

Building resilience to climate change in Alaska is a highly complex enterprise. Planners need to simultaneously consider stakeholder values, projected environmental changes, cultural factors, economic constraints, policy mandates, and other decision constraints. Planners typically grapple with questions like:

- How can social, economic, and environmental data be used to inform cost-effective options for infrastructure improvements?
- How do you repurpose and adapt an existing adaptation solution for a community's specific needs?

Structured decision making (SDM) provides a framework to answer questions like these. SDM has been implemented as a web application called GiSdT (pronounced "gist") that integrates the social, economic, and environmental dimensions of a climate adaptation plan. The trade-offs between these dimensions can be quantitatively analyzed and visualized in GiSdT.

US federal agencies that have used SDM for complex decision landscapes include the US EPA, US Fish and Wildlife, and the US Department of Energy.

