



How is fire danger in the Netherlands changing because of climate change?

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CONTEXT

Climate change is accelerating due to human activity. Higher temperatures and more frequent heatwaves and droughts are decreasing the moisture content of the vegetation, resulting in more fuel available for the fast propagation and increase of magnitude of wildfires. With this, in Europe, fire danger is expected to increase in both established and emerging fire-prone countries. In the Netherlands, a country in temperate Europe usually not associated with wildfires, recent wildfires are challenging fire service capacity.

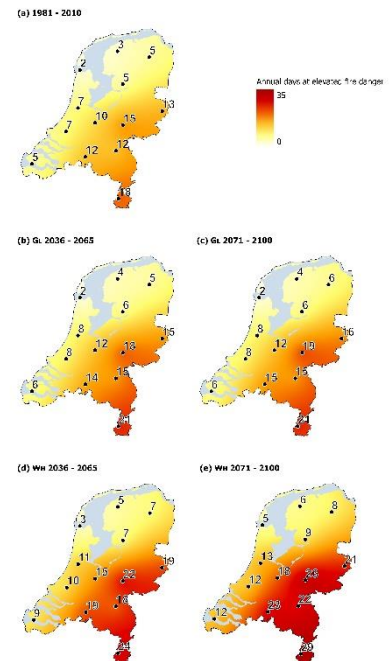
Hugo Lambrechts and his team determined the historical and future spatio-temporal variation of elevated fire danger days in the Netherlands.

OUTCOMES

For the period from 1981 to 2100, and considering future possible scenarios of limited (G_L) and rapid (W_H) climate change in the Netherlands:

- During the last decade (2011-2020), the number of days at elevated fire danger has increased and it is similar to those predicted for 2085. This shows that current scenarios may underestimate future fire danger.
- The number of days with elevated fire danger is expected to double by 2050 compared to the 1981-2010 decade for the scenario of rapid climate change (W_H).
- The biggest fire danger increase will be in the south and centre of the country for the rapid scenario (W_H), and during the summer for both this and the milder scenario (G_L).

On the right, average annual elevated fire danger days per decade for future scenarios of limited (G_L) and rapid (W_H) climate change during the following reference periods: a) 1981 – 2010, b) 2036 – 2065, c) 2071 – 2100, d) 2036 – 2065 and e) 2071 – 2100.



IMPACT ON WILDFIRE MANAGEMENT

- The underestimation of number of days at elevated fire danger makes risk reduction, prevention and **preparedness** for future scenarios, a matter of urgency in the Netherlands and northwestern Europe.
- In this sense, actions to be carried out should include **landscape management, wildfire risk awareness and education**.

RECOMMENDATIONS FOR POLICYMAKERS

- Inform strategies to manage wildfires in temperate Europe from the Dutch experience in water management, which applies an effective **proactive approach**.
- **Engage all actors** of wildfire management (local communities, land owners, farmers, foresters, managers, practitioners, scientists, etc.) in the decision-making process to enhance prevention, preparedness and response.

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Collaborators



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