## **Push Here**

## Opinion Piece by Professor Jonathan Foley \*

We are supposed to be in the business of changing the world. The question is: Are we?

Countless people are seeking to solve some of the most vexing problems of the 21st century: climate change, food insecurity, biodiversity loss, emerging diseases and more. Dedicated scientists, designers, policy makers, health experts, business leaders, philanthropists, journalists and activists are working tirelessly to develop a more secure and sustainable future for the world. But, sadly, our efforts often seem unequal to the task at hand. The problems are still getting bigger and bigger, and our efforts struggle to keep up.

Why are we falling behind? It's certainly not from a lack of effort. Maybe we're not being strategic enough. And maybe we're focusing too much on symbolic fights and not enough on those that can yield sizable, tangible outcomes.

Take climate change. Some people are passionately focused on stopping the Keystone XL pipeline, saying that this single pipeline would be "game over" for climate change—yet the pipeline itself would only represent a *minuscule* fraction of our national energy use. While stopping this pipeline would certainly be helpful to climate change mitigation, *far* bigger reductions in greenhouse gas emissions are possible (and already underway) through improving America's automotive efficiency standards, retrofitting buildings and factories, deploying more solar and wind power, and shifting away from coal. Why not attend more to these larger parts of the American energy system, where we're able to make much more progress on CO<sub>2</sub> emissions? Why not also focus on non-CO<sub>2</sub> greenhouse gas emissions such as methane, nitrous oxide and soot—much of which come from a small number of countries and economic sectors, and may be far easier to change quickly than the whole fossil fuel economy?

Likewise, with respect to food security and the environment, we focus a lot of attention on ideologically charged issues, while largely ignoring bigger, more pragmatic ones. Organic or conventional? GMO or no? We fiercely debate these two systems, even though both are small players in the global food system: Certified organic farms produce less than 1 percent of the world's food calories, and GMOs are only used on 10 percent of the world's agricultural land. Yet research shows that many agricultural solutions—such as improving soil and water management, addressing food waste, or shifting diets—may provide significant food security to the world without getting sidetracked by ideological debates.

Let's put our sustainable-agriculture efforts where they matter most.

How can we focus on the bigger issues and make truly transformative change? Maybe we can take our lead from Archimedes, who once said that, given a lever long enough and a fulcrum on which to place it, he could move the Earth. Let's try to find some of these "planet levers."

An effective planet lever has three key characteristics. First, it needs to be a *long lever*, able to amplify small forces into larger actions. Such leverage can sometimes be gained through media, political change or social movements. Often it happens through technology and the marketplace.

Second, the lever needs to be *positioned in the right place, moving the planet in the right direction*. This means avoiding the largely symbolic efforts, where change is small and possibly in the wrong direction, and focusing instead on big wins in the right direction.

Third, it helps if there aren't strong, opposing forces pulling the lever in the other direction. Finding potential allies—and minimizing the potential of facing ardent foes—makes the job a lot easier.

Finding these kinds of planet levers will require that we look at pivotal ideas, pivotal solutions and pivotal places that can truly change the world. In this issue of *Momentum* we showcase seven projects that are doing just that in the domains of ocean fisheries, climate change, rain forests, urban expansion, population growth, sustainable agriculture and freshwater.

Let me be clear: I don't want to dismiss the efforts focused on the Keystone XL pipeline, debates over organic versus GMO agriculture and other hot-button issues. These are still important, and they should continue to receive attention. But looking forward, let's be careful to not get too caught up in these ideologically charged, highly symbolic efforts. Let's make sure we reserve enough time, energy and other resources to attend to the key planetary leverage points. Moving the Earth toward a sustainable future demands nothing less.

\* Professor Jonathan Foley is the director of the Institute on the Environment at the University of the Minnesota, where he is a professor and McKnight Presidential Chair in the Department of Ecology, Evolution and Behaviour. He also leads the IonE's Global Landscapes Initiative. He is addressing the Crawford Fund's annual development conference "The Scramble for Natural Resources: More Food, Less Land?" in Parliament House, Canberra on 9 October.