

US student offers water drum solution for rural India

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IN THE photographs, the yellow is prominent. Four women stand with earthen pots of water perched on their heads. This is rural Rajasthan.

A fifth woman stands at the yellow water wheel. Her back is arched, her head is buoyant because there is no weight straining her facial muscles. In that water wheel, the handle of which she holds in her hands, there are 25 gallons of water, which is more than what the four women are collectively carrying.

In one frame, the photo on Wello Water's website captures both — the issue and the solution.

With Wello Water, Cynthia Koeling, an MBA/MS student at University of Michigan, aims to improve global access to water by making it possible to collect 90 liters of water easily by placing water inside the "wheel", a yellow drum that women can roll over a range of terrain and without much difficulty as the weight transforms into an effective weight of just 10 kg. This is more than five times the amount of water that women have to carry using traditional methods. And she has chosen Rajasthan in India to roll out her venture by the end of the year.

Cynthia, the CEO and founder of Wello, says lack of access to tap water is an issue globally.

As per the UN guidelines, a person needs five gallons of water per day. A water wheel can carry up to five times the amount and thus cut down on multiple trips that women and girls make to the water source to fill and refill water. This is the first time a water wheel project is being piloted in India, as per experts.

A year ago when Cynthia came second in the 2010



The water wheel is to be launched in Rajasthan

Princeton Entrepreneur Network Pitch and won the Dow Sustainability Challenge Grant, she went to Rajasthan to test the water wheel. She figured she would have to innovate if she wanted to break even.

Rajasthan with its arid climate, its difficult terrain and its chronic water problems seemed like the perfect stage for the launch.

"We are excited about reaching people who have little access. It is a welcoming environment for social enterprises," Cynthia said over email. "We are working on forming partnerships."

Cynthia lived in Latin America — Mexico and Guatemala. That's where the problem hit her first. She saw women carrying water. There was a sense of inequality between genders. Larger issues were being ignored. Education of the girl child was suffering. "I saw women and girls who took on the water collection. Kids were kept out of schools. Water wheel can make a huge difference," she said.

Cynthia didn't herself invent the water wheel. What she is focussing on is how to make the technology available to people who need it the most. In Africa, Hippo Water Roller was invented around two decades ago by two South Africans — Pettie Petzer and Johan Jonker.

Manufactured and distributed worldwide by Imvubu Projects, a social en-

terprise, around 33,000 Hippo Water Rollers, are servicing more than 2,50,000 people in 17 countries. But the model in Africa is more of a sponsored project, a part of the CSR initiatives by companies.

In India, manufacturing is cheap. Wello will manufacture its rollers locally and then scale up after the pilot project, Cynthia said.

Africa's Hippo Water Roller, which sells at \$100, wasn't going to work in India. "We are still working on the product which should cost around \$20 and \$30. We also have a model where end users can become their own water distribution system. The tool pays for itself," she said over the phone. "We don't have any partnership with the government."

Manufacturing would be done in India. Advertising on the water wheel is an option. Money can also be made in distribution of water to households. "India has high-quality of manufacturing and potential for partnerships and it is easy to create awareness. In Rajasthan, we got a positive response," she said. "There are challenges. There are infrastructure issues with regards to manufacturing."

The United Nations has approached Wello for providing water wheels in Sudan's Darfur region where drought has ravaged the landscape, according to reports.