**Context**

The students of Santorre, Turin, are following a course on climate change and have had the chance to work with local environmental entities.

During this lesson, students will analyse temperature and precipitation data over their city, identifying heatwaves, droughts and compound events.

They will study a very urgent theme, not just globally but also locally, given the ever-increasing number of heatwaves and droughts occurring in the north of Italy.

The experiences of the scientist will illustrate the importance of interpreting data correctly. It is crucial that students learn that interpreting historical environmental data allows them to create models and forecasts which help society prepare for them in the future.

**Lesson Plan**

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**Part 1: Climate change and weather, definition of extreme events and examples**

**Activity 1: Students experience of extreme Events in Torino.** List extreme events that affect Torino. What do extreme events look like? E.g. how would you describe a heatwave or a drought? How would you know it’s happening?

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**Part 2: Data over Torino: temperature (heatwaves) and precipitation (floods and droughts).**

**Activity 2: Analysing Temperature and Precipitation Data.** Plot data on screen. Identify key years of extremes (did they feel/experience it?) Are the extremes high or low? Do events occur together?

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**Part 3: Forecasting: short-term and long**

**Activity 3: Preparing for disaster!** Split class into groups/tables. What can be done in each of these contexts? What information is needed?

Example 1: On Sunday evening, schools receive a heavy snow warning for monday morning.

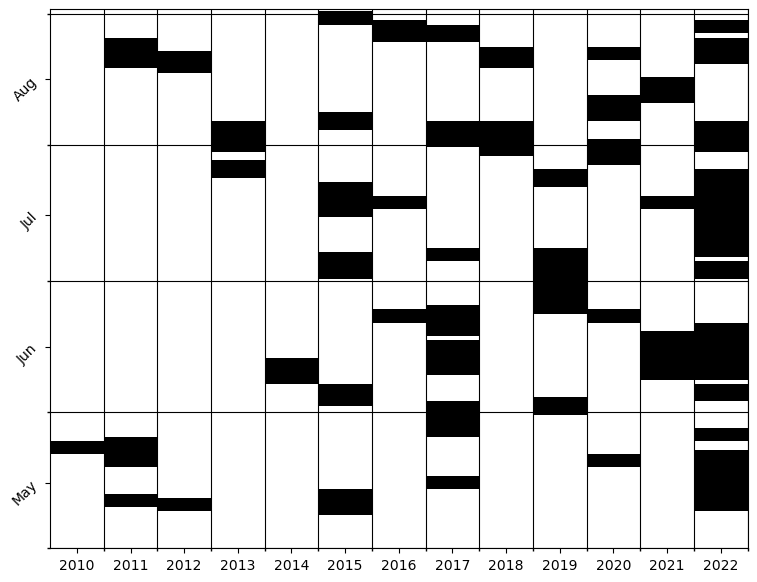
Example 2: At the beginning of August, the mayor is told that Ferragosto could be the hottest day on record.

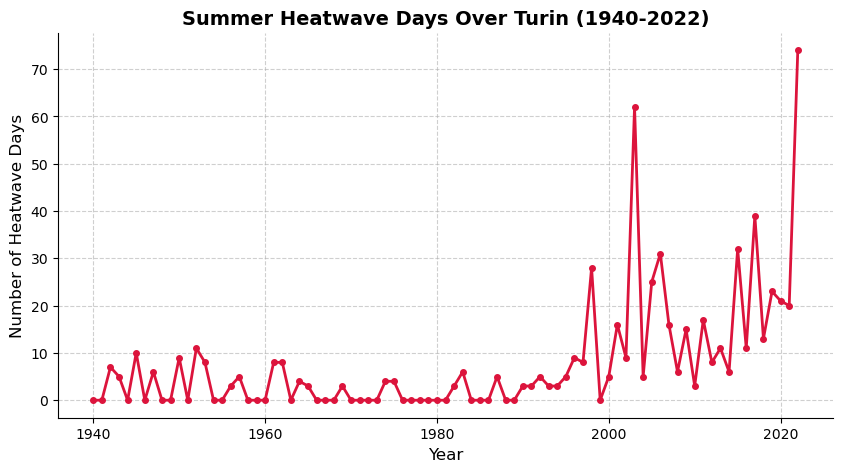
Example 3: In January, farmers are told that the drought conditions will begin in the spring.

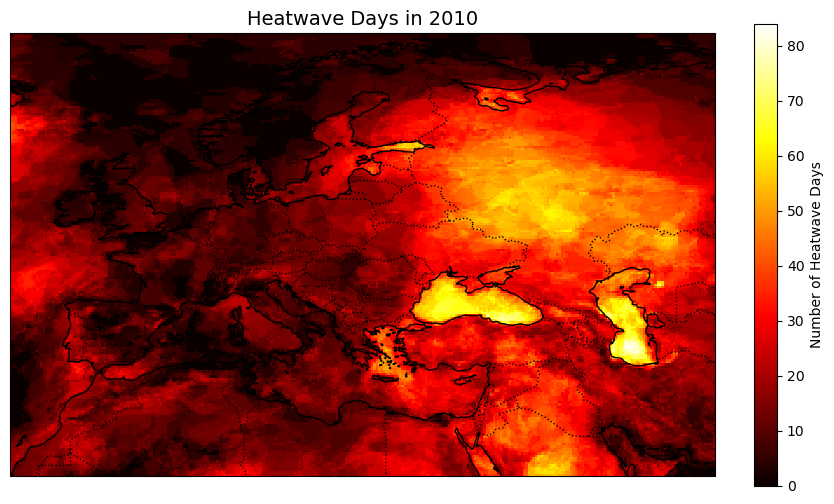
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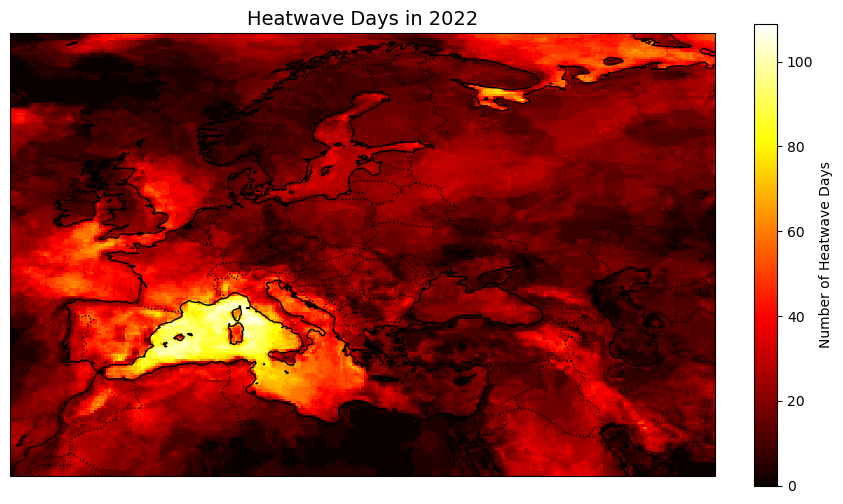
**Heatwave days (marked in black) over the last 10 years**

**TORINO**



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**LONDRA**

