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Commentary \ **“Water Woes but not Water Wars: Getting Beyond Fatalism”**

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Professor Larry Swatuk, University of Waterloo, Canada, is an expert on environmental security and natural resources governance. Commenting on the water crisis in California he argues: “In my view, this prolonged drought challenges not only Californians but every one of us to reconsider the ends to which we use our water resources.” Referring to California’s agricultural commodity abundance Larry Swatuk points out: “Make no mistake: despite all of the cries of ‘climate change!’ humans are the architects of this water crisis.”

California’s water woes have long been known to water experts¹, but tend only to come to global public attention in times of severe drought. For several years, scholars at the Pacific Institute in California have been ringing the alarm bell, trying to get the attention of policy makers, citizens, and the private sector regarding ‘the coming mega drought’.² Recently, in a New York Times opinion piece, Heather Cooley³, Director of the Pacific Institute’s Water Program, argued that if California is to gain some measure of control over its water future, it must institute a state-wide system to accurately measure water use. She describes how farmers have come under scrutiny particularly as they consume 80 per cent of the state’s freshwater resources. Without doubt, an accurate accounting of water use is important. Decision makers need empirically verifiable benchmarks against which to weigh and base their actions. But this is only a starting point. While she goes on to describe a variety of ways and means to make crop-production more water efficient

¹ See Marc Reisner’s seminal study Cadillac Desert: the American West and its Disappearing Water (Viking, 1986).

²<http://www.nature.com.proxy.lib.uwaterloo.ca/scientificamerican/journal/v306/n1/full/scientificamerican0112-14.html>.

³<http://www.nytimes.com/roomfordebate/2015/04/07/can-farms-survive-without-drying-up-california-13/california-needs-better-water-management-and-pricing-policies?smid=tw-share>.

and urban consumers more water wise, little is said about the nature of production itself. Generally when water shortages come to our attention, the individual urban consumer is the target of attention: close the tap while brushing your teeth, do not water your lawn. There are many stories about the size of the ‘water footprint’ of the ‘average American’, generally noting that if the rest of the world consumed water like Americans global usage would more than double.⁴ Rare is the analysis that focuses on the difficult issue of what types of crops are grown where and for what use. In California, for example, ‘in 2013 ... agricultural exports amounted to US \$21.24 billion in value, representing a 15 percent increase over the previous year.’ The top five exports are milk (US \$7.6 billion), almonds (US \$5.8 billion), grapes (US \$5.6 b), cattle and calves (US \$3.05 b) and strawberries (US \$2.2 b).⁵ According to the California Department of Food and Agriculture, the state accounted for approximately 14.7 per cent of total U.S. agricultural exports. This is an incredible success story, particularly as these products derive from a primarily arid to semi-arid environment. High modern water engineering has made possible the miracle that is California – not only its heavily populated cities, but its food and agricultural commodity abundance. And such a model inspires the rest of the world to strive for similar outcomes, so we have cotton production in the arid lands of Uzbekistan, and lemons in the Negev desert. Millions of acres of cereal and feed crops are grown around the world in environments transformed from hostile to hospitable by engineering science.

But what is the outcome of such miracles of modernity? Aside from enhanced crop production, the most important outcome is the so-called ‘global water crisis’. Make no mistake: despite all of the cries of ‘climate change!’ humans are the architects of this water crisis. Fate is not our master; we are. It is not my main intention here, in this short article, to make an argument for better crop choices (drought resistant and indigenous

⁴ Julian Fulton, Heather Cooley, Peter Gleick, 2014. Water Footprint Outcomes and Policy Relevance Change with Scale Considered: Evidence from California. Pacific Institute (September).

⁵ <http://www.cdfa.ca.gov/Statistics/>

rather than water-hogging introduced species), or to describe the ways and means of lessening our water use (eat less meat; eat high-nutrition locally grown cabbages not imported California lettuces; eat preserved jams made from local fruits not out of season strawberries imported from California). My main intention is to shine a spotlight on the water crisis and to say that it is a crisis of our own making. Let California stand in as the poster-child for this problem: we have chosen to commandeer water resources and direct them to largely menial ends (almonds, lettuce, strawberries and grapes – crops grown all over the world, all easily substitutable and none essential). Certainly the agricultural industry creates jobs and generates wealth, but it is an industry built on a hydrological fault line where sustained drought has begun to shake the house that high modern technology built. If, as in Australia at the beginning of this Century, the house should come crashing down, we only have ourselves to blame. Post-disaster management suggests that we must ‘build back better’. In my view, this prolonged drought challenges not only Californians but every one of us to reconsider the ends to which we use our water resources. How did we end up on this technological hard path to dependence and vulnerability, made manifest around the production of basically inessential commodities? Rather than defend our rights to produce whatever the market will bear, we should come together to reexamine food and agricultural policy from a sustainability perspective. Eating less meat will not kill you; to the contrary it may make you healthier.

Empirical evidence shows that extreme events tend to have different impacts: floods tend to bring people together in cooperative action whereas drought tends to heighten tension and often leads to violent conflict.⁶ While it is unlikely that California’s current water problems will lead to such violence in the short term, it is not out of the realm of possibility, barring state intervention through drought relief supports and so on, in the medium to long term. Hard choices face the people of California. Altering embedded

⁶ See N.P. Gleditsch, 2012. Whither the Weather? Climate Change and Conflict. *Journal of Peace Research* 49(1): 3-9.

practices will not be easy. A serious conversation centered around production must begin now.

Larry Swatuk

Professor [Larry Swatuk](#) is staying with BICC for three months to develop a co-operation project between BICC and the University of Waterloo on Climate Change Adaptation, Organised Violence and Regional Security.