

Lesson from the past for surviving climate change

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Research led by the University of Leicester suggests people today and in future generations should look to the past in order to mitigate the worst effects of climate change.

The dangers of [rising sea levels](#), crop failures and extreme weather were all faced by our ancestors who learnt to adapt and survive in the face of [climate change](#).

Dr Jago Cooper, of the School of Archaeology and Ancient History at the University of Leicester, has been studying the archaeology of climate change in the Caribbean as part of a Leverhulme Early Career Fellowship.

The international study involves researchers from Britain, Cuba and Canada. Dr Cooper said: "Populations in the Caribbean, from 5000 BC to AD 1492, successfully lived through a 5m rise in relative sea levels, marked variation in annual rainfall and periodic intensification of [hurricane activity](#)."

"This research examines the archaeological lessons that can inform current responses to the impacts of climate change in the Caribbean. I have examined the relationship between long and short-term effects of climate change and past human engagement with the geographical, ecological and meteorological consequences."

"A key focus of the research has been to investigate past mitigation of

the impacts of climate change through the analysis of changes in settlement structures, food procurement strategies and household architecture."

The study is part of a long term project, begun in 1997, that includes a wide-ranging study of archaeological and paleoenvironmental data. Key to the research has been to understand how the past can inform the future.

Said Dr Cooper: "We have acquired archaeological information that has then been closely correlated in space and time with the long and short-term impacts of climate change. It has then been possible to evaluate the relative advantages and disadvantages of past cultural practices in the face of [environmental change](#) and establish lessons that will contribute to contemporary mitigation strategies. "

Following the end of the last Ice Age, the people of the Caribbean have had to cope with a relative sea level rise of 5m over 5,000 years. Hurricanes led to storm surges that reached inland more than ever. Groundwater became contaminated with salt and the land was waterlogged.

But the researchers found that far from abandoning life by the coast and moving further inland, people continued to live by the shore- and even built houses on stilts over a lagoon.

An ancient site in Cuba, Los Buchillones, that is currently out to sea "represents a way of living that capitalises on hundreds or even thousands of years of experience."

Dr Cooper warns that modern settlements are more at risk of flooding because they are constructed in more vulnerable places. In fact, indigenous settlement locations over water could make homes less at risk

of flooding as floodwater could flow beneath the homes and inland rather than pour into the houses.

This ongoing research has looked at past mitigation strategies, assessed how pre-Colombian settlements were located close to cave complexes that acted as refuges during times of past hurricanes, how the architecture of homes were constructed from local resources allowing people to rebuild them easily upon their return. It also reveals how local populations diversified their food production to mitigate against resource scarcity.

Source: University of Leicester ([news](#) : [web](#))

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