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Now You See it, Now You Don't

The dark cyan bodies of water in the upper and lower right of this image are what's left of the Aral Sea. This enormous endorheic lake (a lake with limited or no drainage) once spanned large parts of Kazakhstan and Uzbekistan. How big was it? In 1848 three ships from the Imperial Russian Navy were sent to do a complete survey - it took two years. Once the fourth largest lake in the world, it encompassed the entire sand-colored region in the center of this picture. Today it is a small fraction of its original size.

As part of their grand plan to develop a large cotton export industry, the government of the Soviet Union diverted the rivers that filled the Aral basin in order to irrigate the surrounding desert. Cotton is an insatiably thirsty crop - about 2,700 liters of water are required to grow enough to make one shirt - and the lake was decimated in no time.

While about 5 million acres of new farmland were created, the economic, environmental, and health costs were too high. Much of the drained lake bed has turned to desert, and clean, fresh water is now scarce. No significant fishing industry remains in a region that once yielded a sixth of the nation's total fish catch. The exposed lake bed contains high levels of salt and toxins from fertilizers, industrial wastes, even the byproducts of Soviet era biological weapons testing. Dust storms routinely suspend and disperse these toxic deposits into populated areas, causing widespread health problems including throat cancer, respiratory illness, and an elevated infant mortality rate.

A dam constructed in 2005 has led to improving conditions in the section now known as the North Aral Sea, but only by constricting inflow to the South Aral Sea. The Aral Sea story is a haunting reminder of what can happen when environmental common sense is ignored in the pursuit of economic ambition.

