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Heat waves : Risk which requires adaptation

Division: Ecology of arid ecosystems and climate risks



What is a heat wave?



Currently there is no universal definition for heat waves, as they differ from one country to another; and varies according to the climate of each region: for example the temperatures that can be considered as normal temperatures for people living in hot regions can be at the same time high temperatures in cold places. In general, a "heat wave" is an episode of very high temperatures and unusual for several consecutive days, day or night, especially during the summer.

During the period of heat waves, humidity causes sensation of heat and sometimes a feeling of suffocation (case of the Mediterranean region). For an integrated study of heat waves, we must take into consideration the maximum temperature (during the day) and the minimum temperature (during the night), humidity, solar insolation, evaporation, speed and wind direction. But for now, most studies are interested in the analysis of the maximum temperature and its duration.

The risk of heat waves

Heat waves impact the areas of life of the plant, the animal, the Man and his socio-economic activities; we can mention:

For the environment, heat waves

- Influence on the dynamics of ecosystems.
- Change of installation zones of wild flora and fauna.
- Accelerate fires.
- Increase evaporation and evapotranspiration rates
- Increase the air pollution rate.

For the Agriculture, heat waves

- Influence on the phenological stages of plants, especially at the flowering stage and consequently at the level of pollination.
- Decrease soil moisture and increase salinity.
- Reduce yields (quantity and quality).

On the economy, heat waves induce

- High water consumption (AEP and agriculture).
- An increase in electricity consumption.
- A stoppage of work in the building sites.

On health

Heatwaves can greatly increase the risk of mortality especially for vulnerable people: infants, children, the elderly and people who suffer from chronic diseases, as a result of:

- High body temperature.
- Excessive body sweating (up to 1 liter / hour).
- Epistaxis.
- Sunburns.
- Skin rash.
- Hypotension and fast heart rate.
- Cardiovascular crises.
- Which leads to congestion in hospitals (especially in emergencies).



In short, heat waves do not spare any area of life.



How to cope with heat waves?

Daily Habits / We need:

- Avoid going out at peak times (from 10 am to 5 pm).
- Remember to drink plenty of water and fruit juice all day long and give children and elderly people a drink.
- Wear light clothes and not synthetic with light colors.
- Wear hats.
- Close the windows.
- Set the temperature of the air conditioners to 25 ° C.
- Reduce the use of electrical machinery (during the peak period).
- Focus on cold meals, low in fat and calories.
- Instead, eat vegetables and / or fruits.
- Avoid taking (whenever possible) the road at peak times.
- Keep yourself informed of special weather bulletins (BMS) broadcast through the media.
- Adapt work schedules (when necessary) during the Summer season.

Agriculture

- Irrigate during the night according to the plant needs.
- Developing adaptation strategies:
 - Irrigation techniques.
 - Choice of cultivated species.
 - Cultural calendar, etc.

Urbanism

- For more energy efficiency, adapt our architecture to bioclimatic contexts.
- Choice of local building materials, insulators that have proven themselves over time.
- Dimensioning and orientation of the openings.
- Rehabilitation of old buildings.
- Green spaces must accompany any construction in areas where the heat wave risk is potential.

The heat waves / a serious risk that must be adapted and followed by a scientific and technical point of view.

Without neglecting the ancestral knowledge.