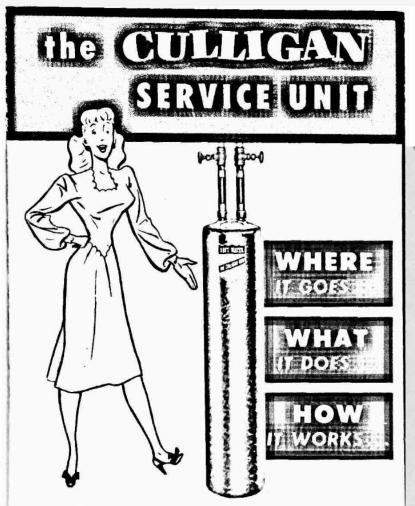
FRAMING THE WATER CRISIS: ECOLOGICAL, SOCIAL, AND ECONOMIC PERSPECTIVES ON WATER

Dr. Alexandra Straub, University of Pittsburgh Teaching the Global Water Crisis

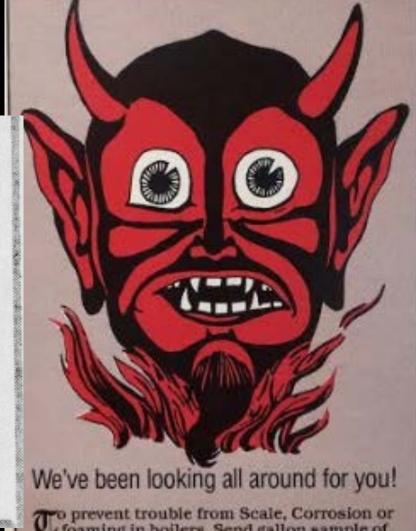


Culligan Soft Water Service is available in your community through your local, independent, franchised Culligan Dealer.



Calgon makes your household tasks easy. Makes the hardest tap water feel silky soft and smooth! Just dissolve in water for all fine laundering, for baby's bath, for a smooth shampoo rinse that leaves your hair soap-free and gleaming soft.

HOUSEWARES, FOURTH FLOOR



To prevent trouble from Scale, Corrosion or foaming in boilers. Send gallon sample of water for your analysis and proposition.

DEARBORN DRUG & CHEMICAL WORKS

299 Broadway N.Y. Postal Telegraph Bldg. Chicago

HARD WATER: Household Swindler

"Hard water is not fit for a Christian woman to wash with anyway. Hard water is an abomination in the kitchen, laundry, or bath."

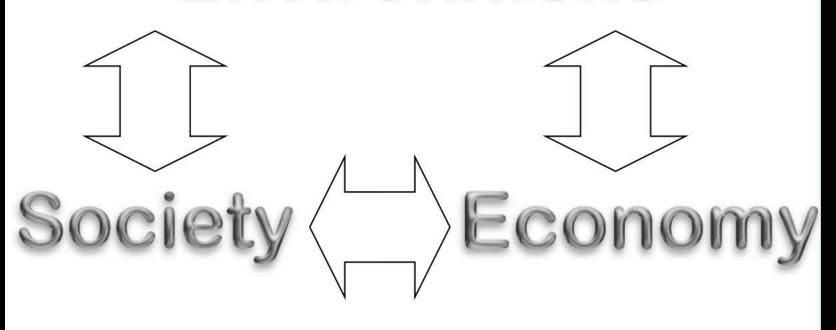
The Michigan Farmer, 1880

Environment

Society

Economy

Environment



WATER AS SOCIAL

- Sacred Water in India's Ganges River
- When thinking about relationships with water, how does race, gender, class, law, and technology shape those relationships?

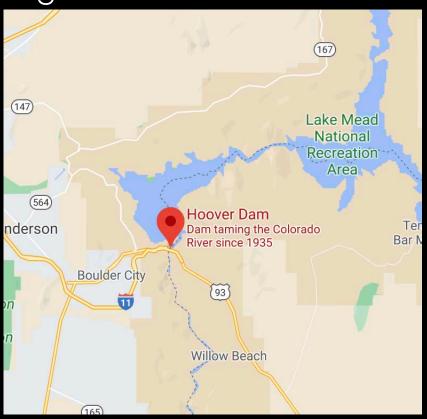


Image from Reuters , https://graphics.reuters.com/INDIA-RIVER/010081TW39P/index.html

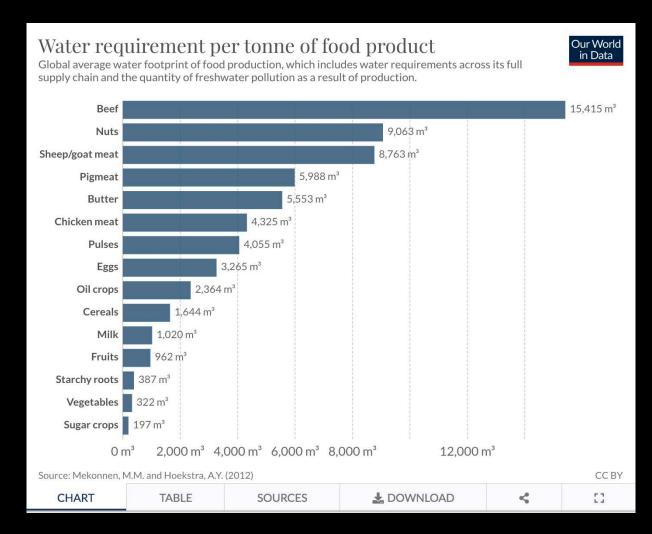
WATER AS H_2O (SORT OF..._)

- Nonhuman nature is "at once a cultural construct and a set of actual things outside of us and not fully contained by our constructions..."
 - Richard White, The Organic Machine: the Remaking of the Columbia River

 The role of water in modern industrialization, urbanization, and agricultural intensification



WATER AS A RESOURCE



THE ARAL SEA IN CRISIS

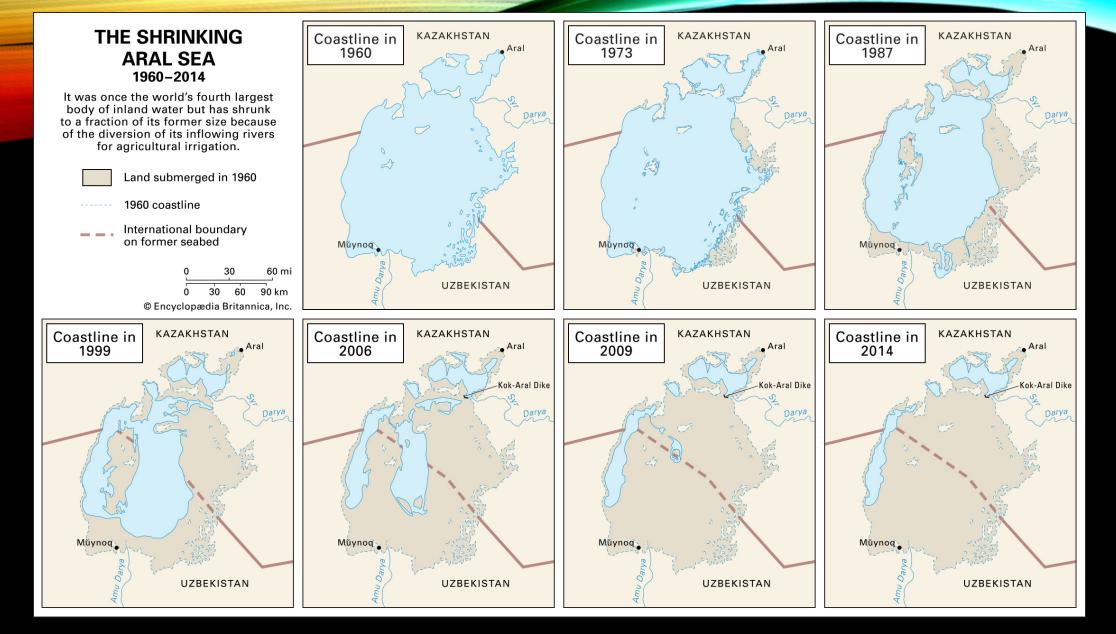


Images from Britannica Encyclopedia online Britannica.com/place/Aral-Sea





Source Nasa Earth Observatory





GREAT PLAN FOR THE TRANSFORMATION OF NATURE

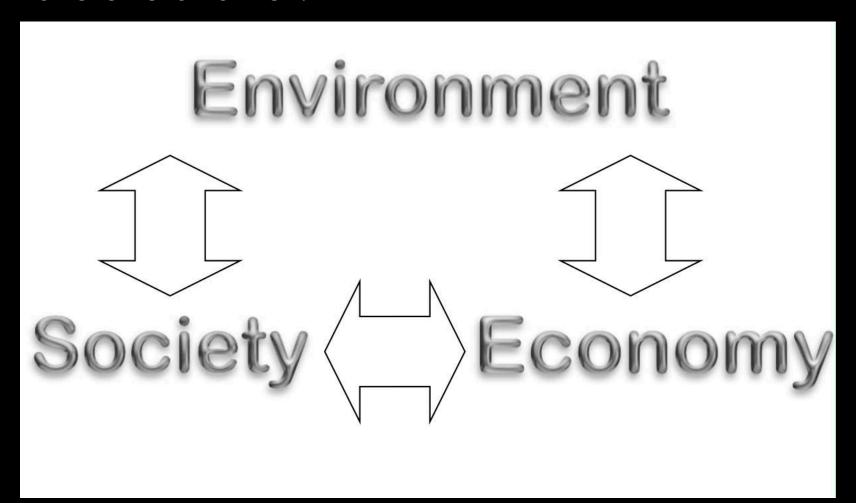


"We shall conquer drought"

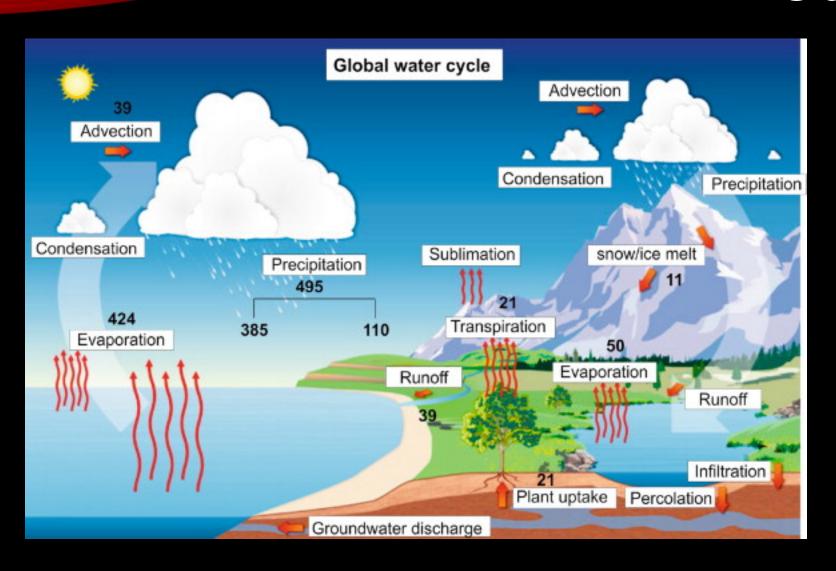
Image credit: Viktor Govorkov (1949)



- What are the environmental contexts of the Aral Sea crisis?
- The social contexts?
- The economic contexts?
- In what ways do these aspects interact with one another and remake one another?



THE HYDROSOCIAL CYCLE



- What's missing?
- Modern Water

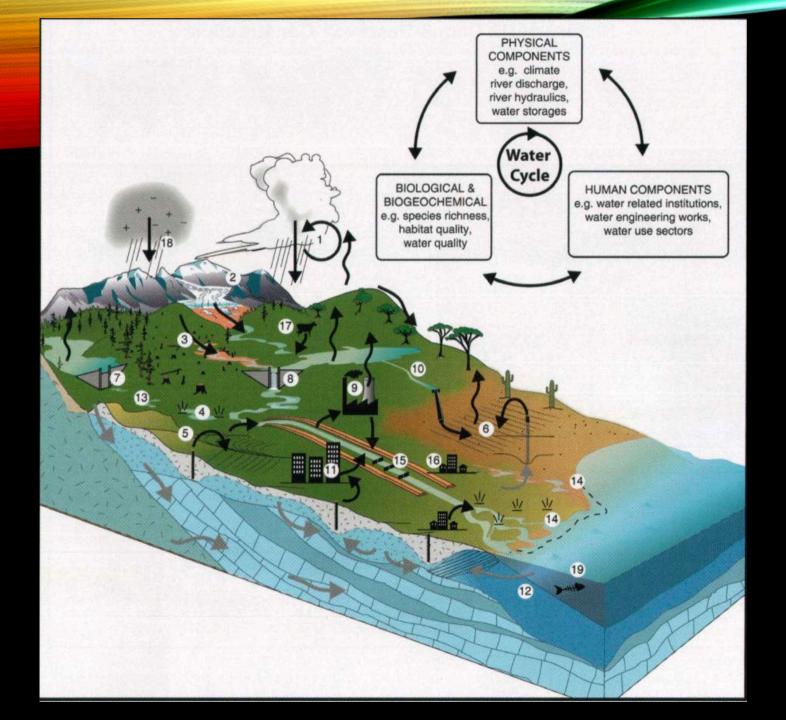
"It made water legible, disentangled from ecology and human society while also internalizing hydrological science and rigid water management. "

James C. Scott



The hydrologic cycle as it occurs today. Water flows to money!

Kate Ely, "Postmodern Hydrologic Cycle" from WaterWired, 2008

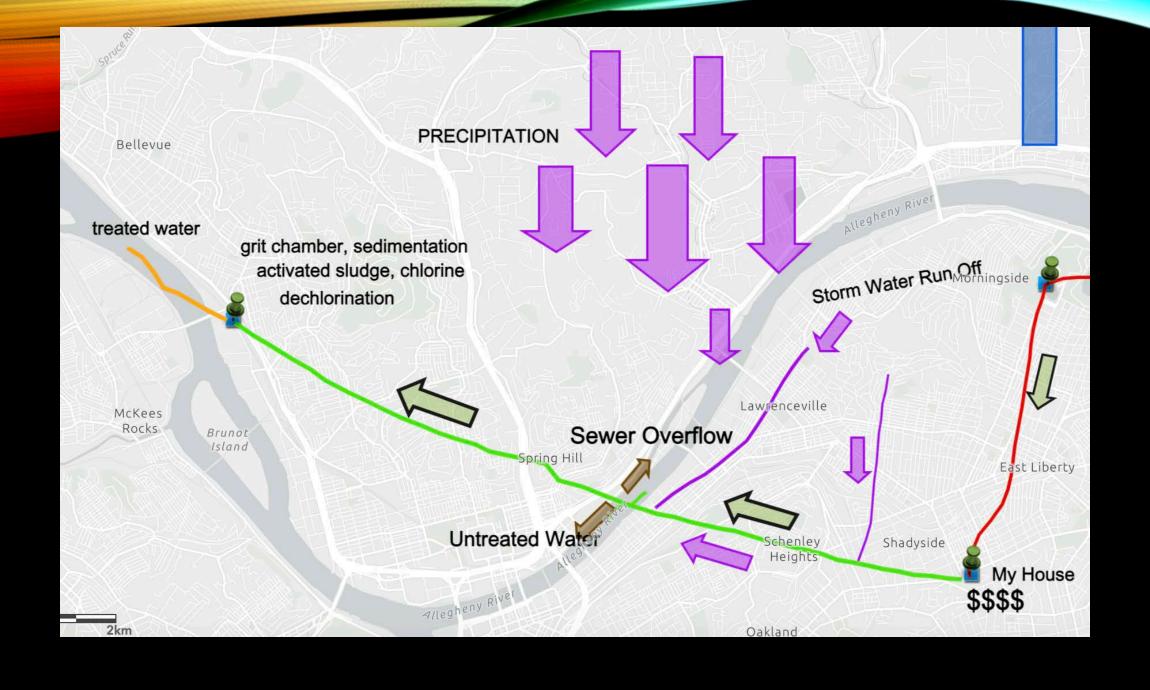


Humans transforming the global water system. *EOS* 2004

https://agupubs.onlinelibrary.wiley.com/doi/pdf/10.1029/2004EO48000

CREATING YOUR OWN HYDROSOCIAL CYCLE

- Local Water & Sewer Department Website
 - https://www.pgh2o.com/your-water
- USGS Water Use in the United States
 - https://www.usgs.gov/mission-areas/water-resources/science/water-use-united-states?qt-science_center_objects=0#qt-science_center_objects
- Our World in Data, Global Water Use
 - https://ourworldindata.org/water-use-stress



ADDITIONAL RESOURCES

- PBS News Hour "India's Effort to Clean up Sacred but Polluted Ganga River," February 11, 2021, https://www.pbs.org/newshour/show/indias-long-term-effort-to-clean-up-pollution-in-sacred-ganga-river
- Reuters Graphics, "The Race to Save the Ganges," <u>https://graphics.reuters.com/INDIA-RIVER/010081TW39P/index.html</u>
- Encyclopedia Britannica, "Aral Sea," https://www.britannica.com/place/Aral-Sea
- Nasa Earth Observatory, "The Aral Sea," https://earthobservatory.nasa.gov/world-of-change/AralSea
- Jamie Linton, "Modern Water and its Discontents: a history of hydrosocial renewal," WIRES Water 2014, 1:110-120.

- TedEd "The Science of Flint's Water Crisis," <u>https://ed.ted.com/best_of_web/HSPnp900</u>
- Cornell Policy Review, "The Flint Water Crisis: Using Systems Thinking to Understand Critical Failures"

http://www.cornellpolicyreview.com/flint_water_crisis/?pdf=3841#:~:text=A%20deficiency%20in%20the%20Flint,switch%20that%20sparked%20the%20crisis. &text=City%20officials'%20decision%20to%20stop,River%2C%20saved%20Flint%20%249.2%20million