Michele Fetting (00:03):

The first time you see this plant in person, especially at night, it's just mind boggling. It's massive. It's like a small city. It lights up like Las Vegas. And the community that lives around this plant feels like it's daylight 24 hours a day, and it's a monstrosity. It's frightening. It's like Mordor. It represents doom for a lot of people that have to look at it every day. And it hasn't even started operations yet.

Katharine Wilkinson (00:38):

That's the view according to Michele Fetting, program director for the Breathe Project, an organization focused on air quality in southwestern Pennsylvania. And the eerie glowing structure that Michele describes as something reminiscent of the fiery wasteland of Tolkien's imagination, well, that's an ethane cracker plant, specifically Shell's newest cracker plant, recently constructed on the banks of the Ohio River, just 30 miles outside of Pittsburgh in Beaver County.

Leah Stokes (01:07):

And if you're thinking that an ethane cracker plant sounds like a place where they make the grossest, most inedible food, you're kind of right.

Katharine Wilkinson (01:14):

It's certainly revolting. Cracker plants take so-called natural gas and expose it to temperatures up to 900 degrees Celsius. It's so hot that the ethane, a chemical compound abundant in gas, breaks down so the ethane's molecular bonds crack apart and produce ethylene. It's an invisible gas with a sweet musky smell.

Leah Stokes (01:38):

Ethylene, as in polyethylene, the most common type of plastic. So, ethane is a key input to everything from trash bags to kids' toys.

Katharine Wilkinson (01:48):

Every step in the life cycle of plastic – extraction, transportation, manufacturing, consumer use, and finally, waste disposal – it all poses risks to our environment and to our health. In this episode, we're zooming in on that middle step of manufacturing in order to unpack the problems surrounding petrochemicals.

Leah Stokes (02:09):

And as the name suggests, petrochemicals are any and all chemicals created by refining petroleum, meaning they are very much under the purview of the fossil fuel industry.

Katharine Wilkinson (02:20):

And in a world that's trying to move away from oil and gas toward clean energy, the industry is clinging to petrochemicals as a way to stay afloat in the decades ahead. We want to explore this lifeline, why it's actually deadly, and what we can do to stop it.

Leah Stokes (02:38):

This is a Matter of Degrees, stories for the climate curious. I'm Dr. Leah Stokes.

Katharine Wilkinson (02:43):

And I'm Dr. Katharine Wilkinson.

(02:50):

In my conversation with Michele Fetting, we discussed the grim reality of living in the shadow of industry and the toxic underbelly that lies beneath the really beautiful landscape of southwestern Pennsylvania.

Michele Fetting (03:04):

Geographically speaking, the Ohio River Valley is a beautiful part of the country. Rolling hills and valleys, very lush vegetation, abundant water with not only our rivers, but streams, lakes, watersheds that really make this region rich in natural resources. But what you can't see, and what's not so evident at first glance, is the industrial legacy that exists in the valley.

Katharine Wilkinson (03:36):

Decades of industrial activity, coal mining, steel manufacturing have left their mark on the people of the Ohio River Valley. That impact lives in their air and their water and even their bodies. Michele and her family have experienced higher than average rates of cancer, which Michele attributes to their exposure to pollution. More recently, the region has seen an explosion of fracking, a process used to extract gas and known to contaminate water. On the Ohio River, it's the main source of drinking water for more than five million people.

Leah Stokes (04:10):

The last thing that this region needs is more plants, more waste, and more toxic exposure.

Katharine Wilkinson (04:17):

But a new wave of industrialization is arriving on the banks of the Ohio River with Shell leading the charge.

(04:23):

In 2011, they began sniffing around the area, and in 2013 announced their plans for an enormous petrochemical plant. Construction began back in 2015, and the plant is just now coming to life.

Michele Fetting (04:37):

This region is really bracing itself for the Shell petrochemical plant in Beaver County to come online and start operating. This plant is going to make polyethylene pellets, basically plastic nurdles, which is the building block for pretty much all plastic from the very thin cellophane all the way up to very heavy plastic drums and more durable materials. The feedstock is ethane, but they need the gas to extract the ethane from the natural gas. So, basically they wanted access to that feedstock and they saw how abundant our gas resources are here in this region.

(05:23):

With the onset of fracking, we got a better understanding of just how much natural gas they could get out of the ground so that they wouldn't have to transport those materials very far. So, that's really the reason I believe that Shell wanted to locate here. That, and they recorded by the state of Pennsylvania, they got a $1.6 billion tax break to build that plant in Pennsylvania.

Leah Stokes (05:50):

Wow. $1.6 billion. Just imagine how far that money could have gone if it was put into good things, into climate solutions.

Katharine Wilkinson (06:01):

Well, I can actually tell you exactly what good it might have done. And I'm sorry, this may hurt a bit Leah. But that $1.6 billion, which was the largest tax credit in the state's history, it could pay for some 300,000 heat pumps for American homes.

Leah Stokes (06:18):

Wow, you really know how to cut me deep. You put it in heat pumps.

Katharine Wilkinson (06:22):

It is the universal Stokes language. But the sad truth is, Leah, that the region's history of polluting industry makes it a prime candidate for this petrochemical expansion. We call these areas sacrifice zones, right? Communities where residents, typically low income families, families of color, they live in proximity to sources of pollution, exposing them to all kinds of environmental threats.

Michele Fetting (06:48):

I think that this region has always been a sacrifice zone. And I think that elected leaders on the other side of the state felt like they could put this upon the community because, hey, we've had it before. We went through coal, we went through steel, we went through all kinds of boom and bust industries in this region. What's another one? They can handle a little bit of petrochemicals, they'll be okay.

(07:14):

But the sad thing and the scary thing is that this plant was supported by the Beaver County Council. It was promoted and supported by people who live in the region, which is really hard to understand how they could bring this harm to their own communities. But again, I think some of it is cultural, some of it is just the way it's always been, and this is who we are, and we need jobs first and foremost. And a lot of jobs were promised with the construction of this plant. And now that the plant is constructed, there are only going to be a few hundred workers at that plant. So, now we're kind of seeing, "Oh, okay, we got a little boost." But ultimately what we're finding is that communities are not getting what they were promised and that's so disappointing and tragic.

Katharine Wilkinson (08:13):

In exchange for shouldering this toxic burden, the community was promised job creation and an influx of money from out-of-state. But the benefits to the economy were largely short-term and unsustainable.

Leah Stokes (08:26):

This is such a classic story. The companies that develop these plants, they claim that they're going to be good for the community. It's going to bring in jobs and profits. But it's really about profits for the company and the community is just left carrying all these harmful effects.

Katharine Wilkinson (08:42):

And unfortunately, Shell isn't the only company looking to take advantage of abundant fracking and tax breaks in this part of the country. Others have been scouting and even clearing land.

Michele Fetting (08:53):

So, it has been said by industry that the amount of natural gas that exists in the Ohio River Valley region could support four or five petrochemical plants like the Shell Plant, which is a horrifying thought. And Shell is the only one that has really taken root. But the other infrastructure is very much there. The increase in fracking operations, the pipelines that are necessary to get the gas to the compressor stations, to the cryogenic facilities that actually separate the different types of gas, the methane from the methane, the butane, the propane, those all come out of the natural gas that they are fracking for in our region.

Leah Stokes (09:44):

So Katharine, this is a pretty bleak picture you've painted for Southwest Pennsylvania. Not to take us deeper into despair, but I want some numbers. Do we know what the Shell plant could mean for the climate? In terms of how much carbon pollution it creates?

Katharine Wilkinson (09:59):

Well, according to the Clean Air Council, which is another nonprofit that works closely with Michele's organization, that Shell plant in Beaver County will spew nitrogen oxides, volatile organic compounds, hazardous air pollutants, and more. And when you aggregate the plant's estimated emissions as carbon dioxide equivalent, the apples to apples measurement for greenhouse gases, we can expect over 2.2 million tons annually. And that's the equivalent of almost half a million cars.

(10:31):

So, when we look at emissions from the whole plastic life cycle, it's currently about 1.8 gigatons of carbon dioxide equivalent. And if we don't do anything to curb the industry's growth, emissions are predicted to reach 4.3 gigatons by 2060.

Leah Stokes (10:47):

Wow, that is massive. That's almost the size of all of the United States' current carbon pollution. That's the entire country of America's carbon pollution just from plastics.

Katharine Wilkinson (10:59):

And the thing about the size of the problem is that it also tells us the size of the opportunity, which means we had better get busy curbing plastic. And that's exactly what Michele and other advocates are doing. So, while the Shell plant is a done deal, they hope that they can prevent it from being the first of many and stop this further petrochemical buildout in the Ohio River Valley. And they're far from alone. This challenge is galvanizing lots of people in lots of places.

Shilpi Chhotray (11:28):

Petrochemical plants use oil and gas to make plastic. So it's essentially where plastic comes from. They also make industrial chemicals and pesticides and they're derived from crude oil and fracked gas. So, if you think about lining up a row of dominoes, fracking is the first one that tips everything into play. So, eventually they convert the components of oil and gas into chemicals like ethylene, propylene, butadiene, and methanol. These are really, really nasty compounds and these are the building blocks for plastic. The industry is ramping up production. This should be a massive concern to anybody that cares about climate because plastic, and I'll say the industry plastic footprint, is a big part of this.

Katharine Wilkinson (12:22):

That's our second guest, Shilpi Chhotray, co-founder and executive director of People Over Plastic. It's an environmental justice media project that, as the name suggests, looks at the impacts of plastics and petrochemicals and tries to get us beyond them. I asked Shilpi, why is the fossil fuel industry so keen on plastic?

Shilpi Chhotray (12:43):

It's because petrochemicals, in a way, are giving the fossil fuel industry a lifeline. The oil and gas companies are scared because there is this drastic push to renewable energy and renewable energy infrastructure. So, if you think about it, if there's less people at the tank, they have to put their bottom line somewhere and so that's why they're doubling down on plastic production, and sachets in particular. These basically ketchup packet size plastic packaging for everything. Rice, sugar, conditioner, shampoo, you see it mostly in the global south. But they're really ramping up on this low value plastic packaging because it's cheaper, the lower the value, the cheaper it is to produce so they can make more of it and hit their quotas.

(13:27):

So, it's all very connected to profits and again, the industry is looking to offload this cheap oil and frack gas to build up its profit margins. The buildout is primarily planned in the Appalachian and Gulf Coast regions. So, areas with cheap land,

industry friendly governments, and communities that are already dealing with toxic pollution. So, you're not going to see this happen in the Bay Area or white suburbs of Chicago. This is very specific.

Leah Stokes (14:01):

This big petrochemical buildout is basically a last ditch effort for the oil and gas industry to shore up its profits in a world seeking to move past fossil fuels.

Katharine Wilkinson (14:12):

Exactly. And I did a little bit of digging around in some industry publications because I wanted to see how they're talking about this. And I found a pretty choice quote from Chemical and Engineering News.

Leah Stokes (14:23):

Oh, classic. I love that. I love that outlet.

Katharine Wilkinson (14:25):

I know. It's a real page turner, I got to tell you. So, oil companies, they write, are looking into their crystal balls and seeing a future in which the world's appetite for fossil fuels isn't insatiable. Hence the headline, Why the Future of Oil is in Chemicals, Not Fuels.

Leah Stokes (14:45):

I think I've got to have a different crystal ball than these companies because I'm not looking towards the future where we just keep using fossil fuels. Maybe that's just me, I don't know. But that sounds bad.

Katharine Wilkinson (14:55):

I mean, maybe their crystal ball's a little clogged up with air pollution, potentially.

Leah Stokes (14:59):

Yeah, maybe it's clogged with oil. Their crystal ball's not working very well.

Katharine Wilkinson (15:04):

And this is not exactly a stealth plan they've got going. So these companies, they're seeking out places that they assume will not have the resources or the voice to self-advocate and stop this arrival on their doorsteps. They prey on these sacrifice zones

like the Ohio River Valley, which is an area already facing higher than average rates of poverty and other social challenges

Leah Stokes (15:28):

Yeah. Or that place they call Cancer Alley, right?

Katharine Wilkinson (15:31):

Right, the 85-mile stretch along the Mississippi River in Louisiana. It accounts for a full quarter of petrochemical production in the US.

Leah Stokes (15:41):

Wow, that's stunning. And we know that that area is somewhere where Black and low-income communities are living, so they're disproportionately bearing the brunt of this petrochemical activity.

Katharine Wilkinson (15:54):

And Shilpi talked about Cancer Alley as well. Another place where advocates like Sharon Levigne and her organization, Rise St. James, are fighting back against the industry. In fact, in September, earlier this year, these activists secured a big win when a Louisiana Court denied the fossil fuel industry the permits that would be necessary to begin construction on yet another petrochemical plant.

Leah Stokes (16:18):

Oh yeah, I remember seeing that win. It was so exciting. It was Earthjustice. Our friend Rev Yearwood. What a big, exciting victory. I can't believe they managed to stop that plant.

Katharine Wilkinson (16:30):

It's a sign of the wins that are possible even when pushing up against this monstrous industry. And speaking of monsters, while it is not the focus of our episode today, we would be remiss not to add that the harms of petrochemicals of course go beyond extraction and manufacturing to the end of plastic's lifecycle, right? And the enormous issues presented by waste.

Leah Stokes (16:54):

And if you're wondering where is all that plastic going, the answer is typically nowhere good. In 2021, at least 85% of US plastic waste wound up in the landfill and the amount of consumer plastic that gets recycled, it's a whopping 5% to 6%.

Katharine Wilkinson (17:11):

We are not saying stop recycling. 5% to 6% is better than no percent. But it's worth understanding that plastic recycling has been called a big lie for good reason. It is not the solution to this problem. And in addition to winding up in US landfills, we ship huge amounts of plastic waste overseas, dumping this mess onto communities in the global south. Yet more sacrifice zones.

Shilpi Chhotray (17:39):

Where is it all going? A lot of it is going overseas where it's dumped and burned and burdening communities on the other side of the world, which we're also not talking about enough. The other challenge to tackle is this concept of waste colonization where the US is outsourcing and shipping a lot of our waste, again, overseas to a lot of these same areas that are already inundated. This matter of plastic is very much so synonymous to climate change and also environmental racism. So for many communities of color and indigenous communities around the world, they're paying the price while these polluters profit.

Leah Stokes (18:20):

Wow. You can really hear the indignation in Shilpi's voice, and I got to say, I share it.

Shilpi Chhotray (18:25):

Shilpi has seen the harms from petrochemical facilities up close in person. And once you've seen them, it changes you.

(18:41):

A few years back, Shilpi visited Houston, Texas, the oil capital of the world. She took a toxic tour in the Houston ship channel, specifically a 12-mile stretch where petrochemical facilities operate right alongside residential areas. It was a trip that opened her eyes, Shilpi called it her petrochemical awakening.

(19:01):

When you see these problems up close, it can be so powerful. And it turns out Shilpi's tour guide was our third guest, Yvette Arellano. Yvette lives and works in Houston's East End. They're the founder of the grassroots organization Fenceline Watch. It's a group working to eradicate toxic, multi-generational harm, harm Yvette knows all too well.

Yvette Arellano (19:22):

Oil and gas and petrochemical infrastructure has always been in the background of my life. Everything from them hosting back-to-school gatherings and giving everybody in the community backpacks with Shell, Chevron, and Exxon logos, to my dad being a janitor his entire life still to today for Chevron. They've definitely fostered an entire culture behind oil, gas, and petrochemicals that's problematic and definitely a strong piece of propaganda that lives in my childhood and in a lot of kids growing up here in Houston.

Katharine Wilkinson (20:01):

Years later, Yvette found themselves volunteering at a local mental health facility, working outside in the garden. Here too, they couldn't escape the looming influence of petrochemicals.

Yvette Arellano (20:13):

I thought, "Well, I want to be out here. I want to reconnect with the earth. I want to have systems where we can grow food and eat our own food." And all the time in the background there was this big, looming petrochemical facility and I was just kind of weeding and doing the everyday duties in the garden even though there was this big looming cloud, even though it smelled, even though I could feel in my essence it was bad. I was getting dizzy, I was getting nauseous, I would have to go inside. And I chalked it up to things like heat exhaustion and this other stuff.

Katharine Wilkinson (20:51):

Though Yvette didn't know it, a lifetime of toxic exposure was already accumulating in their body and they were beginning to experience the results.

Leah Stokes (21:00):

The health impacts of this kind of toxic pollution can be incredibly serious and often deadly. One study shows that cancer rates in Louisiana's cancer alley are 44% higher than the national average.

Katharine Wilkinson (21:15):

It's shocking and it's so cruel. In our conversation, Yvette described the haunting smells of pollution that hover in places like Cancer Alley and East Houston.

Yvette Arellano (21:27):

The smells can go from smelling gasoline in the air like you would at a gas station to smelling burning plastics, nail polish, acetone. There's one that's super sweet, and it's

not the kind of sweet that you associate with a cookie, but a kind of irritating sweetness in the back of your throat. And then there's not so pleasant smells like rotten eggs, right? That's sulfur. Sometimes you can see it and sometimes you can smell it – and sometimes you can't. And that's where we get into dangerous territories.

Katharine Wilkinson (22:02):

Yvette's health continued to decline. They began to find mysterious lesions and scabs all over their body and live with inexplicable bouts of pain.

Yvette Arellano (22:11):

And eventually I came to a pass where I couldn't move one day and I was keeling over in the bathroom and I would take breaks to give myself the ability to feel that pain because I was really trying to work through it and I knew that all these years working on these issues had affected me in a way that there's no coming back from.

Katharine Wilkinson (22:45):

If we spend too much time in the weeds of climate reports, economic forecasts, policy debates, this is what we can miss. The lived experience of people like Yvette suffering the consequences of someone else's actions, the actions of unethical corporations and politicians.

Leah Stokes (23:04):

And you can really hear it in Yvette's voice. That desire to be okay, to be healthy, to keep pushing through it, to get back to the work of helping their community.

Katharine Wilkinson (23:15):

But sometimes the things the body has suffered aren't going to heal and we have to figure out how to adapt to a new reality. Before Yvette continues telling their story, I want listeners to know that this takes us into some painful content about reproductive health and I also want to acknowledge and thank Yvette for their incredible generosity in sharing this story.

Yvette Arellano (23:38):

The day that I couldn't take it anymore, I called a Planned Parenthood and I was like, "I need this service. I need to get checked out. I don't have a lot of money." And they said, "Yeah, sure, come in." And like a lot of folks out there now, I was negotiating with my doctor, what can I get now for the lowest cost that will help me understand? And

so it was a blood panel. The blood panel came back and I got some not great news and the doctor said I was going to have issues conceiving kids and potentially not. And I took that really hard.

Katharine Wilkinson (24:23):

Yvette carries the impacts of the fossil fuel industry and petrochemical production in their body everywhere they go. It has ripped possibilities out of their life. Amidst so much pain and loss, Yvette decided to take hold of the agency they still had, to raise their voice and say, "What happened to me didn't have to happen. What happened to me is wrong."

Yvette Arellano (24:50):

And so, I went back and I started doing the work with a new perspective and a new diagnosis and a new understanding over how I was harmed and affected. And I think that's really difficult for folks to recognize how we're being harmed. But it also gave me a new sense of direction. How many women are out there that are having the same issues that don't have the resources? That are negotiating when enough is enough with the pain that they're having?

Katharine Wilkinson (25:28):

Beyond the reality of their own diagnosis, Yvette sees a wider tragedy at work, which is that they are not alone. So many others face the same threats, breathing the same air.

Yvette Arellano (25:41):

So, I founded Fenceline Watch at the backend of 2020 after I left another organization. And I did it because there was a missing narrative. And that was women who were disproportionately affected by toxic chemicals because I was being affected.

Leah Stokes (26:05):

And after everything they've gone through, I have to imagine that Yvette has asked themselves, "Why? What is the point? What is the purpose of all these petrochemical plants? What is worth poisoning people's homes and bodies?"

Katharine Wilkinson (26:20):

And the sad answer, at least in part, is plastics. It is why Yvette asked us to reconsider our relationship with this material we probably interact with every day in the most

mundane and thoughtless waves, plastic bags, plastic wrapping, plastic bottles, plastic cutlery, plastic anything and everything.

Yvette Arellano (26:44):

It's the everyday plastics. It's the ketchup packets, it's the newly wrapped plastic items. It's the polyester, Shein, fast fashion industry. Everything is finding a home in plastic and fossil fuels is only one of the largest industries to have a stake in that game because they see the transition of everyday people switching over to hybrid and all electric vehicles. They see more solar panels on homes. They see the growth of solar and wind in states like Texas. Texas is the largest producer of wind. So, oil and gas is trying to set out a lifeline that can keep its profits coming at a consistent rate.

Katharine Wilkinson (27:28):

We've heard it from each of our guests today. The fossil fuel industry sees the threat of clean energy's continued expansion. I asked Yvette, why does the industry continue to get away with all of this? Even continuing to expand into new regions like the Ohio River Valley despite the direct and permanent harm being done to the environment and to so many people?

Yvette Arellano (27:53):

So, welcome to the Port of Houston-

Katharine Wilkinson (28:01):

Before they could answer the horn of an enormous ship blared, a third voice barging into our conversation.

Leah Stokes (28:08):

Oh, I see what you did there, Katharine. Very punny.

Katharine Wilkinson (28:11):

I have a hard time resisting a bad pun, as you know. But in all seriousness, Leah, this noise brought me home to the sensory reality. The sounds, sights, smells of petrochemicals. It's impossible to ignore when you live at the center of industry.

Yvette Arellano (28:28):

These facilities and any polluting facilities that are fossil fuel have had the ability to pollute our communities for free. The penalty process for these facilities is slap on the wrist. I've seen fines as low as $3,000 for a multi-billion dollar industry where it would

take potentially tens of thousands of dollars to update equipment. That's their own set of negotiations. Is it cheaper to pay the fine or is it cheaper to update? And many times over, it's cheaper to just pay the fine.

(29:10):

And when it comes to putting in problematic facilities into already polluted communities, it seems so easy because you're putting a facility in a community that has already 3, 4, 5, 6, 20 facilities around them that are polluting. And so if someone tries to file a lawsuit saying, "Your facility caused my family or my child to get childhood leukemia," then that facility gets to point at the other 20 and say, "Prove it."

Katharine Wilkinson (29:43):

And what's really horrifying is they don't even have to tell these communities, they don't even have to tell people what they're doing. So, Yvette explained that a lot of immigrants live in this part of Houston and some are not able to read the emergency messages that might get posted in their neighborhoods because they are only communicated in English.

Leah Stokes (30:04):

And this is hugely important information, right? It's stuff that people need to know so that they can take actions to stay indoors, for example, when pollution is at its most dangerous.

Katharine Wilkinson (30:14):

And that's why a lot of Yvette's current work with Fenceline Watch is focused on language access and language justice. There are over 160 different languages spoken in Texas and over 10 million Texans speak a language other than English at home. So, some might have limited English or none at all.

Yvette Arellano (30:33):

Houston is a largely Mexican-American community and the eastern of Houston is historically been a Spanish-speaking community. And that's a lot of our country now and that's a lot of our country that's going without having access to the kind of information over what are the next facilities coming into your neighborhood. Every single community, including those who don't speak English, have a right to have their voices heard. We're already seeing climate refugees from all over. So, these issues are only going to get more intense.

Leah Stokes (31:09):

And this issue of language, it's absolutely critical to public health and environmental justice. If people can't understand what's happening, how are they supposed to protect themselves? How are they supposed to organize? How are they supposed to tell their elected officials that what is happening is not okay? This is really the bare minimum.

Katharine Wilkinson (31:27):

Yeah. If you can't access fundamental information about what's going on, how can you fight for a safe community or a livable future? It's vital for participation in a democratic system. And if we want to get on top of this problem of petrochemicals, participation is a big part of the solution.

Yvette Arellano (31:46):

We need to work on reestablishing the strength behind the Voting Rights Act. We do need to work on redistricting and voter rights issues so that our systems, our democratic systems, don't get undermined in the way they did during the Trump election. We need folks to call their representatives and senators and say, "Hey, yeah, we need less plastic in our world and we need a moratorium, which would cause a pause in new plastic facilities showing up in communities like mine, the Gulf Coast, Appalachia." And also, not only do we need to hold folks accountable, so let's take away the discounts on penalty fees, none of us get that. We're going to have to do it as an entire society. And some of that does mean shutting down some of these facilities. But we can't accept any half measures anymore. We're not at that point. We're past that point.

Katharine Wilkinson (32:44):

Yvette is clear-eyed about the need for political and policy solutions to this petrochemical mess. They highlighted a particular piece of legislation, the Break Free From Plastic Pollution Act of 2021. Shilpi mentioned it as well. In fact, she called it the most progressive piece of plastics legislation, and it's something Congress could act on.

Leah Stokes (33:05):

Plastics pollution has been one area where we're not making as much progress on policy as we need to be. This is really an area that's at the cutting edge of climate action.

Katharine Wilkinson (33:17):

We need smart government policy to address this issue and to get there, we're going to have to change how we talk about plastics and talk about petrochemicals. This is one of the big things Shilpi said. She's been working on narrative change for a while now, and she shared some reflections on what she's seen shift in the last few years.

Shilpi Chhotray (33:36):

When you think about narrative change, and there was 2018, still so much focus on the ocean, even philanthropy and funders were scared to talk about petrochemicals. Certainly the big white groups, they weren't ready to talk about Black and Brown people dying. It's much easier to focus on the ocean and wildlife, and what happens if I go out on my paddle board and I find this plastic. It's just easier. This is a very complicated topic that stems from decades long history of environmental racism.

Leah Stokes (34:06):

So much of the narrative around plastics has been about recycling, not about the harms when we make the bottle or about the fact that recycling is largely not working.

Katharine Wilkinson (34:18):

And the communities that are on the front lines of petrochemical and plastic pollution, they're on the front lines of so many other challenges too.

Shilpi Chhotray (34:26):

You can't bifurcate the social and racial justice piece from environmental justice. It's all so baked into the same thing. These communities are facing police brutality, gentrification issues, voter suppression, not surprisingly, strong voter suppression in states where there are petrochemical facilities. So, it's this multi-pronged layers of oppression when speaking to these groups. And even more reason to create the platforms, to really uplift and have them lead to share their stories. And for People over Plastic, our goal is to set up the infrastructure for them to be able to do that. It's so intersectional.

Katharine Wilkinson (35:08):

Shilpi and the team at People Over Plastic work to change public narrative every day. They believe in the power of the stories and the solutions of people who are building toward environmental justice.

Leah Stokes (35:21):

We also need to be holding these companies accountable, the ones who are building and operating these dirty petrochemical plants. What did you learn about that, Katharine, from the guests that you talked to?

Katharine Wilkinson (35:33):

Well, Michele thinks citizens have a critical role to play. She told me about how they are setting up systems to monitor Shell's operations in Beaver County, Pennsylvania.

Michele Fetting (35:44):

The community has really learned a lot since this plant was first permitted. And there's an organization that was created called Eyes On Shell. It's a group of community members that is really growing by the day to keep an eye on this plant. And they're doing that in a number of ways. They are putting up air monitors all around the plant. Individuals are hosting air monitors on their homes and businesses to get a 24/7 picture of air emissions that are coming out of the plant. But the real truth of the matter is that people care about jobs and they are willing to put themselves at risk to put food on the table, to put clothing on their families, to send their kids to school. What we really have to do from a solution standpoint is create good clean family sustaining jobs that aren't harming people.

Leah Stokes (36:41):

What Michele says there is so true. We can't just be stopping bad stuff. We have to be building the clean energy economy so that people working jobs don't have to choose between getting a paycheck and poisoning their communities,

Katharine Wilkinson (36:56):

Especially these places that have been sacrifice zones for industry. They need and deserve good jobs and economic investment.

(37:04):

You know, what we're trying to do is bring every community along and ultimately build a world without plastics.

Yvette Arellano (37:11):

I think everything that we have extracted from the earth is already laying in our landfills and it's going to take an entire culture shift and an entire society to build systems of renewable and reusable products and some of that's going to have to come at the cost of comfort and convenience because things that are comfortable and things that are convenient can sometimes be the worst for us.

Katharine Wilkinson (37:44):

Yvette believes we can absolutely move beyond extraction, pollution, and waste. Maybe even more easily than we think.

Leah Stokes (37:51):

Yeah, after all, plastics have really only been with us for like a century.

Katharine Wilkinson (37:55):

And Shilpi says that if we're looking for a vision of a world beyond petrochemicals, we should begin by asking those most harmed in the present, like the folks in the Ohio River Valley.

Shilpi Chhotray (38:07):

I would love to know from residents and people that live there, what would your dream day-to-day look like? Would it be more community parks, more infrastructure for safe drinking water, more churches and schools? These are all things that could very much go back into the community, benefit the community.

Katharine Wilkinson (38:28):

Michele had some thoughts on exactly that.

Michele Fetting (38:32):

I want to see our region stop being a sacrifice zone for the oil and gas industry and for the fossil fuel industry. I want to see our region lifted up and protected and recognized for the beautiful, clean, abundant place that it is. I want to see people swim in the rivers. I want to see people drink the water without fear that is contaminated with PFAS chemicals or radioactive material from fracking.

Katharine Wilkinson (39:04):

And she believes this future beyond petrochemicals lies in our hands and the hands of communities and advocates across the country and the globe.

Michele Fetting (39:13):

It's an everyday battle. And I am just so proud of the people in this region that are fighting and working to really put fossil fuels behind us and look to a new day when we can break free of these toxic materials and start to really look for cleaner and more natural solutions that are going to benefit everybody. That's what I think so many of us are working towards. And I'm just very proud of the people that are in that

fight because it's a tough fight to be in, but we're starting to win more and that's what's very exciting and that's what keeps a lot of us going.

Leah Stokes (39:52):

You've brought us such a powerful story today, Katharine. And, you know, it's sad and it's dark, but it's also hopeful. I'm so impressed by the work of Shilpi, Michele, and Yvette, who despite everything are still hoping and working and believing that a better future is possible.

Katharine Wilkinson (40:11):

All three of these leaders remind us that we have to have the capacity to see the hard truths of the present and imagine the future we want. We have to keep one foot on our current and maybe toxic ground and plant the other in a life-giving future. Yvette reminds us of that and of what's at stake.

Yvette Arellano (40:32):

Petrochemicals is killing us in a way that is not immediate. It is reducing our dignity of life and I know folks understand what the disproportionate impact is. I hope that they're getting a glance of that now, hearing this. But everyone is affected in a way that they might not see in their lifetime, but their children's and their children's children. So, it's a multi-generational problem and we're harming our future in the process. And it's fatal. But it's true, and I'm someone who doesn't shy away from the truth and I hope that listeners don't shy away from the truth either, because it's hard to hear and it's hard to digest. But the sooner we recognize the problem, the sooner we can get towards working on solutions.

Leah Stokes (41:24):

A Matter of Degrees is co-hosted by me, Dr. Leah Stokes.

Katharine Wilkinson (41:28):

And me, Dr. Katharine Wilkinson.

Leah Stokes (41:30):

We are a production made in partnership with FRQNCY Media, The 2035 Initiative at UC Santa Barbara, and The All We Can Save project.

Katharine Wilkinson (41:38):

Thanks to our funders and supporters who make the show possible. Energy Foundation, Northlight Foundation, McKnight Foundation, Bloomberg Philanthropies, and the 11th Hour Project.

Leah Stokes (41:48):

If you're digging the show, please hop on Apple Podcast or Spotify and give us a five star rating or leave us a review.

Katharine Wilkinson (41:56):

Jordan Rizzieri is our producer, Catherine Devine and Emily Krumburger are our associate producers. Enna Garkusha is our supervising producer and Michelle Khouri is our executive producer.

Leah Stokes (42:08):

William Cagle and Ellie Katz wrote the script and Isabel Moncloa Daly and Becca Godwin were script editors. Matthew Ernest Filler is our lead audio engineer, mixer, and sound designer with dialogue editing and additional mixing by Claire Bidigare Curtis.

Katharine Wilkinson (42:24):

Rose Wong designed our new show art and Sean Marquand composed our theme song. Additional music came from Blue Dot Sessions.

Leah Stokes (42:32):

Research, fact checking, communication, and Production Support by Daniela Schulman, Amarachi Metu, and Madeleine Jubilee Saito.

Katharine Wilkinson (42:39):

Come back soon as we tell more stories for the climate curious.

Shilpi Chhotray (42:50):

I also think zero waste needs to be looked at more as an infrastructure issue-