

**Conclusions:** Both young and older people were affected by heatwave, and precautionary warning should be used throughout the community to alert people of the dangers underlying extreme heat conditions.

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### (A87) Sea-Level Rise Disaster in Micronesia: Sentinel Event for Climate Change?

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**Background:** In 2007, several atoll islands in the Federated States of Micronesia (FSM) were inexplicably flooded by sea water.

**Objectives:** To describe the impact of an acute-onset sea-level-rise disaster in 2 coral atoll populations.

**Methods:** Households of Lukunoch and Oneop islands, FSM were assessed for demographics, asset damage, food availability, and water quantity and quality. Every fourth household on Lukunoch, ( $n = 40$ ), was randomly selected and surveyed. All Oneop households were surveyed ( $n = 72$ ). Prevalence data were analyzed.

**Results:** A total of 112 total households were surveyed representing 974 inhabitants. On Lukunoch, roughly half of all households surveyed reported at a partial loss of their primary dietary staple and source of calories (taro and breadfruit). Six (15%) of 40 Lukunoch households surveyed (95% CI, 6%–30%) reported a complete loss of taro and four (10%) of the 40 households (95% CI, 3%–24%) reported a complete loss of breadfruit. On Oneop, nearly all households reported at least a partial loss of these same food staples. Twenty four (31%) of all 76 Oneop households reported a complete loss of taro and another 24 (31%) households reported a complete loss of breadfruit. One third of all households surveyed reported a complete loss. On Lukunoch 11(28%) of 40 households, (95% CI, 15%–43%) reported damage from well salination, but none were damaged to the point of a complete loss. Forty-nine (64%) of 76 Oneop households reported salination and five (6%) reported complete loss of their well.

**Conclusion:** These findings suggest that FSM populations experienced disastrous losses due to a sea level rise event damaging crop productivity and freshwater sources.

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### (A88) Public Health Consequences of Climate Change in the Republic of Palau: A Photojournalism Project

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**Introduction:** The Republic of Palau, like other small, island, developing states, is particularly vulnerable to climate change due to a number of factors, including: (1) small size; (2) remoteness; (3) limited natural resources; and (3) vulnerability to disasters and extreme weather events. Other factors include social and economic factors such as: (1) economies sensitive to external shocks; (2) high

population growth rates and densities; (3) poorly developed infrastructure; (4) limited financial and human resources; and (5) emigration. The (US) Centers for Disease Control and Prevention (CDC) partnered with the Republic of Palau Ministry of Health (MoH) and Southern Illinois University (SIU) to investigate public health consequences in Palau. The goal of the project is to reduce morbidity and mortality due to climate change in Palau by improving awareness using three tools: (1) a photojournalism book to document the local experience in Palau; (2) a marketing campaign to increase awareness in Palau about climate change as it relates to human health; and (3) a Website to raise regional and international awareness of the findings, and act as a forum for discussion and resource-sharing.

**Methods:** The CDC, SIU, and Palau MoH conducted interviews with community members including government officials, traditional leadership, fishermen, gardeners, physicians, scientists and local residents to explore their experiences concerning climate change in their community. Photojournalists took thousands of images documenting locally identified effects of climate change that were perceived as having direct or indirect health consequences for the people of Palau.

**Results:** Coral bleaching, beach erosion, irregular rainfall, sea level rise, and salt water inundation directly impact food security and tourism in Palau, while other less obvious, but important consequences, such as potential loss of traditional practices and cultural identity were also identified.

**Conclusions:** The people of Palau reported significant impact from climate change on agriculture, economics, health, and culture.

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### (A89) The Greenhouse Effect in Nigeria

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The atmosphere contains gases that act like the glass in a greenhouse. They are transparent to visible light from the sun, and allow it to pass through to the earth below; but they absorb and trap infrared light radiated outward from the earth and convert it into heat. The principal “greenhouse gases” are chlorofluorocarbons (CFCs), methane, and most importantly, carbon dioxide. The concentration of greenhouse gases is rising due to two factors: (1) the manufacturing of CFCs; and (2) the burning of fossil fuel at a tremendous, and still increasing rate. If this trend is not reversed, research predicts that there will be a steady rise in the temperature of the earth. This global warming could cause drastic climatic changes with devastating results, including: (1) shifting of seasonal winds, with the creation and spreading of deserts in the northern areas; (2) alteration in crop patterns with social upheaval; (3) starvation; and (4) the inundation of large areas of land. When this chaos begins, developing countries such as Nigeria, Kenya, etc. also will be affected, along with developed countries. The solution to the problem of CFCs in principle, though not in practice is simple: STOP MAKING THEM!! But one cannot burn carbon without producing carbon dioxide. Which is why new ways to produce energy must be used?

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