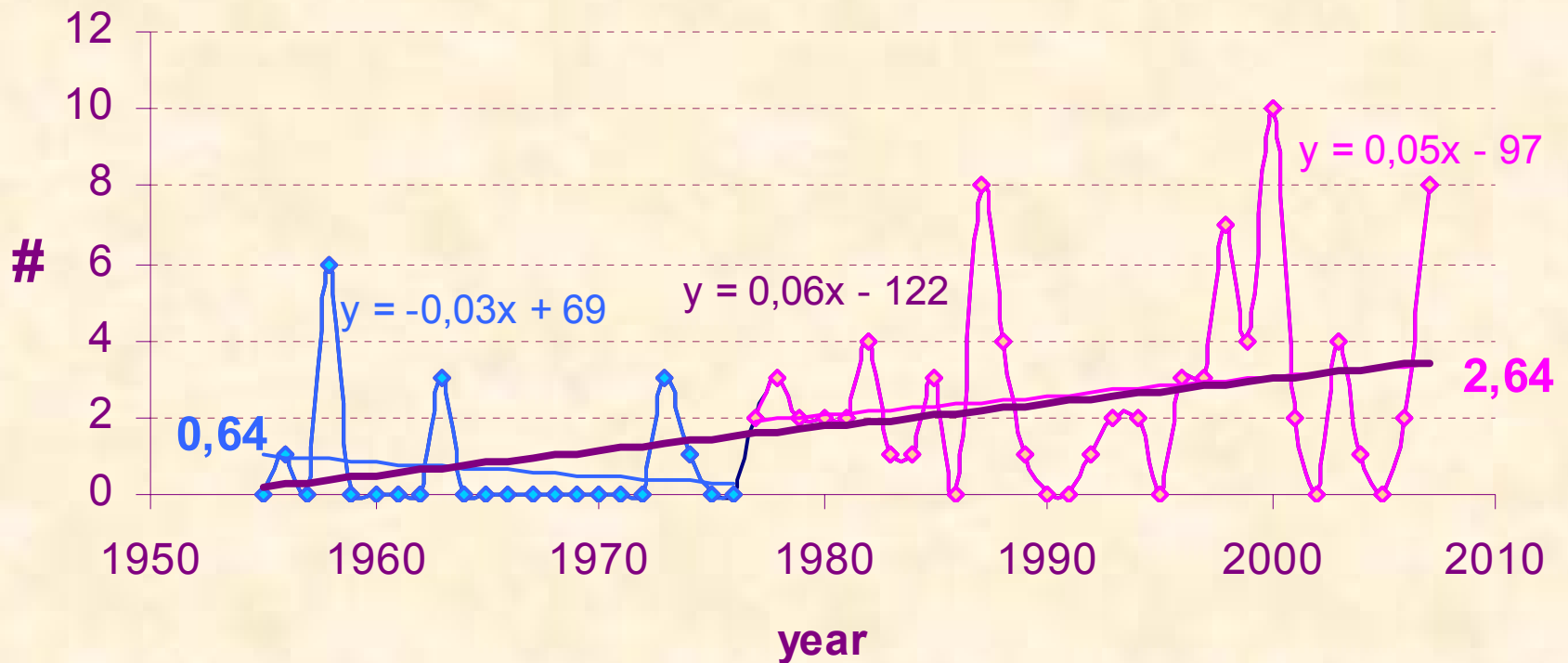


Number of days with $T > 36.5$ increase



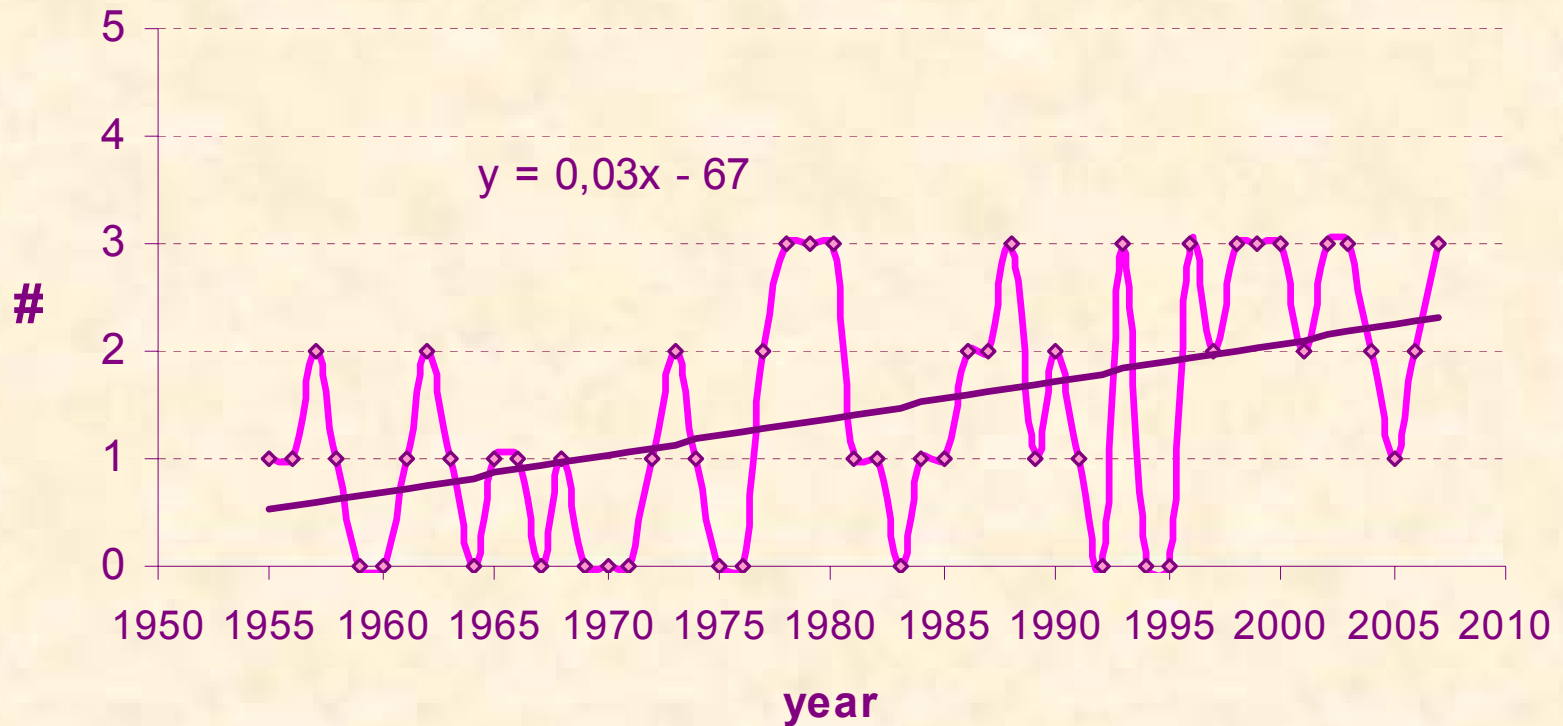
Number of days $T > 39.5$ **increase**

Number of days with $T \geq 39,5$ °C



Number of heat waves incidents increase

Heat wave episodes per year



- This increase cannot attributed only to “heat island”

(for Athens the comparison between two stations an urban and a rural -semiurban showed no significant difference)

Sources

- ZIAKOPOULOS et al, 2008

“HEAT WAVES IN HELLAS DURING THE SUMMER
PERIOD AND HIGH TEMPERATURES RISK SCALING”
(9TH COMECAP2008)

- PETROU 2007

HEAT WAVES IN HELLAS-SUMMER 2007
(WGCEF: 13rd Annual Meeting)

Thank you

