Environmental Sustainability and Energy Informatics: An Alaskan Case Study

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Environmental Sustainability and Energy Informatics: An Alaskan Case Study

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Alaska’s economy depends heavily on natural resources. The state’s leading economic activities include oil production along the Arctic coast, fishing, and forestry. However, climate change has threatened Alaska’s ecosystems. Globally, too, climate change has caused an unprecedented increase in tropical storms, heat waves, wildfires, rising sea levels, and melting glaciers. There have been multiple calls for research to address the adverse impacts of climate change. Articles published in the top Information Systems (IS) journals in the past years have put forth the necessity for information systems research in environmental sustainability (Watson, Boudreau, & Chen, 2010; Malhotra, Melville, & Watson, 2013; Gholami, Watson, Hasan, Molla, & Bjorn-Andersen, 2016; Staudt, Leinhoff, & Watson, 2019). There is also an increase focus on energy informatics as a research area in IS (Goebel et al, 2014).

In this paper, we research information systems that can help Alaska address the adverse effects of climate change. We research solutions that help with sustainability management such as smart grids used in Alaskan villages. We plan to use the belief-action-outcome (BAO) framework (Melville, 2010) to formulate our action agenda and determine the important role that IS plays in environmental sustainability. To help us determine actionable insights, we also propose to analyze datasets made publicly available by the State of Alaska, the United States Geological Survey (USGS), and National Oceanic and Atmospheric Administration (NOAA).

References


