

Welcome to Turning Conscience Into Action, the Earth Charter podcast. Join Mirian Vilela, Earth Charter International Executive Director, in her fascinating conversations with great thinkers, scholars and activists from around the world who are working in the fields of sustainability, ethics, education and social transformation. Our purpose is to generate new insights on how to face current global challenges and inspire informed action.

In this podcast episode, we'll have a conversation with Anupam Sarabn, who is professor of sustainability and governance of complex systems.

Dr. Sarab has taught system dynamics, information systems, environmental systems and sustainable development at various universities. For some years, he has worked with Donella Meadows on global modeling and systems theories. Anupam is joining us from India, Pune. And India is certainly a place that is very close to my heart. I'm very happy to have this conversation with you, Anupam. I would like to start our conversation around the topic of system thinking. We know that system thinking is kind of a basic requirement for us to understand sustainability.

It's something that people from different areas of knowledge talk about. But I think the majority of people don't really come close to that because it sounds very complicated. So I would like, if you can, share with us what is your take on what is system thinking and why that is so important for us to develop skills on that in the times that we have nowadays to address so many challenges we have. Thank you for being here with us. Thank you for having me. It's a pleasure. Terrific question. I think I want to zoom back to 1987 to World Commission on Environment and Development led by Gro Harlem Brundtland, the former Prime Minister of Norway.

I think one of the biggest insights of this commission was that the world, the institutions in the world are increasingly operating as if they are independent, fragmented, and with closed decision processes. And it's important for us that if we were to really move towards a sustainable world that we need to recognize interdependence, we need to recognize integration, and we need to have open decision processes. So that is actually a restatement of what systems are all about. What Gro Harlem Brundtland was pointing out is that we are interdependent.

And interdependent means that we are really, we need to look at the whole which has to rely or which has to depend on one another. We are not independent and we cannot look at ourselves as if we are in test tubes isolated from each other. We live together in a world of interdependence. So if we look at the different interdependencies that we enjoy in the world, that they come from different relationships that we have in the world, all of these form different systems. So systems is a word that we use to describe or to identify the whole of the parts that come together in interdependence to serve a common purpose.

So I'll give you a couple of simple examples that we encounter every day. So when we go out into the market, we become the buyers and we interact with sellers. And together, the buyers and the sellers form a system called as the market system. Similarly, when we go to our banks, we go there as money lenders and we deposit our money with the bank and the bank becomes the borrower borrowing money from us. So when borrowers and lenders

come together, we create a banking system. So if we look at either of these systems, if you take away any one of the actors who has come together, then you no longer have the whole, you no longer have the system.

So we need to recognize that if a market has to sustain itself, you need the buyer and you need the seller. And you need to have a relationship between them, which is symbiotic and not exploitative. If you want the banking system to survive, you need to have the borrower and you need to have the lender. And you need to have a symbiotic relationship between them and not an exploitative one, because an exploitative relationship will only ensure that one or the other of the actors will exploit the other and simply self-destruct the system.

Unfortunately, what has happened is because we don't recognize systems or we are not trained to understand the whole, we don't describe our world in terms of the systems that make up our world. We as the Frontline Commission actually described, imagine that our institutions are independent and not interdependent. So we lose out our understanding of the whole. So that's essentially where systems and sustainability comes together. Why do you think the majority of decision makers in even education institutions haven't really grasped that idea in why our systems, our education systems or political systems will continue to function in such a fragmented way?

This is an excellent question because I think this is what we all struggle with. Why is the world systems illiterate? So in some sense, we need systems literacy. More than computer literacy, I think we need systems literacy. We need our leaders to recognize the holes that they really are a part of and the holes that they are trying to govern. I think there are a few reasons why we remain systems illiterate. The first is because all systems, whenever there is a problem, have several symptoms and it is these symptoms which cry out for attention.

And when our leaders try to address these symptoms, they actually forget about the hole and they focus their attention on hiding the symptoms or making it disappear. So we have become very addicted to dealing with these symptoms. Dealing with symptoms is so addictive because once you hide a symptom, you are said to be successful and if you are successful, then you want to hide more symptoms whenever they come up in the future. So you get into an addictive cycle of only addressing the symptoms that are part of your world and dealing with symptoms or hiding them is something you can do in the short term.

You don't need to really spend a lot of time and effort to solve or make sure that you heal the system. When you heal the system, you are looking at the causes, you are looking at the hole, you are ensuring that the symptom will not appear. You are actually making sure that there is no symptom. You are not dealing with the symptom but you are dealing with the causes when you heal a system. Unfortunately, our leaders focus on the symptom and not on the healing. There are three key things which have happened in our world or three key tools which help all our leaders to keep away from looking at the hole.

The first is technology. I think technology is kind of the magic wand which allows us to deal with a symptom and allow us to make the symptom disappear in the short term. So if there is a traffic jam, we use technology to build flyovers. We use technology to have

metros and rapid transportation and we feel that we have solved the problem of traffic. But traffic was never a problem of actually vehicles. It was a problem of the congestion of a city. When too many people came into the city, more than there should be and the city spread out, more people had to travel on the road.

And therefore our roads started getting traffic jams. But instead of addressing the fact that there are too many people in the city and the city has got obese, what our leaders are doing is they are making the roads seem as if there is less traffic by building more parallel roads, one on top of another, or by simply creating mass rapid transportation. So it's like telling an obese patient that, look, I'll give you additional veins and arteries and additional heart and lungs just because you're obese.

Instead of telling the obese patient that you need to go on an exercise or you need to actually change your diet. So it's quite absurd, but this is exactly what technology has been doing. So the second thing is that our leaders feel that markets will solve everything. And markets basically delegate the decision to how demand and supply will magically take care of whatever is the problem with the world. And we say, oh, well, if somehow the market will have people move away from private vehicles to go to public vehicles, and it will solve the problem of traffic.

So let pricing or let demand and supply curves take care of whatever is the problem or whatever is the symptom that you experience. So that's the second kind of addiction that drives our leadership. And the third one is politics. So what happens is that our leaders find that it's much easier to actually talk in terms of private interests that can be satisfied through a symptom rather than focus on a public interest. Politics is all about ensuring that private interests can be pushed in preference to public interests.

And therefore, you have people who belong to a particular private interest start finding reasons why other things cannot be done. And the long term or the lifetime of a child born today cannot be dealt with, or you cannot look at the whole and you need to look at parts and try to solve things by looking at symptoms. So these three things, technology, markets and politics have been the three addictions which have driven our policymakers, our leaders, and kept them from really addressing the whole.

So moving moving them away from these three addictions, what would be the recipe? What would be the pills or the treatment for them to move away from these three addictions?

I think the problem is very similar to the problem of de-addicting a patient with an alcoholic or a drug addict. So obviously, when you go through a de-addiction cycle, there are withdrawal symptoms.

And it's not an easy exercise to ensure that an addict will not relax and will continue to ensure that their lives are free from the drugs that drive their behavior. Much the same way as you deal with a drug addict or an alcoholic, you actually help them to focus on what is it that they can change in the system. So I think the best way to look at it is to go to the prayer of the alcoholic anonymous. I'm sure you must be familiar with the prayer

of the alcoholic anonymous. It goes something like, God, give me the strength to change what I can, the serenity to accept what I cannot, and the wisdom to know the difference.

So in much the same way, I think we need to ensure that our leaders can accept, can actually recognize what they can change to accept what they cannot and know the difference. So more often than not, when the attention is on the symptom, they feel that that is the only thing that they can solve, and they actually don't recognize that they're not solving it. So I think we need to be able to allow them to see how they can change, how they can understand the whole. I think making them systems literate is probably the first step.

So if they become systems literate, they recognize that it is not just they alone, but other actors along with them in the system, who are part of the driving force for why we experience the symptoms that we do. And it's only when we work together that we can make the symptom disappear. It's not going to be the role of only the leaders to make sure that the symptom disappears. It's going to be the role of the relationship of the actors who come together to ensure that we don't have a system which is exploitative.

And that can happen when they together recognize the whole and recognize the common purpose of the whole. So if we don't recognize what is the common purpose for which we come together, then we are not really able to recognize the importance of the system. And our attention flows to the individual symptoms that come up when the system malfunctions. So I think the first step is to really create systems literacy and help the actors in the system to find the common purpose and have them share the common purpose and then find ways to address this.

So Anupam, let's say I am a school teacher or the director of primary secondary school and I like the ideas I heard you and I would like to bring system thinking to my school. How would you help me make that happen in practice? How can I incorporate system thinking in primary and secondary schools in a way that kids once they graduate from secondary education, they can have the skills of system thinkers and how can that be done in practice? I think in some senses systems thinking is a parable.

So if you really look at teaching history, geography, science as systems that we are part of, rather than teach them as independent subjects, then I think we make a big leap to helping students to understand the interdependence of things that make up the whole. And then they recognize the purpose for which this interdependence does exist. And then they can make an extension of understanding this interdependence in history, geography and science to their own lives. So to give you an illustration, if you were to actually talk about the whole journey of Alexander the Great all the way from Europe to India, I think it's about the relationship between him and his army and those that he conquered.

And as this relationship changed by the time he got to India, his army was completely exhausted. And the relationship was not the same as when they started from Europe. And so Alexander at that point of time as his resources, as his relationship with his resources also ran differently as he exhausted those resources. He had to, and his people ran out of morale because the relationship had changed. He had to turn back and not continue his journey onward towards China. So when you recognize that it's actually the story of the

relationship between an army and its leader and those who they conquer all throughout and you narrate it as such, then I think people start recognizing that it's about the whole.

And it's not about Alexander as an individual. Individually he could not have done whatever he did. He could not have accomplished it at all. So you start seeing history from a completely different perspective. And then you notice the geography of the world that unfolds as a consequence depends on the dynamics of the relationships between people. How they actually form relationships with the community around and create exploitative system or symbiotic system. And in this case it was mostly exploitative system.

And therefore as an exploitative system, it had to finally kill itself and destroy itself. It was not a symbiotic system that he went about creating. If it was a symbiotic system, he would have been supported by all the leaders who he conquered all along the way. And he would have continued to surge ahead and maybe form an empire all across the world. But his whole aim was to actually exploit them, take away their resources and move ahead. So he kept on running out of the resources because he was, he only carried a finite source of them.

He did not really create a relationship where he had a continuous channel of resources available to him. So I think just as we have the story of Alexander, we have so many different marvelous stories in history. We have so many different marvelous stories in science and geography and in mathematics, which can be taught from a systems perspective, where we actually show the whole.

So bringing system thinking to education with this effort to make learners become system thinking literates. It basically has to do with helping people to think deeper in contextually and thinking in relationships.

Thinking in relationships. So it's not superficial thinking or superficial shallow understanding of things. Yes, it's not splitting up the whole and looking at the parts. It's actually trying to understand what is this a part of?

And why is it a part of whatever it is a part of? Is there a common purpose that they serve together and that common purpose understanding that common purpose and understanding what reinforces that common purpose? And whether that common purpose is shared and known by all the participating actors.

If the common purpose is not shared or understood by all the participating actors, then obviously you would have a gradual disintegration of the system.

I see the idea of an organizational vision.

When done very well as a way to share the common purpose of the participating actors, the community serve by an organization and organization together. So if it's done beautifully, then it helps to put that system together and allow them to serve each other.

And be a symbiotic system. I like this this approach by bringing it also to the organization level. So it's in your thinking to be crucial, essential for us to move towards sustainability to embed system thinking in our learning process, not only for kids, but also leaders, right, which is quite a challenge. Because people don't seem to have time to think a bit deeper and long term and finding the multiple causes of a symptom. So people are very quick to jump into conclusions and not to go deeper.

So therefore it is quite a challenge. How would you relate system thinking to world views and sustainability?

Different parts of the world actually have different world views.

We actually have different timescales. So we may look at the short term to the long term in different cultures. We might have different levels of materialism or spiritualism. So we might have an access of being extremely materialistic or extremely spiritual or somewhere in between.

And you can invent more access to look at depending on which part of the world you're looking at. So and you can describe on these access, what is the world view of that particular part of the world? Why are these world views important? Because these world views are the context in which our understanding about the world in which we live, the models we have about this world are actually born. So our understanding about what are the parts of the whole in that world is born out of our recognition of the world views in that part of the world.

So whether you are in India or whether you are in the United States or you are in Costa Rica or in Germany. I think people have different world views and these world views actually shape our ability to recognize the whole or simply look at ourselves as independent and capable of doing things without anybody else. So it also shapes our understanding of what the purpose of the system, the purpose of the whole is and what we must accomplish together or what we must accomplish individually is shaped by our world views.

And so recognizing these world views is extremely important to recognizing why people have constructed or designed or evolved the kind of systems that they are part of.

Because in different countries in different parts of the world, there are different systems to do the same things. So we have different systems which work as markets or as means to exchange goods and services. They're not the same everywhere. It's not the same market. The participating actors are different. Their roles are different. Their common purposes are different. The kind of family systems that we have in different parts of the world are different. Their participants are different. Their purposes are different.

So why is it so different? Because there are different world views. Yeah, but don't you think that independently of where we come from, whether we are from Brazil or India or China, there are a number of commonalities among human beings that transcends our cultural differences? There are of course some commonalities, but there are I think increasing amount of, there is an increasing amount of co-organization of culture, thanks to the spread of television and networks which are spreading Hollywood, Hollywood and

other soap operas, which kind of cause the world views to, different world views to dominate the original world view or replace the original world.

So I think the world views that existed 30 years ago, 100 years ago and 200 years ago are not the same as what exists today and will not be the same as what will exist 10 years from now. And thanks to the internet, I think we have had a large amount of co-organization.

Wherever the net has reached, thanks to Facebook, YouTube, Twitter and TikTok and such like, we have had people sharing things from their parts of the world which have been adopted within a few weeks. If not few days in other parts of the world and almost as if it were part of their culture. So I think we are homogenizing a lot of the world views. So there is value in some world views actually going across, there is some value in allowing the original world views to survive as they are. And seeing the world through a system thinking approach is a way to see the world.

It's a whole mindset, seeing the world through the lens of system thinking.

Yes, it's both a world view as well as it is shaped by different world views too because based on which part of the world you belong to, the kind of understanding of systems you will have will be very different. So for example, Jay Forester came up with the world view of looking at systems from a perspective of feedbacks. So for him, the world was made up of feedback loops and stocks and flow.

And if you look at Latin America where Maturana and Varela came up with a world view of systems which really talked about auto poetic systems. And auto poes. And if you look at me from India coming up with a world view of systems which comprises of actors who come together for some common purpose and form a whole, which is yet a very different way of coming up with an understanding of systems. And I think each way of looking at systems has its own value.

And it serves a certain purpose. And I don't think one is more superior or inferior to another, but it is really the insight that it gives for those who want to interact with the systems that they recognize with the system. And I think this world view is what is important. So if the world view helps them to find harmony, find symbiosis, find sustainability, find joy and happiness and eating, then I think it makes a lot of sense. And that's why I think we should be looking for world views which will help us to discover systems in different ways.

That's great. Okay, we should be. Thank you so much, Anupam, for sharing with us. I think we are about to close. I would just like to ask you one last question. I think if you if you may take the last few minutes to conclude in share with our audience, what are the key elements for me or for anybody to become a system thinker? What do I have to consider?

It's not difficult to become a systems thinker. Systems literacy is not at all difficult. I think inherently we recognize that if we were to remove our heart and lungs and kidneys and

brains and keep them aside, we will not function as a whole. So we know that for us to function, all of these need to be together.

And we also know that if we simply were to get the best heart in the world and the best brains in the world and the best muscles in the world and the best lungs in the world and try to put them together, you wouldn't even have a living being. So it all depends on the ability of all of these to work together with each other.

So if we recognize this, that our body has actually several parts which are working together to form the whole, the system that is us. Then in the same way when we form the whole with others for whatever purposes, then we need to have that relationship which works for a common purpose. And if we are able to recognize that common purpose, so which means we must make all efforts to keep on articulating it, talking about it, sharing it, till we find it.

And I think that discovery is or that search and that journey of that search is very important. So I think it's extremely important to learn to be humble and say that it's not me who's driving the world, but I'm part of several systems and together with my co-participants in those systems, we together make the world. Become a beautiful place. So we need to learn to find those common purposes that would make the world a beautiful place. We need to learn to give up our feeling that we are independent. We need to recognize our interdependence.

Wonderful. Thank you so much. And as you know, the way in which Dershada was drafted was with the thinking that it's a declaration of responsibility and interdependence. It's really, it does have a purpose to help us deepen our understanding of our interdependence with the largely remote. So anyway, thank you so much, Anupam, for being here with us, for sharing your knowledge, your wisdom, your experience with this audience.

Thank you so much. Thank you for having me. My pleasure.

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