

RATIONAL MIDDLE. NET ZERO

THE CIRCULAR ECONOMY

EPISODE TRANSCRIPT

Ashima Sukhdev:

When you think about the climate conversation so far, the majority of the conversation has focused on renewable energy, energy efficiency, the emissions used in transport and buildings, which is a really critical piece of the puzzle. But that only addresses actually 55% of global emissions. The other 45% comes from the way that we produce goods, and products and food.

Dr. Jon Smieja:

As more people globally get brought into the consumer class, we're just creating more and more waste.

Dr. Rachel A. Meidl:

We don't have a strategic way to really manage the volumes of projected waste that are expected to come to their end of life in the coming years.

Emily Tiplado:

Tackling waste is essential to be able to drive down our impact and create a net zero environment.

Ashima Sukhdev:

Waste is a very big problem in our society. It's emerged essentially through the industrial revolution, which has brought us great economic opportunity and growth, but at the same time has meant that we're plowing through finite resources and not necessarily thinking systemically about what the problems are with all the waste that we're generating.

Bridget Croke:

Anytime we produce anything, whether it's food, packaging, medical products, housing, all of these have a huge carbon impact.

Manuel Maqueda:

Right now, the world's economy is about 92% linear. That means 92% of all the materials that go into the economy are lost.

Emily Tivaldo:

So you'll often hear a linear economy described as take make waste.

Dr. Rachel A. Meidl:

Which is a model that takes resources, it makes and manufacturers different products and materials. We use them and then we dispose of them at the end of their useful life.

Ashima Sukhdev:

A third of food that's produced globally goes to waste, whether that's through the supply chain or in your plate.

Dr. Rachel A. Meidl:

We generate over 400 million metric tons of plastic every year. The majority of those plastics can't be managed in our traditional recycling systems.

Dr. Jon Smieja:

There's also all of the disposable products, the textiles, the packaging, the toys, all of these things are disposable at the moment. And then of course, tech is becoming a bigger and bigger issue. We all replace our phones every two years, we replace our computers every two or three years.

Emily Tivaldo:

When you think about using or producing a product, we often forget that it's not just that product that becomes waste, but it's all of the resources and energy that were used to produce and transport that product.

Lauren Phipps:

Our waste management system is set up to take things that are no longer useful and to put them in a landfill. It is dealing with the problem at hand, but it loses sight of this greater opportunity to consider what else could be done with what's currently deemed trash.

Ashima Sukhdev:

We need to shift our conversation from that downstream discussion to a conversation upstream. What I mean by that is looking at how do we actually prevent waste from being produced in the first place? How do we make sure that whatever we're using is being circulated in society rather than just being chucked away?

Dr. Jon Smieja:

The other way besides the linear economy is really a circular economy. A circular economy is thinking about how we use materials and keep them in their highest and best use for a longer period of time.

Lauren Phipps:

From just a embodied carbon and energy standpoint, why are we making things over again? The greatest value is not in making a new one. It's in keeping things better and moving in our system and preserving that value for as long as possible.

Manuel Maqueda:

The circular economy is all around us. Thrift stores are circular economy, share or borrow something with your neighbor so you don't have to buy your own chainsaw, whatever it is, you're going to use it once, that's circular economy. And repairing things and fixing things and swapping things, all that is circular economy.

Dr. Jon Smieja:

We are starting to see some sort of niche cottage industries pop up of reusing materials, reclaiming materials, and that's a great thing. The problem we have right now is scale. We're not going to be able to solve it through things like Etsy and Reuse. So while they are positive developments, we need much bigger, much faster and much more scalable solutions.

Dr. Rachel A. Meidl:

The whole idea of a circular economy is working symbiotically across supply chains to create value, and a lot of that begins at the design phase where we can engineer and design materials that create value throughout the system so that we eliminate waste by the superior design of materials and products and technologies.

Manuel Maqueda:

It introduces the concept of building new relationships with things where things are designed to last. They're designed to be reused, and as they degrade or they get out of fashion or outdated, they're designed to be reprogrammed, updated, refurbished re-manufactured. And then when there's no way you can keep them in value anymore, then recycled in a closed loop so that their components, their atoms and molecules become new nutrients for new things to be made, and that is what a circular economy is about.

Craig Cookson:

So there's great environmental benefits for us going to a circular economy. We're going to keep products out of landfills, and we're also going to displace the need for a virgin resource to make those products and packaging. From the standpoint of the economy, consumers are demanding recycled content in their packaging and products and brand owners want to make sure that they have that.

Bridget Croke:

We're saying major retailers change their business models to include reuse aisles and push on their whole supply chain, new packaging design guidelines so that they can be either reusable or recyclable in some way.

Manuel Maqueda:

Caterpillar, Renault and other manufacturers of heavy equipment and trucks and cars, they've been re-manufacturing their engines, meaning they take the old engines and take the parts and use the parts in the manufacturing of new engines. That saves them a lot of money. That saves up to 70% emissions as well.

Dr. Jon Smieja:

We're also seeing some really cool things, especially in the tech space, where the tech companies are finally starting to unlock the ability to repair and upgrade their products so that

they don't end up e-waste so quickly. And that's a big, big move in this area because that's very much a growing piece of our global waste.

Bridget Croke:

And that's definitely growing and happening. But I don't think we're moving fast enough.

Dr. Rachel A. Meidl:

To achieve a circular economy, it really is going to require unprecedented collaboration and radical collaboration that we haven't done before. So I mean, we're partnering with our competitors and NGOs and industry and governments.

Manuel Maqueda:

How we're going to do it is where we can have a discussion. Hopefully we can be smart about it and be leaders.

Craig Cookson:

And there's no silver bullet here. We need to do a better job of educating consumers. We need to do a better job of collecting our packaging and products after use. We have to do a better job of pre-processing and getting these into a suitable raw material for companies to take.

Ashima Sukhdev:

The transition to a sector economy is going to take everyone. It's the community organizations that are setting up repair cafes in cities so that folks can come in and get the microwaves fixed instead of chucking them away. It's the small innovators that are creating packaging out of seaweed instead of plastics. It's the furniture designers that are figuring out how to design tables and chairs to be easily repaired. It's the large corporations that are putting out commitments on plastic packaging and rethinking their business models and rethinking the way that they're designing products.

Dr. Jon Smieja:

The good news is that we have people thinking about this. The biggest corporations on Earth, who frankly we can't do this without, are hiring folks to think about circular economy. They have sustainability teams. They're committing to goals. We're also starting to see consumers think more and more about waste, and people are starting to use their voices as consumers to start changing that.

Bridget Croke:

The risk is that we're having just enough success that people don't put more capital or more resources towards this, and we always stay subscale. So we need to make sure that all the key players, the brands, the supply chain companies, policymakers, the media, all the key stakeholders, still keep the level of urgency around circular economy and always tie that back to climate, which is our bigger goal.

Emily Tipaldo:

A net zero scenario is predicated on fully reducing our greenhouse gas emissions and a circular economy will enable us to drastically reduce the resources that we use, the energy that we use.

So in order to really reduce our emissions to the level at which we need to to protect human health and our environment, we need to look for new ways to build more circular systems that drive down our emissions.

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