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# Climate Change and Health in Mediterranean Cities - Policy Recommendations for Extreme Weather Events

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## ***Background***

Since the 1960s, the Mediterranean region has become warmer with a significant increase in the frequency, intensity and duration of extreme weather events such as heat waves, cold waves, floods and droughts.

*Tel Aviv,  
January  
2013*



*Drought  
in the Sea  
of Galilee*



*Floods in  
the Negev  
desert*



*The way to  
Jerusalem,  
December  
2013*



*Health policy recommendations for adaptation to extreme events  
due to climate change*

The health dimension of vulnerability to extreme events includes differential physical, physiological and mental health effects in different regions and on different social groups.

It also includes the possible impact of extreme weather events on the provision of health services (e.g., infrastructure and facilities).

*The city of  
Zefat,  
December  
2013.*



*Floods in  
central  
Israel,  
winter  
2012/3*

The public health policies for adaptation to extreme weather events essentially require sound and effective preparedness.

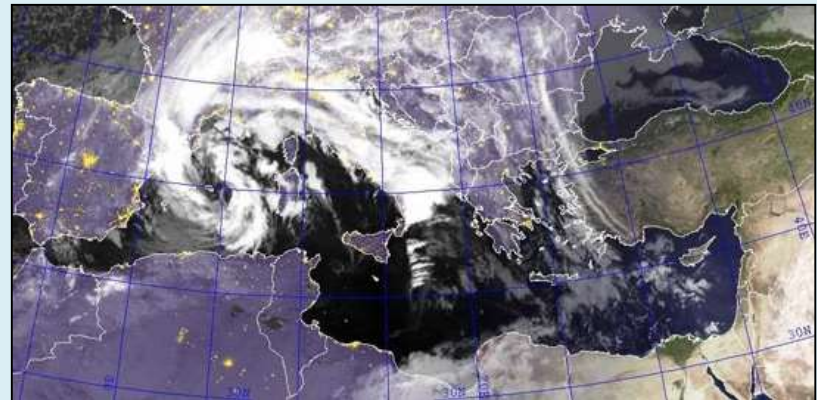
In particular, health policies that address the special needs of *vulnerable groups* must be identified, and where necessary, given special attention.

Policy recommendations should address:

1. Early detection of extreme weather events
2. preparedness of the health systems
3. monitoring of morbidity and mortality
4. public / health professionals education
5. the living environment

*Extratropical Storm over the Mediterranean  
November 19, 2013.*

*Image credit: Navy Research Lab, Monterey.*



## *Early detection of extreme weather events*



The meteorological services are responsible for the updated alerts on the possibility of extreme weather events.

Thus, a productive collaboration between the meteorological service and the health authorities is essential.

An action plan should be developed, containing definitions of "changes in the level of alertness and action" for the preparedness for extreme weather events.

Exercises on an annual basis should be carried out to evaluate the functioning and quality of the alert system.

## *Preparedness of the health system*

Policy recommendations should address the emergency services' delivery, governance and regulations, the health workforce, medical products, financing and assisting other countries in addressing the health effects of climate change.

Special attention should be given to people with limited ability and who are unable to leave their homes independently.



## *Monitoring*

There is a need for a monitoring system for the health effects of climate change, including indices of total and cause-specific morbidity and mortality. As soon as a heat/cold wave begins, causes of morbidity and mortality should be reported to the health authorities.

The data should be analyzed and reviewed on a daily basis. This applies to both hospitals and community health clinics. Registers of the demographic details and geographic location of vulnerable groups and individuals (elderly, children, chronically ill, people with special needs, outdoor workers) should be maintained and updated regularly.



## ***Education***

There is a need for improved educational programs for the public and for health professionals on how to adapt to the changes in the climate.

Guidelines for behavior in case of heat waves and cold spells for the general public, as well as for the proper treatment of heat and cold injuries in hospitals, should be published and updated regularly.

The guidelines should be displayed clearly in emergency rooms and primary care clinics and should be included in the teaching curriculum for medical students and other health professionals.





## *The living environment*

The potential impact of climate change requires a conceptual adjustment in the way buildings and Mediterranean cities can be adapted.



It is important that the building codes will require new buildings to be designed to comply with green standards, such as improved insulation, window shading and natural ventilation.

Special consideration should be given to existing buildings, to adapt them to updated green standards, improving the building envelope to reduce energy consumption and improve thermal comfort.

Open areas, parks and streets can provide a vital space for public urban life throughout the entire year.

## *Conclusions*

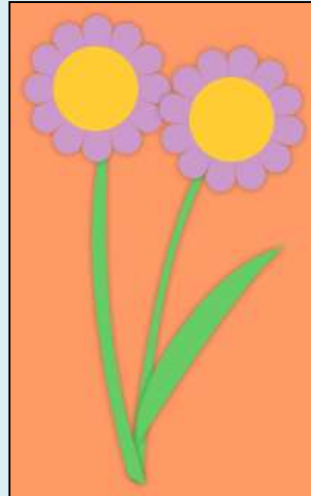
The impact of climate change is likely to worsen markedly in the coming decades in many Mediterranean locations.



Climate change and health adaptation policies should be developed and tailored to the needs of countries in the Mediterranean Basin.

Efforts should be made to increase regional collaboration on these issues, by pooling knowledge, coordinating monitoring and alert systems and developing common adaptation policies relevant to the Mediterranean basin.

# Thanks



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For more details:

Green, M.S., Groag Pri-or, N., Capeluto, G., Epstein, Y., Paz, S., 2013. Climate Change and Health in Israel: Adaptation Policies for Extreme Weather Events. *Israel Journal of Health Policy Research*, 2: 23.