

The Interaction of Climate Change and Human Health in Italy

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Abstract : The effects of extreme heat events are increasing in recent years. Humans are forced to adjust themselves to adverse climatic conditions. The impact of weather on human health has become public health significance, especially in light of climate change and rising frequency of devastating weather events (e.g., heat waves and floods). The interest of scientific community is widely known. In particular, the associations between temperature and mortality are well studied. Weather conditions are natural factors that affect the human organism. Recent works show that the temperature threshold at which an impact is seen varies by geographic area and season. These results suggest heat warning criteria should consider local thresholds to account for acclimation to local climatology as well as the seasonal timing of a forecasted heat wave. Therefore, it is very important the problem called 'local warming'. This is preventable with adequate warning tools and effective emergency planning. Since climate change has the potential to increase the frequency of these types of events, improved heat warning systems are urgently needed. This would require a better knowledge of the full impact of extreme heat on morbidity and mortality. The majority of researchers who analyze the associations between human health and weather variables, investigate the effect of air temperature and bioclimatic indices. These indices combine air temperature, relative humidity, and wind speed and are very important to determine the human thermal comfort. Health impact studies of weather events showed that the prevention is an essential element to dramatically reduce the impact of heat waves. The summer Italian of 2012 was characterized with high average temperatures (con un +2.3°C in reference to the period 1971-2000), enough to be considered as the second hottest summer since 1800. Italy was the first among countries in Europe which adopted tools for to predict these phenomena with 72 hours in advance (Heat Health Watch Warning System - HHWWS). Furthermore, in Italy heat alert criteria relies on the different Indexes, for example Apparent temperature, Scharlau index, Thermohygrometric Index, etc. This study examines the importance of developing public health policies that protect the most vulnerable people (such as the elderly) to extreme temperatures, highlighting the factors that confer susceptibility.

Keywords : heat waves, Italy, local warming, temperature

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