

Climate change may impact future tourism at some US national parks

June 17 2015

Visitation at U.S. National Parks may potentially increase with increasing temperature in temperate areas, but may decrease with temperatures rising over 80 degrees Fahrenheit, according to a study using future climate and visitation modeling scenarios published June 17 in the open-access journal *PLOS ONE* by Nicholas Fisichelli and colleagues from U.S. National Park Service.

Climate change may affect not only natural and cultural resources within protected areas, but also park tourism. To assess the relationship between climate and park visitation, the authors of this study evaluated historical monthly mean air temperature and Park service visitation data (1979-2013) at 340 parks, ranging from Guam to Alaska, and projected potential future visitation (2041-2060) based on two warming-climate scenarios and two visitation-growth scenarios.

Of the original 340 parks assessed, over 80percent showed strong relationships between visitation and temperature. Visitation generally increased with increasing average monthly temperature, but decreased strongly with temperatures over 77 degrees Fahrenheit (25 degrees Celcius). Future visitation varied across parks, but the authors found that many high-latitude and high-elevation parks showed increases in potential visitation, especially during the spring and fall seasons. Parks with historically warm temperatures showed a potential future decrease in visitation during the hottest months, and tropical parks with small temperature variation throughout the year showed no relationship to temperature.



Although very warm months at some parks may see decreases in future visitation, this potential change represents a relatively small proportion of visitation across the national park system. The authors suggest that protected areas that develop adaptation strategies for these changes may be able to both capitalize on opportunities and minimize detriment related to changing visitation.

More information: Fisichelli NA, Schuurman GW, Monahan WB, Ziesler PS (2015) Protected area tourism in a changing climate: will visitation at us national parks warm up or overheat? *PLOS ONE* 10(6): e0128226. DOI: 10.1371/journal.pone.0128226

Provided by Public Library of Science

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