

Episode 3: The Value of Water

Sun, Jan 23, 2022

SUMMARY KEYWORDS

water, people, livelihoods, downstream users, climate change, poverty reduction, macroeconomy, decision makers, California, resources, economic, watershed

SPEAKERS

JC Giraldo

Vishal Mehta

Annette Huber-Lee

Laura Forni

JC

0:22

Water is fundamental to human development, from drinking water and sanitation to agriculture and more. You are listening to Water Stories, a podcast series where you will learn everything about securing water, energy and food security for all of us.

JC

0:52

Hello, everyone, I am Juan Carlos Giraldo, and welcome to Water Stories, a podcast series where you will learn topics related to water management from the Stockholm Environment Institute experts.

According to the United Nations report on the development of water resources in the world 2021, we have to recognize, measure and express the value of water and incorporate it into decision-making. This will be essential to achieve the sustainable development goals of the 2030 agenda.

Also, I would like to add that the COP26 last year in Glasgow marked a welcome change. Water is included in climate agenda, therefore the value of water is important. Having said this, we will discuss in this episode the value of water.

My co-host in this episode is Vishal Mehta. Vishal is an environmental scientist with more than 15 years of experience in different countries on water resources research, forest conservation and sustainable development. He's based in Davis, California office of Stockholm Environment Institute at the United States Center. Hello, Vishal, how are you? Happy to have you again as a co-host to discuss this topic.

Vishal

2:04

Thanks, JC It's my pleasure. And today I'm particularly happy to introduce my two colleagues, Laura Forni and Annette Huber-Lee. Both are senior scientists in our water group with a great deal of background and experience in many countries around the world on this subject of valuing water on economics, poverty and gender. So welcome Laura and Annette.

JC

Hello, Laura.

Laura

2:28

Hello. Great to be here. Thank you for inviting me.

JC

2:31

Hello Annette, how are you?

Annette

2:33

Thank you so much. Thank you for including me in this conversation.

JC

2:37

Annette, I would like to start this conversation by asking you, when we see from space, our planet is predominantly blue, seemingly abundant with water, right? However, only 1% of the surface is freshwater. The world urgently needs to value this resource. In your opinion, why is it so essential, the value of water, and also what is the perspective of the Stockholm Environment Institute in this particular situation?

Annette

3:01

This is such an important question. Water is perhaps the most valuable resource on this planet for human life. Water is essential for life. We need water to survive not only for drinking, but for the food we eat and for virtually every dimension of our lives,

whether we are living at the level of a billionaire, or a person who's living below the poverty line.

For a wealthy person, water is embedded in the products they use the production of cars, the mining of metals, the cooling of power plants, the processing and transport of food, et cetera. But the value of that water is hidden from those who are wealthy, as we as a society do not adequately price water nor give it the recognition of its value in our public media.

On the other hand, the very poor are acutely aware of the value of water, carrying it for miles, suffering when the water quality is inadequate, keeping children from attending school to get water or recover from waterborne illnesses. Almost universally, the poor pay much more for water they use than the rich in both high-income and low-income countries.

It is critical that we start valuing water and public policy and in the public media, particularly as we face climate change, which will play out most forcefully in water-related events, including droughts, floods, hurricanes, snowfalls, glacier melting and sea level rise. When we value water, we will be able to mobilize the resources needed to adapt to climate change and find more equitable allocations of water across rural and urban communities, as well as wealthy and poor communities.

SEI's role in particular is to highlight the disconnect between the value of water at micro and macro scales so that decision-makers are aware that the value of water and make according major and long-term investments needed to address the consequences of climate change, so that we collectively have a more resilient future from local to global scales.

Vishal

5:11

Yeah, Annette you mentioned the word disconnect. And now I've been thinking about how water scarcity is a daily experience for millions of people around the world. And in many parts of the world, there is no 24/7 pipe water supply, which most of us in the US we take for granted. So people use water from so many different sources like bottled water, groundwater, lakes, rivers, water tankers. There's not a perfect market operating in these situations. Pricing is not regulated, either. And like you mentioned, a related reality is that the poor often pay more for water. So I was thinking about your work, Laura, as well. And in your opinion, Laura, why does this happen? Why does it

happen that the poor often pay more for water? And are there examples of promising solutions in such cases?

Laura

6:00

Yes, thank you, Vishal. Yes, as Annette indicated, the burden of not having water is greater for the poor. And it's something that through our project and work, we discovered that it happens in the developing world, definitely, but also in the developed world. And one example is in California, San Joaquin Valley, where their community members living in agricultural areas, who don't have water, safe drinking water in their homes, or their faucets are contaminated, and they must buy bottled water, which is very expensive. And these communities are the ones that are disadvantaged and they definitely cannot afford buying bottled water every day and living with that stress, right, of not having water for the families and children.

But going to back to the global South, where a lot of the work that we do focuses on this problem of lacking water in people's homes has huge implications and burden for the poor, especially for the people that have to collect water who are women. There's also men and children that have to spend significant amount of time collecting water. And in our analysis, or when we're looking at, you know, water in connection to social equality and poverty, we see how the policies or water planning policies that we try to inform with decision-makers can help with this aspect, whether it's the absence of infrastructure investment, and how the actions that we can inform conversion can reduce this burden in these communities.

And you were asking about potential examples of promising solutions. There's a project that we are currently working in Bolivia, where we're linking watershed management to water and sanitation in connection to poverty reduction to improve people's livelihoods. And this project is called Bolivia WATCH and it's on the SEI website. And I think this could be a very interesting approach for Integrated Water Resources Management, where we are linking the sanitation and hygiene components to watershed management that often is not, is not linked or does not happen. Addressing these issues of lack of water in people's homes kind of also helps with poverty reduction and improves people's livelihoods. So we're very happy to collaborate with stakeholders and decision-making organizations in three watersheds in Bolivia, working with the Ministry.

JC

8:33

Thank you, Laura, for this answer. We are talking about water scarcity and imperfect markets. So following Vishal's question, and Laura's answer, Annette, I want to ask you how we should view water: as a human right, public or private commodities, or all of them together? What is your opinion about that?

Annette

8:53

That's a really important question. I think, from my perspective, water is, first and foremost, a human right. But I think we need to go beyond that and say that water also, we need to think of ecological rights to water as well. We have to recognize that as humans, we depend on ecosystems, and we need to allocate water for ecosystems, even from a human-centric standpoint. So the first consideration should be basic human needs and water to keep our ecosystems healthy. These really need to go hand-in-hand.

And from that perspective, I would say that water in those roles is really playing- more of a public commodity. But once we fulfill those obligations or those priorities, I think we could think of water as being both a public and/or private commodity.

For the latter, when we think of water as a private commodity, it has to be set in a regulatory context. And by that, I mean when water is used for other purposes, there needs to be consideration for the impacts of that water allocation on downstream users. Is the water that returns into the system sufficient to meet the quantity and the quality needs for those downstream users? And if either of those is compromised, we have to start to think of either proactive actions that we can take to restore the needs of those downstream users or we can start to think of compensation systems where either upstream users compensate downstream users, or downstream users compensate upstream users to keep that water of sufficient quantity and quality.

So I think the most important thing is that we start a starting point when we think about water management and planning: Is this holistic view of water and its role for human health, ecological health, as well as our economic health? Because all those pieces are important as we think about water on planet Earth.

Vishal

10:58

Thanks very much Annette. Like you mentioned, water is so valuable to essentially everything we do on this planet. It's what makes life possible on this planet in the first

place. I wanted to ask Laura, again, are there some other specific examples of SEI's work on valuing water, and how do you think it can actually help protect this resource?

Laura

11:22

Yes, Vishal. So, Annette gave a fantastic outline of all the ways that we can tackle this topic of valuing water depending on the context and the problem to address and in that sense, I want to share about the work in California.

We worked with UC Riverside looking at collaborative actions for managing aquifer recharge, which is a strategy to help growers save water in the case of drought and linking that with economic optimization models and hydrological simulation models. So there's this integration or collaboration of economic and hydrological analysis that can help decision-makers, in this case, in the Kings River watershed.

We're also looking at salinity issues in the San Joaquin. And again, using this hydro-economic analysis, looking at water quality models with economic optimization models and integrating them. Also in Cambodia, Annette and I, we both work, it's a different approach, more focused on ensuring people's livelihoods and looking at poverty and different dimensions of poverty. But it does connect with this topic of valuing water. So even if we're not doing economic optimization model, we are contributing to people's livelihoods and trying to contribute through water and water actions, informing policies that can reduce poverty and poverty reduction efforts.

And I think Annette, there's the project that you're doing in Jordan, I don't know if you want to share about your work there and this connection, right, of economics and water resources.

Annette

12:53

Thank you so much for that opening, Laura. And for these great examples. I actually wanted to share some work that we're doing right now in Rwanda, that I find particularly exciting around linking water planning with macroeconomic modelling. And through that work, we've been able to demonstrate, in particular, not only to the Rwanda water board, but to the Ministry of Finance, the current dependence of the macroeconomy on hydropower and the implication for their focus right now is expansion of run-of-river hydropower, which leaves the macroeconomy quite vulnerable to climate change.

So I see sort of the cutting edge of what SEI is doing is going to be increasingly looking at the role of water in the macroeconomy and how do we better prepare for climate change to build resilience into our water and macroeconomic modelling, so that we have resilient strategies, robust strategies in how we plan for water and its connections to the many connections it plays out in the larger economy? So I think the beauty of some of the work that we've talked about here is some of the more micro work that we've done, let's say in Cambodia and California, and demonstrating the linkage all the way up to the macroeconomy.

JC

14:17

Thank you, Laura, for your answer. And thank you, Annette, for your explanation. It's very useful for the audience. I have a question, Vishal.

Vishal

Yes. Yeah, of course.

JC

Thank you. How will the new energy and infrastructure bill that the government just passed, help protect and value water?

Vishal

14:36

Yeah, I think that, you know, as this country and California, especially, leading the way moves to more renewable energy futures. That's terrific from a greenhouse gas mitigation point of view.

At the same time, our earlier work has shown that the devil's in the details. So for example, the way the kind of cooling methods you use for any choice of energy production that you go into will have a big impact on whether you're actually conserving water or not, or saving it or leaving it in a state that it can be reused.

So I think overall, it's a good, it's a great policy to move towards renewable energies. And I hope that there is more coordination between energy and water planning because our work has shown how interlinked they are.

JC

15:23

Thank you. Thank you, Vishal. Vishal, we are closing this episode. Is there anything that you would like to add? Besides this, the last part that you just mentioned?

Vishal

15:32

Well, JC, what we've heard is that there are so many different ways of valuing water, you know, like Annette and Laura have shown us. From human rights to water approaches, to pretty sophisticated computer models that link the economy to water resources systems, and actually all the way to climate change. And no matter which perspective we use, I think we should remember it's the outcome that matters, and that we need to lend our voice to strengthen the voices of those who do not have the power to bring about change. And that includes the environment. I just want to thank Annette and Laura for spotlighting some of the most important dimensions of this topic. Thank you.

JC

16:14

Thank you. Thank you, Vishal. Annette, Laura, where can people get more information about this topic, the value of water?

Annette

16:21

I can speak first Laura and maybe, you could follow up. On SEI's website, we actually have under our water program a focal area on the value of water. And I believe all of the projects we have mentioned are highlighted in that on our website.

And maybe the last little piece maybe Laura, you could say something here to its UN Year of Valuing Water. So I think you could also find some information at the United Nations website.

Laura

Yes. And there's also there's a repository on valuing water on the World Bank website as well.

JC

16:56

That's great. Thank you, Laura and Annette for being our guests today. Thank you, Vishal, for being my co-host in this episode.

Annette

17:03

Yeah, thank you.

Laura

17:06

Thank you, JC. My pleasure.

Vishal

My pleasure. Thank you so much.

JC

17:10

Thank you. Thank you for listening to Water Stories. And remember, you can find us on Spotify, Apple Podcasts and Google Podcasts. Stay tuned for our next episode.

Thank you so much, everyone.