

EFFECTS OF CLIMATE CHANGE ON ITALY

2021 will be an important year for the fight against the climate crisis, which Italy will fight on the front line.

What concrete risks does Italy face?

Humanity is speculated to continue emitting ever greater amounts of greenhouse gases, as it has done to date.

If this unfortunate scenario were to come true, in 2100 we would find ourselves with atmospheric concentrations of CO₂ tripled or quadrupled.

The second scenario, on the other hand, proposes that some initiatives be put in place to stem emissions.

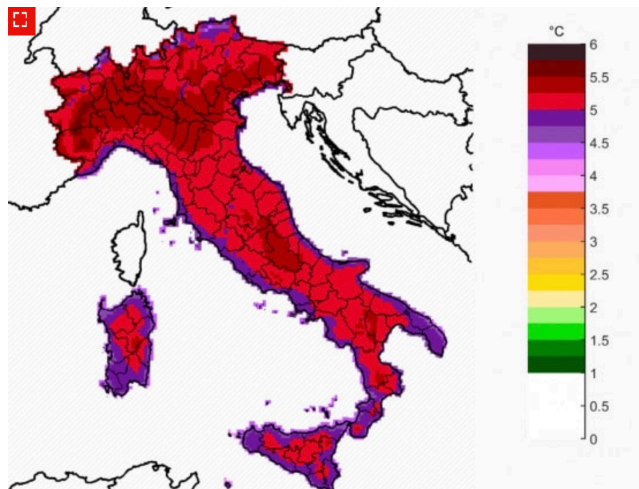
RISING TEMPERATURES:

As for temperatures, the different scenarios agree in predicting an increase of up to 2 °C in the period 2021-2050. In the most pessimistic scenario, the one without any mitigation, temperature rises of up to 5-6 °C are expected by the end of the century in the Alpine areas and during the summer season.

The rain will tend to concentrate in more intense and less frequent rainfall: the summer rains will be at the same time less frequent (especially in the South) and more violent. In summer, between a downpour and the next, the dry periods will lengthen: in both scenarios, an increase in the days with a minimum temperature above 20 °C is expected.

The excess of atmospheric heat could cause an increase in sea temperatures of up to +3.5 °C by the end of the century, worsening the acidification of the waters and endangering the biodiversity of the Mediterranean. This rise in temperatures could cause sea levels to rise by 3 cm per decade, with predictable consequences for coastal erosion and flooding.

In the last two decades, the risk in Italy has grown by 9%. In the next few years we can expect an increase in all those pathologies (heart disease, stroke, kidney disease, metabolic disorders) linked to thermal stress and to the interaction between ever higher temperatures and air pollutants.

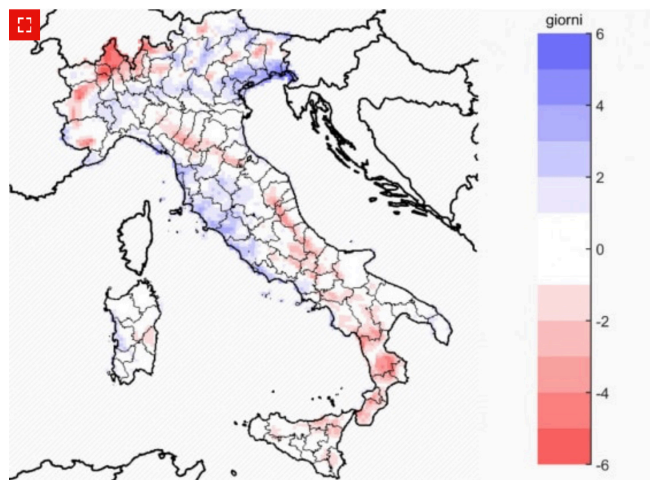


LITTLE WATER CONTENT:

At the same time, there will be a decrease in the amount of surface and underground renewable water resources. The problem will not only concern the quantity, but also the quality of the water: prolonged periods of drought, the concentration of precipitation and the reduced flow rate of water flows will favor eutrophication phenomena (excess of nutrients with a fertilizing effect in a aquatic

environment) and the variation in oxygen content, nutrient supply and contaminants from agriculture and animal husbandry.

In agriculture there will be a reduction in yields for many cultivated species, which could also be of lower quality.



FIRE WEATHER:

The Italian forests made increasingly drier by extreme drought events and left unmanaged, could turn into helpless fuel for seasonal fires, as is already the case in Australia or California: the fire season could be prolonged, or the altitude could shift to which these events occur.