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Environmental Journalists have Important Role to Play in Helping Sri Lanka's Water Sector Meet the Coming Challenges of Climate Change

When it comes to climate, our future is uncertain. In terms of what the future holds for Sri Lanka's climate, we still can't be certain how climate change will affect our rainfall in the coming decades. One way of looking at the situation is: we don't know how much rainfall our grandchildren will be able to count on or the security of their future water supply.

The climate models scientists are using do predict with some certainty that Sri Lanka will become increasingly warmer. Warmer temperatures mean the atmosphere can hold more water vapor, which is the source of rain, but that doesn't necessarily mean more rainfall for Sri Lanka or that the rain will fall in the same predictable monsoon seasons we have known for generations.

Scientists make predictions about rainfall using climate models. There are two projections or estimations of rainfall from climate models for Sri Lanka, but they contradict each other. One group of models estimates higher mean annual rainfall, and the other estimates lower mean annual rainfall. One group estimates that there will be increases in rainfall throughout the country, but the other group says that rainfall will only increase in the western half of the country, and that the eastern half will see a decrease in rainfall.

When scientists talk about 'models', they actually mean mathematical equations. For example, if you want to estimate how long it will take you to drive from Colombo to Kandy, you could use the model $\text{Time} = \text{Distance} / \text{Speed}$ or $T=D/S$. This equation is a model for estimating the time to your destination. This model is very simple and doesn't include other factors that will affect your travel time like what day of the week you choose to travel, what time of day you depart Colombo, weather conditions, whether or not some part of the road is under construction, how often you stop for breaks and so on. We could include all those factors in the model but we would need lots more data.

Scientists developing models of our climate system face a similar but much more difficult task. Our climate is a very complex system with possibly thousands of variables interacting with one another to produce weather conditions from day to day, year to year, decade to decade. Different groups of scientists are developing different models. The models keep getting better as scientists learn more about how the climate system works, but they are far from complete and no one group of scientists has sufficient data to make a highly accurate model.

We will surely have a better picture of what is happening with our climate in 10 years time, but we can't afford to wait 10 years before we take action on climate change. Think about your own home security. No matter where you live, there is a chance that at some point in the future, a thief will try to break into

your house. Do you wait until the thief is at the gate before you start taking security precautions? Climate change could steal our future by changing conditions that could threaten our food security and our physical safety in the form of extreme weather events. Would it not be wise to start taking security precautions now?

The problem is, what kind of precautions do we invest in if we are not sure about the direction of climate change?

Smart investments would be investments that prepare us for either of the two predicted conditions. Such investments mean that whatever happens, our government officials would have “no regrets” about the money spent and voters would have ‘no regret’ about their elected officials. What a happy situation that would be.

One example of a ‘no regrets’ solution is restoration of our ancient tank system. A good water storage system acts as a buffer against climate variability either way. If the climate gets wetter, we have enough storage capacity to mitigate flooding. If the climate gets dryer, we have enough water to irrigate crops.

Another ‘no regrets’ option is rainwater harvesting. This is not a new idea, especially not in Sri Lanka, but it’s an idea that’s been somewhat forgotten and needs to be promoted in a big way. Rainwater harvesting just means collecting rainwater and storing it in tanks instead of letting it run off across the ground into the rivers and out to the sea. People always need incentives to change their behavior so one idea to promote rainwater harvesting might be to make it compulsory to receiving drought relief. If you live in a dry zone and you don’t harvest rainwater, you don’t qualify for as much drought relief as a farmer or household who does. It’s the principle of “helping those who help themselves”.

In the face of uncertain changes in our climate, we face three main challenges.

The first challenge is to change attitudes among water users. We are accustomed to thinking of water as a free and abundant resource, and do not pay much attention to efficiency of use. We need to start looking at rainfall as the ultimate source of water, and shift away from relying on river and groundwater as the “main” source of water. After all, where does the water in rivers and groundwater aquifers come from? Environmental journalists can play a pivotal role here in helping to change attitudes, by educating people through the media.

We also need to look at ways of reducing demand for water and how we can make more efficient use of the water we have. Again, a change in thinking is required here and environmental journalists can do a lot to help change this thinking.

The second challenge is to create or promote one central agency to coordinate activities in the water sector. We need this coordination to promote data sharing, research, and finally, implementation of adaptation responses. In Sri Lanka, the Water Resources Board has the most powerful Act of legislation in the water sector. This Act gives the Water Resources Board the mandate to act as the central coordinating body for all water activities. However, their role has been limited to rather narrow activities such as groundwater exploration. Do environmental journalists have a responsibility to

enquire into the obstacles, constraints and limitations that prevent such a body from fulfilling its mandate?

Our third challenge is to conduct a national water resources audit. Like a financial audit, a water resources audit tells us how we are “spending” the water we have, how much we need and how much we have “in the bank”. Assessing the present status of our water resources is extremely important for understanding future impacts due to climate change. A national water audit would be a one-stop-shop for all Sri Lanka’s water related data and one of the first of its kind in the region. For a project like this to succeed, the initiating government department would need active co-operation with other government agencies and strong public support.

Creating awareness and educating people about the importance of this and similar initiatives is a job best done by environmental journalists working closely with scientists, policy makers and water management experts.

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