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Even if solar radiation were to reach its lowest level in the past 9,300 years, it would reduce potential sea level rise by only 10–20 centimetres. And if volcanic activity reached its highest level in the past 1,000 years, twenty-first-century sea level rise would be just 10–15 centimetres less.

The researchers say their estimates are in line with past sea level responses to temperature change, and they suggest that estimates based on ice and ocean thermal responses alone may be misleading.

Anna Armstrong

Society
Seen to be green



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J. Pers. Soc. Psychol. **98**, 392–404 (2010)
People choose to purchase environmentally friendly goods over luxury items when motivated to increase their social status, concludes a new study.

In behavioural ecology, acts of altruism are seen as a means of communicating an individual's ability to incur costs and therefore of one's social status. Purchasing 'green' goods can be construed as altruistic because doing so often incurs an extra cost to the individual but benefits the environment for everyone. A team of researchers led by Vlas Griskevicius at the University of Minnesota's Carlson School of Management carried out a series of experiments to test whether status motives increase people's preference for purchasing

green products over non-green luxury items. They found that participants were more likely to choose green products in public — where their altruistic behaviour was on display — than online. Participants were also more likely to choose green products over luxury goods when the green products were more expensive and associated with higher social status. The researchers cite the Toyota Prius car as an example of an expensive green product that consumers choose to boost their social standing.

The study suggests that consumer behaviour is driven less by social consciousness than by the desire for status.

Olive Heffernan

Climate impacts
Warming waterways



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Front. Ecol. Environ. doi:10.1890/090037 (2010)
Streams and rivers across the United States have warmed significantly over the past few decades, a trend that could be detrimental to the nation's aquatic ecosystems.

A team of ecologists and hydrologists led by Sujay Kaushal at the University of Maryland analysed historical records of water temperature for 40 streams and rivers throughout the US. The records, which came from the US Geological Survey, ranged in length from 24 to 100 years, and all continued to at least the year 2000. About half of the waterways analysed showed a significant warming trend. The most rapid warming was measured in the Delaware River, at almost 0.08 °C per year. In general, the largest temperature rises were observed in waterways near urban centres, suggesting that some of the warming could be the result of heat emanating from the cities. Recent changes in land cover could also be a factor at some sites, say the researchers. Concurrent warming in pristine waterways suggests, however, that global climate change is also responsible for the trend.

The team warns that warming can affect the biological and chemical composition of waterways and that, unchecked, it could lead to local species extinctions and the proliferation of invasive organisms.

Alicia Newton

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