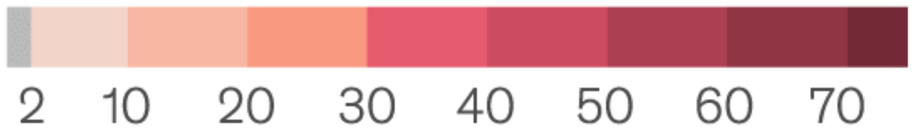
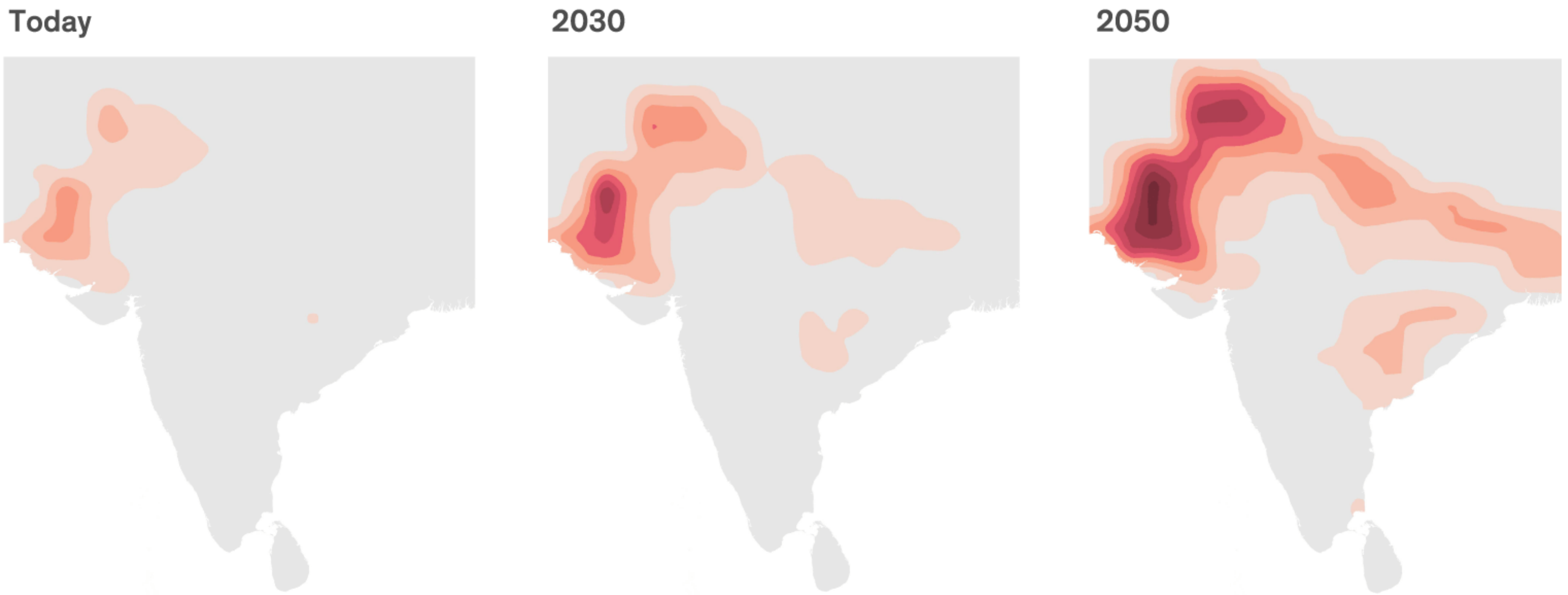
Urban areas in India and Pakistan could be the first places in the world to experience lethal heat waves.

Lethal-heat-wave[1] probability in India and Pakistan, (based on RCP[2] 8.5), % annually





[1]A "lethal heat wave" is defined as a 3-day period with maximum daily wet-bulb temperatures >34°C, where "wet-bulb temperature" is defined as the lowest temperature to which a parcel of air can be cooled by evaporation at constant pressure. This threshold was chosen because the commonly defined heat threshold for human survivability is 35°C wet bulb, and large cities with significant urban heat-island effects could push 34°C wet-bulb heat waves over the 35°C threshold. Under these conditions, a healthy, well-hydrated human being resting in the shade would see core body temperatures rise to lethal levels after roughly 4–5 hours of exposure. These projections are subject to uncertainty related to the future behavior of atmospheric aerosols and urban heat-island or cooling-island effects.
[2]RCP = representative concentration pathways. All projections based on RCP 8.5 and Coupled Model Intercomparison Project 5 multimodel ensemble. Following standard practice, future (2030, 2050) states as the average climatic behavior over multidecade periods. Climate today is defined as average between 1998 and 2017, in 2030 as average between 2021 and 2040, and in 2050 as average between 2041 and 2060.
Source: Woods Hole Research Center; McKinsey Global Institute analysis

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