



## How fashion can bring about ecosystem collapse

*A fashion for otter fur is directly linked to the degradation of kelp forests, a new study shows. (© Keith A. Ellenbogen)*

**Editor's note:** [A new scientific paper](#) argues that drivers of social change like technology and fashion play a key role in bringing about environmental change — and it's time the scientific community pays attention. The authors — including Jack Kittinger, senior director of [Conservation International \(CI\) Hawai'i](#) — contend that in order to protect ecosystems before it's too late, we have to look beyond traditional data and clue into these social forces, which can forewarn scientists when an ecosystem is in decline.

*In a recent conversation, Kittinger laid out the paper's key findings.*

**Question: What's an example of a social factor that can tell us about the health of an ecosystem?**

**Answer:** It may be hard to believe, but to understand the decline of kelp forests, you have to understand how the demand for otter pelts was driven by a [fashion craze in China](#). The demand for this species was so great that the price was astronomical, driving the intensity and geographic expansion of the harvest. This explains why some people were still financing expeditions long after the majority of otters were extirpated — the pelts were worth more than gold. [We are doing the same thing now with bluefin \[tuna\], actually.](#)

But markets are just one example: For cod off the coast of Newfoundland and the northeastern U.S., new technologies were the culprit. Suddenly people were able to use fish-finding technology, allowing them to increase or maintain their catch per unit effort, even while the stock was declining precipitously. If you're just watching the catch, you'd miss the importance that technology played in crashing the fishery. It's never recovered — clearly we need to be more vigilant in our monitoring of technology and its impact on species and on ecosystems.