

TUWaterWays

Water News and More from the Tulane Institute on Water Resources Law and Policy
August 13, 2015

Delta Cities' Short Term Protection May Elevate Long Term Risk

[A pair of studies](#) in *Science* this month show that all around the world cities in river deltas face increasing [flood risk](#) and [vulnerability](#), and that increased development and mega projects make things worse in the long term. One study found that all deltas (of the 48 they studied) will be more vulnerable when energy and labor costs go up in the future, and, although wealthy countries could infrastructure their way to limited threat in the short term, in the long term scenarios more developed deltas are at higher risk. The other study might explain why – all the geo-engineering that developed countries have been doing in deltas only works in the short term. They limit the deltas' ability to absorb floods and to heal themselves afterwards. The Mississippi River Delta is the poster child for this problem, but will not remain alone in the need to reverse course in order to reduce risk and find some sustainability.

Mine Waste Discolors River in Colorado – And the EPA Did It!

Last week a spill of wastewater from an abandoned mine turned the Animas River [orange](#) as it flowed through Durango, Colorado. The EPA was in the process of cleaning the site and setting up a diversion for a leak where the mine had been putting waste into a tributary of the Animas. Well, there was more wastewater in there than they thought, and 3 million gallons of the stuff were released. Why did this particular spill seem to catch the world's attention? After all, spills of [oil](#), [brine](#), [coal ash](#), [mine tailings](#), etc. into streams are pretty common these days, and people turning [water all sorts of colors](#) is nothing new. It's likely because it was the EPA who messed up and caused the spill. Never mind that it wasn't the EPA who created the highly acidic, heavy-mineral laden wastewater in the first place, or that the spill was part of an engaged, [multi-year effort](#) to fix a long-neglected problem. It was the government's fault, so let's all just revel in that fact and repeat [the mantra of our times](#).

A Few Interesting Thoughts at the Oil' Water-Energy Nexus

Every form of energy, clean or otherwise depends on water in one way or another. Access to water, especially clean water, is almost always dependent on some form of energy. Hence, the [water-energy nexus](#). One [study](#) in PNAS indicates that trying to mitigate climate change by increasing biofuels would [worsen water shortages](#) and that better climate change

The **Tulane Institute on Water Resources Law and Policy** is a program of the Tulane University Law School.

The Institute is dedicated to fostering a greater appreciation and understanding of the vital role that water plays in our society and of the importance of the legal and policy framework that shapes the uses and stewardship of water.

Coming up:

[18th Annual Conference on Litigating Takings Challenges to Land Use & Environmental Regs.](#)

September 25, 2015

University of Maryland School of Law
Baltimore, MD

[Coastal Candidates Forum](#)

August 18, 2015

4:00 P.M.

Nichols State University
Peltier Auditorium
Thibodaux, LA

Water jobs:

[Virginia Energy Attorney](#)

Southern Environmental Law Center
Charlottesville, VA

[MRD & Natural Infrastructure Economist](#)

(Two Year Postdoc Position)

Environmental Defense Fund

Washington, DC, New York City, or Boston, MA

[Attorney](#)

Community Water Center
Sacramento, CA

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modeling has to start taking in to account other aspects – such as legal regimes and the limited nature of water.

Hydropower is another energy source that avoids huge carbon emissions, but the big dams it relies on limit the movement of fish, change their habitats, need costly operations and maintenance, and cut off the flow of sediments much needed downstream in those vulnerable deltas (see above). Calls to remove these dams are often muted by the associated loss of clean energy. Well, some are calling on the US to [remove dams while maintaining their power production](#) with a combination of solar, wind, and “run of the river” hydropower. Although the question of who would own the exposed land that was once at the bottom of the reservoir would have to be answered, the possibility of maintaining the clean energy production while losing the negative aspects of the damming makes the prospect of widespread dam removal much more realistic.

Another energy form still in its infancy is wave or tidal power. “[Ocean energy concepts come and go like Donald Trump memes these days](#),” but a new concept out of the United Kingdom promises to provide power in shallow, slow moving waters without building massive walls or turning sea life into [bouillabaisse](#). [Kepler Energy](#) is hoping to raise enough money to demonstrate a 1 kilometer version of their Transverse Horizontal Axis Water Turbine, developed at Oxford’s department of engineering science. Good luck, Oxford, and thanks for the [commas](#)!

You take lemons and make lemonade. Bill Gates takes poop and makes water, electricity, and ash. That’s why he’s Bill Gates and you’re not (Unless Bill Gates is reading this. In which case, hello, Mr. Gates! Congratulations on the great work The Gates Foundation is doing, and we’d love to talk with you about the law and policy aspects of the Foundation’s water work!). The Omni Processor, developed by an engineering firm and funded by The Gates Foundation, is intended to [provide cheap sanitation](#) in developing countries. Well, it’s doing just that right now in Dakar, Senegal. The processor is currently being [tested](#) by the Senegalese sanitation utility, and proving that that demonstration back in January, when Gates sipped on water that had just recently been human waste, was not just a meaningless publicity stunt. It’s doing the good work in a town where more than a million people don’t have sewage access and have to deal with it manually, and/or pay someone high prices to empty their latrine. Now, thanks to support from the Gates Foundation (again), people in Dakar have access to something like [a latrine-emptying Uber service](#) that is driving down the costs of sanitation in the city. Again, he’s Bill Gates, and you’re not. Neither are we.

Correction RE: Nutrient prize

Last week TUWaterWays reported about the Gulf of Mexico’s Dead Zone (to recap: it’s a big one this year). Well, that piece stated that the EPA had been working on reducing hypoxia in the Gulf of Mexico since 2008, but a sharp reader noted that, in fact, the EPA has been working on hypoxia for much longer, and has had an [Action Plan since 2001](#). So that’s even longer that nutrient reduction in the Mississippi Basin hasn’t worked. We regret the error. Even more, we regret the delay. Come on, [Tulane Water Prize](#)!