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FIRST PERSON >

The New Oil

Tufts engineering professor *Shafiqul Islam* teaches water diplomacy and has created a website, *AquaPedia*, that aims to get people – not just politicians – involved in the debate.

You say water is the new oil. What do you mean by that?

Like oil, water can help determine countries' wealth, welfare, and stability. It affects wealth because if people are spending their scarce time fetching and storing water, that limits their productivity. It can affect people's health when floods bring disease such as cholera, malaria, and dengue fever, and when drought brings thirst and starvation.

> How does diplomacy figure in?

Over 300 rivers cross national boundaries. In the Nile Basin, for example, Ethiopia is less powerful than Egypt. Egypt claims that the water from the Nile is theirs, but 90 percent of the water comes from Ethiopia. That's why we need diplomacy. Egypt has taken the position that the water belongs to us and if you do anything – such as try to build a dam – we will take action.

> Will there be wars over water?

Historically that has never happened. But it will lead to local conflicts that could be violent. What's happening now in Darfur is a good example. Rainfall has gone down there by 30 percent in the past 40 years, which has created a significant conflict between grain farmers and people who raise cattle and sheep. Water is not the primary reason for the conflict there, but it's one of the contributing factors.

> Is there a worldwide water shortage?

We do not have water problems on a global



“Water is in the wrong place at the wrong time.”

level. What we really have is local problems – water is in the wrong place at the wrong time.

> For example?

In tropical climates – such as Bangladesh, where I grew up – it rains very hard for about 100 days a year. The other 265 days, there's drought. So 95 percent of the rain falls in four months.

> So the problem is one of distribution.

Partly. The biggest difficulty comes when you have competing needs: Irrigation is one need, urban development is another, and maybe salmon fishing a third. Economy, institutions, and values come into play. In India, for example, the Ganges River is almost like a religion. In the US, a value might instead be the view.

> So the question is, who is going to get more water?

Exactly. And we're recognizing that science alone will not solve water problems. But policy operating in a vacuum will not solve the prob-

lems either. You need a combination of the two, and we would like to educate our students to understand both. We will have much bigger problems down the road if we don't start training these students now. We hope they will go on to work in think tanks and politics, and will be able to solve conflict through creative understanding of the situation.

> And how does AquaPedia fit in?

There are two types of knowledge. The first is water information, which is basically science and engineering. It can be applied in the natural domain and it gives you predictable outcomes. The second is water wisdom, which can be applied in the societal domain and is contextual. AquaPedia [Aquapedia.tufts.edu] will combine them using hundreds of case studies from across the globe.

> So you're democratizing policy, in a way.

Yes. We're creating actionable knowledge, not just knowledge that sits in the library.

– Elizabeth Gehrman