Concept 1: What are marine heatwaves?

A marine heatwave is when sea surface temperatures stay unusually high—above the 90th percentile for that time and place—**for five or more days** (Hobday et al., 2016).

These events can be triggered by weak winds, increased solar radiation, persistent high-pressure systems, or shifts in ocean currents. While often seen in open oceans, they also occur in smaller seas like the Baltic Sea, where their impact can be just as intense.

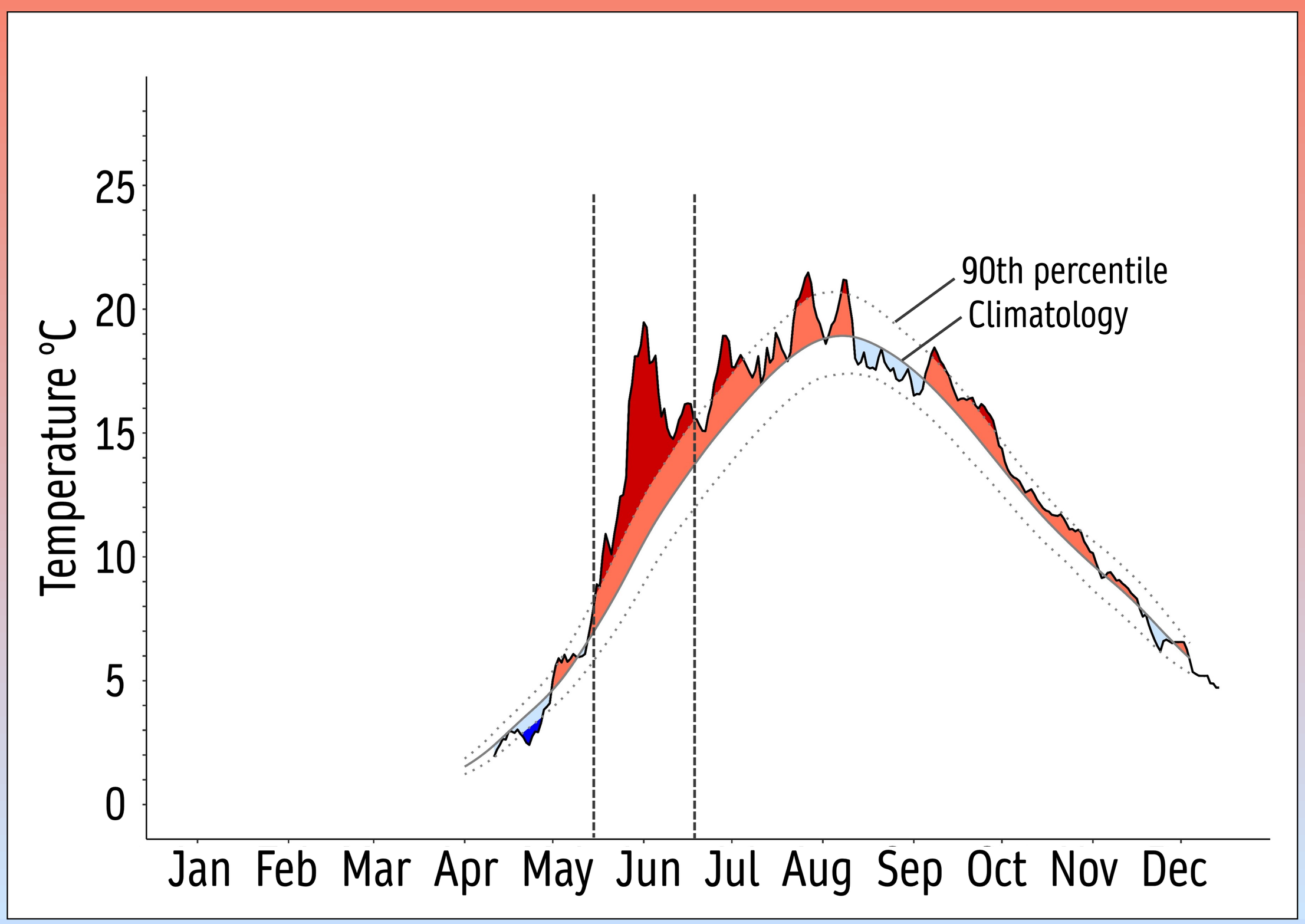

Figure 1. Temperature data collected at Korpoström, Finland, 2024. The data are shown together with a climatology (grey line), which is a long-term average based on many years of seawater temperature records from Seili, Finland. By comparing current temperatures to this average, we can see when the water temperature shifts from normal (orange/light blue) to heatwave conditions (red) or cold spells (blue). If temperatures stay above or below the dotted lines for more than five days, it signals a heatwave or cold spell, respectively.