

What's at stake: When systems interventions fail

Here, we set the stakes by sharing some examples of conservation intervention failures which could have been prevented by a better understanding of the system at hand. Sadly, these are just some of the many failures we see in conservation.

For each of these examples, consider: What elements do you see at play in the system?

Wolong Reserve

China's Wolong Nature Reserve boasts an impressive population of Pandas, but households located in the reserve compete with pandas by collecting bamboo, the panda's main food source, as fuel wood for fires. Although the government reserves were meant to protect panda habitat, another government program, subsidies that incentivized multi-generational households to split up, caused increases in the number of households. This increase in household numbers caused an increase in foraging for fuel wood, exacerbating encroachment on panda habitat.

(Reference: [Complexity of Coupled Human and Natural Systems](#))

Saiga Horn

In the 1980's, poachers decimated Asian and African rhino populations to sell their horns. Conservationists were looking for ways to save the remaining rhino population, and to do so they promoted Saiga horn as an alternative. Saiga are a little known antelope from central Asia that at the time had thriving populations and had traditionally been hunted sustainably by local communities. The suggested swap, supported by conservation organizations and the United Nations, ended up reducing the Saiga population by roughly 97% as the market for Saiga horn grew.

(References: [Rare antelope driven to edge of extinction by well-meaning](#) and [Rhino rescue plan decimates Asian antelopes](#))

Gobi Desert Saxoul

In the Gobi desert, the Saxoul tree is an important keystone species that has been declining for decades. To save the tree, the Chinese government established reserves, but researchers found that the trees became worse off in the reserves. They were smaller and rats had been attacking their root systems. Several years prior to the creation of the reserves, the government had effectively stopped the already

declining nomadic herding activity in the region by enforcing new land-use laws. Following interviews with traditional herders, the researchers learned that grazing on low, tender saxoul branches by camels helped the trees to grow vertically and crushed rat dens at the base of the tree. Nomadic herding practices were actually instrumental in maintaining healthy saxoul forests, a perfect example of a local social-ecological system.

(Reference: [Traditional Ecological Knowledge Informing Resource Management: Saxoul Conservation in Inner Mongolia, China](#))

Shark Conservation

Shark finning is a heavily publicized but misunderstood practice. While states and the US federal government have taken steps to ban the most nefarious meaning of the term - cutting the fins off of live sharks and returning the live sharks to sea - it has yet to make a dent in the real issue. Conservationists have pointed out that the real problem is the overfishing of sharks worldwide. Misplaced system change not only falls flat, but can undermine future efforts if the changes are perceived as ineffectual.

(References: Mongabay, [Shark fin trafficking ring busted as trade ban comes into effect in Florida](#) and [Shark fin stories by major media 'misleading': Q&A with David Shiffman](#))