Michael Mann

Interview with the Sustainability Club

ALICIA PECK: The first question we have here is, if you were president of the United States, what would you do to solve the climate crisis on an international and national level? Are there any currently debated domestic policies that look promising to you?

MICHAEL MANN: Yeah, so, there are a number of vehicles that are being considered for climate action. Of course, there is Alexandria Ocasio-Cortez, or AOC, as they call her, the Green New Deal, which has been proposed. It's sort of, is really-- it's still somewhat short on details. But basically, it emphasizes incentives for renewable energy and sort of putting more funding into renewable energy.

There are other potential climate legislation vehicles that are being considered right now in the US Senate and the US House. There is, for example, Democrats are trying to put together, in fact, working with some Republicans, something akin to a carbon tax, a bill that would actually put a tax on carbon. These are different ways of trying to level the energy playing field, so that renewable energy can compete fairly against fossil fuel energy.

Of course, renewable energy-- wind, solar, geothermal, isn't doing the same damage to the planet, damage to our economy, damage across all sectors of society that the burning of fossil fuels is doing, through the climate change that it is causing and the dangerous impacts of climate change. And so the idea is you have to incorporate that, somehow put in a price signal that communicates to the market that fossil fuels are doing damage.

We have to put a price on carbon that accounts for that. You level the playing field. Then renewable energy can compete fairly. And there are different ways to do that. You could provide explicit incentives for renewable energy, and that's sort of what the Green New Deal looks to do.

Others argue you really need a price on carbon, and ultimately, it'll probably have to be some combination of those things. But the good news is that we are talking about that, in part because Democrats have taken back the House of Representatives and they can now produce legislation.

That puts a little bit more pressure on Republicans to come to the table. And to try to make sure that if climate legislation is ultimately going to pass Congress, that they get some say in it. And I think that's leading to a little bit of movement on the part of the Republican Party, away from outright denial of climate change, toward the legitimate policy debate that there is to have about how we solve this problem. So, that's the good news.

ALICIA PECK: Thank you so much, sir. That kind of leads into the next question that we had submitted. And the submittee asks, could cap and trade, carbon dividends, and renewable energy portfolio standards be used concurrently in an effective way?

And I think what they were getting at is, it seems like all the policy proposals seem to just use one way to try to address all these things, when they are thinking a combination of policies would be the best approach. What do you think about that, sir?

MICHAEL MANN: Yeah, so I think that there's something to that. Right now, we sort of lack any national policy on climate and energy. And in the absence of that, we see states, localities, municipalities, and states sort of taking matters into their own hands.

And so you have the West Coast states that have a-- that are trying to put together a consortium for a cap and trade system. You have the New England states, REGGIE, this regional consortium of states that now includes New York, and New Jersey, and Maryland, and Virginia as well.

And each state may decide to do things differently. Cap and Trade, some states are talking about carbon tax. And, of course, lots of states are now creating these renewable energy portfolios that require the energy industry to provide a certain percent of power generation from renewables. These are all-- none of them are mutually exclusive.

These are all ways of trying to attack the problem. And I think that that's what we need right now. We need states to be creative about how they go about trying to solve the problem at the state level and at the level of consortia of states, as we await, hopefully, a meaningful national policy on climate that might come two years from now. Who knows?

The political winds seem to be shifting in favor of national climate policy. There was just a poll that came out today that-- I'm trying to remember the source of the poll. But a very large percent, 80% of the American public now recognize that climate change is real and they connect to the damage being done by extreme weather events, unprecedented weather events that we've seen.

They're connecting the dots on that. And so there is now mounting public pressure. And combined with the fact that House Democrats can now produce legislation, I think there's a lot of pressure on opponents of action. There's quite a bit of pressure now for them to move to the center and try to find sort of common ground.

And we may indeed have-- pass a climate bill a couple of years from now, when Congress looks somewhat different. And there are majorities in both the Senate and the House to pass that sort of legislation. In the meantime, states have to do everything they can. And they have to be creative. There's no one size fits all.

Some states might want to use something like a carbon tax or a fee and dividend, as you mentioned. A revenue neutral carbon tax is something that's very attractive to conservatives, because it doesn't increase overall taxation. It just shifts taxes around. You tax the thing you want less of, which is carbon pollution, and maybe you lower some other taxes.

I think states deserve the right to be flexible in how-- what sort of system they put in place. And combined with renewable energy portfolios, that can all-- all those things can help us sort of move the ball down the field, as we await our star quarterback in the form of Congressional support for a national climate bill to arrive on the scene.

ALICIA PECK: That's great, sir. I really love your football reference, by the way. That's a great way to give--

MICHAEL MANN: Well, yeah.

ALICIA PECK: A lot of people to [INAUDIBLE]

MICHAEL MANN: Penn State, you know. If you can't use football reference at Penn State, where can you use it?

ALICIA PECK: Exactly. All right, so another board member of ours that has been really active with Sustainability Club and has been vital to its success throughout the years, Justin, is going to ask you a few questions. I'm going to go ahead and unmute him. Justin, you good to go?

JUSTIN BOWEN: Yes, can you hear me?

ALICIA PECK: Yes.

JUSTIN BOWEN: OK, thank you, again, Dr. Mann, for showing up today. We really appreciate it.

MICHAEL MANN: Thank you.

JUSTIN BOWEN: A couple of people had this question. It's a science question for you. In November of last year, Harvard researchers announced a planned solar radiation modification experiment that is thus far scheduled to take place sometime soon. Actually this spring was the most recent story on this. Can you please explain some of the major issues associated with solar radiation modification?

MICHAEL MANN: How long do we have here? Is it a half hour? Yeah, I'm troubled, frankly, by much of that discussion. I think that doing the research, the theoretical research, climate modeling experiments, that's fine. Because if anything, those sorts of experiments are exposing the potential threat of implementing these unprecedented, uncontrolled, so-called geoengineering schemes.

One of which, as you allude to, solar radiation management-- it makes it sound-- that term alone, in my view, is an attempt by certain communities to sort of game the language. Hey, we're just going to manage the solar radiation. Well, that's not what we're doing.

In reality, what they're talking about doing is shooting sulfate aerosols into the stratosphere at a massive scale. And we know that that has negative potential impacts on atmospheric chemistry. It can worsen ozone depletion and acid rain. We can't control the distribution of those aerosols.

And the experiments that are often done, the modeling experiments that are done, that have been used to actually say that this could be implemented in an effective way, typically they describe that intervention by an approximation, where you simply turn down the sun a little bit. It's like the sun is a knob, and you just turn it down a little bit. But that's not what they're actually talking about doing.

They're talking about blocking out sunlight by shooting particles into the atmosphere. There's no way of ensuring that that ends up being uniform. And you could end up warming some places, and cooling others, and changing atmospheric circulation patterns, and ocean circulation patterns in an unpredictable way.

You could, if you're not careful, if we're unlucky-- and the principle of unintended consequences really reigns supreme with these schemes-- you could end up actually causing some regions to warm even faster. What if we end up warming Greenland even faster? What if we end up warming the Antarctic Peninsula even faster? And we actually accelerate the loss of ice from the ice sheets and the sea level rise that that causes?

In our book, our recent book, The Madhouse Effect, a book I co-authored with The Washington Post cartoonist Tom Toles, our chapter on geoengineering is entitled, "Geoengineering, or What Could Possibly Go Wrong?" And I think that gives you some sense of where I come down on geoengineering. Doing the basic theoretical research, fine. If anything, that's exposing the dangers of geoengineering, at least in my assessment of the literature.

And I put quite a bit of stock in the work by my colleague, Alan Robock, of Rutgers University, who's perhaps the leading scientist in this field. And based on the climate modeling experiments that he's done, he has concluded that there are far more reasons not to do it than to do it. Finally, by the way, this is sort of climate methadone.

So, if we do this, it becomes sort of a crutch. It becomes an excuse for some to not do the hard work of bringing down our carbon emissions, solving the problem at its source. It's a cover up. And it becomes very attractive to those who don't really want to bring down our carbon emissions. They just want to find some relatively cheap fix.

And it's not surprising that some in the fossil fuel industry, or who are sympathetic to the fossil fuel industry, are very supportive of geoengineering as a way of dealing with this problem. But the problem is, you know, it potentially provides an excuse not to bring our carbon emissions down.

And meanwhile, our carbon is building up in the atmosphere. It's acidifying the ocean. We lose the coral reefs and all these other things proceed. They aren't helped by the geoengineering. And in the end, we could end up much worse off than if we had not implemented these schemes at all.

So, I'm for doing the theoretical research, but actually trying to implement geoengineering, which is what you alluded to, which is what one of these individuals-- in fact, the Harvard folks you're talking about, one of them as a for-profit venture, He intends to profit on implementing geoengineering. I find that to be a fundamental conflict of interest, a disturbing conflict of interest.

We should all be very disturbed by this geoengineering, because it's becoming talked about more and more in policy circles, as it becomes clearer that climate change is a real problem, we have to do something.

Those who don't want to solve the problem at its core, which is stopping the burning of fossil fuels, increasingly are going to point to something, some untested, uncontrolled way of trying to cover up the problem, like these geoengineering schemes. And they call them solar radiation management. Even the language that they use is an attempt to game the conversation in a way that obscures the threat.

JUSTIN BOWEN: Thank you for that.

MICHAEL MANN: You want to know what I really think, though?

JUSTIN BOWEN: Thanks for that detailed answer, actually. We'll definitely link to our book so that our fellow students can read more about this.

MICHAEL MANN: Well, that chapter is actually available for free, thanks to my friends at the National Center for Science Education. So, if you Google it, or I can provide the link, people can read that chapter without buying the book, I hate to say.

JUSTIN BOWEN: OK, thank you. We have another question. As the science and impacts of climate change become increasingly assured, we are finally seeing some conservatives support climate policy. Andrew Hoffman from the University of Michigan has done some fantastic research on climate change communication, including engaging the middle, and knowing your audience when crafting your message. What do you think are the best strategies to engage more conservatives toward impactful climate policy?

MICHAEL MANN: Yeah, well, you know, I think it's important to distinguish between conservatives who aren't outright sort of hardcore climate change denialists. Because there's a lot of evidence that there's this core group of dismissiveness within the conservative community, whose heels are dug in. And you could waste a lot of your time, and a lot of your effort, a lot of your resources arguing with them.

And you're not going to change their mind. And you're going to waste a lot of time that could have been spent focusing on maybe what we're talking about here, or what I call the sort of confused middle. These are moderates. And they might be Republicans, they might be Democrats, but they're not the extremist climate change denialists.

They're honestly confused. They are victims of the misinformation or disinformation campaign that has been waged by fossil fuel interests to confuse the public and policymakers. And there's been a lot of research. I mean, there are-- Yale and George Mason has done extensive polling. My colleagues, Tony Leiserowitz and Ed Maibach of Yale and George Mason respectively, wrote this report, this sort of landmark report, now, about 10 years ago, "The Six Americas" report, that sort of looks at the different constituencies, from the dismissives, which are only like-- in their latest polling, it's only 10%.

They're very loud, but a small fringe, a minority. The dismissives, all the way up to the alarmed, and there are different ways, obviously, of engaging each of those sort of constituencies. And different approaches are going to be relevant. When you start talking about the alarmed, for example, the primary obstacle in their case is sort of pessimism, and defeatism, and gloom, and doom.

Some of them are in despair because they're convinced it's too late to act. And that isn't true. So how you would approach them and sort of motivate them to be part of the solution-- it's not too late, but you need to act, you need to-- we need to move the ball forward on policy.

How you would-- the messaging you would do with them and the messengers who would be most effective in communicating to them are going to be very different from the ones that might speak to more conservative audiences, who might care more about issues like national security, evangelical Christians, conservative Christians.

There are people like my colleague, Katharine Hayhoe, who's a climate scientist and a conservative-- sorry, and a Christian, evangelical Christian, who is very effective in speaking to those audiences. So, I don't think there's a one size fits all approach.

And I don't think any one messenger-- in our very divided world, there's no trusted messenger who will be accepted as a trusted source across the political spectrum. You need a team. And I'm not familiar with the details of all the research, the Michigan research that you mentioned. But there has been a lot of research in this area over the years. And to me, that's what the research-- that's how I read the message from that research.

JUSTIN BOWEN: Thank you.

MICHAEL MANN: Thank you.

JUSTIN BOW

ALICIA PECK: I'll hand this back to you Alicia.

ALICIA PECK: All right, thank you so much, Justin. Dr. Mann, we have two more questions for you, if you don't mind. They're short ones.

MICHAEL MANN: No problem.

ALICIA PECK: The first one we're going to get to-- I actually had this question typed in the chat box, trying to spur some other people to get courageous and ask you some more questions.

MICHAEL MANN: OK.

ALICIA PECK: If we've read all of your books, what other books would recommend to students particularly, that are up and coming, and still motivated to do the hard work that needs to be done?

MICHAEL MANN: Yeah, great question. So, of course, my books are the best. No-- you know. Every book has its own approach. I think there are lots of books that I would recommend for different reasons. And the three books-- well, four books that I've now written are all very different. One is a children's book, although it's probably appropriate for our chief executive too. It's aimed at five to 10-year-olds. That's The Tantrum that Saved the World.

The Mad House Effect, which was my second most recent book, uses cartoons and satire to talk about this issue in sort of a lighthearted, but at times quite hard-hitting way. Dire Predictions, my first book, is a straight up sort of attempt to translate the findings of the IPCC reports, what does the science tell us, basic physical science of climate, the impacts, what are the solutions.

It's sort of a translation of the reports of the Intergovernmental Panel on Climate Change, using user friendly graphics and explanations that are appropriate for non-experts. And then I wrote The Hockey Stick And The Climate Wars, which is really about my experiences at the center of the very fractious public debate over climate change.

And how I found myself at the center of that debate because of this the hockey stick curve that my co-authors and I published, literally 20 years ago. March 15 was the 20-year anniversary of The Thousand Year Hockey Stick Reconstruction. But in addition, there are books that approach this in very different ways. I think of, for example, my colleague Gavin Schmidt and his co-author Josh-- I'm suddenly going to forget his last name. (Wolfe)

But Gavin Schmidt is the first author of a book. Climate Change, Picturing the Science. And they used photographs, actual natural photographs to sort of tell the story. Josh is a photographer and Gavin is a climate scientist. And they combined forces to use pictures, actual photos, to tell the story.

There is the-- there are other books that are really about the politics of climate change and the politics of climate change denial. My colleague Naomi Oreskes and her co-author Erik Conway, The Merchants of Doubt, which is sort of about the origins of the denial machine, and how the modern campaign to deny climate change really has its roots in sort of tobacco and other industry funded campaigns to undermine public faith in science, that was disadvantageous to their interests.

Then my colleagues Stefan Rahmstorf, who's a climate scientist in Germany, and Dave Archer, who's a climate scientist from the University of Chicago, wrote a really nice book about climate change, that's maybe a little more technical, gets a little bit more into the technical details than say Dire Predictions. And it's called The Climate Crisis: An Introductory Guide to Climate Change forget by Rahmstorf and Archer.

And if I were to think about this at length, I could probably name another five to 10 books, but those are some of the books that I think about. And, there are other resources as well that are very readable and useful, short of actually buying a book and shelling out money, giving money to Amazon, or what have you.

There are some resources online that are free. Skeptical Science is a wonderful website that provides a lot of information. It has the list of the 100-plus leading sort of myths about climate change. And the responses to those myths at the beginner, intermediate, and advanced level. And they've got a nice smartphone app that you can download that has all that, so you have all that information at your fingertips.

At Thanksgiving, when you've got that contrarian uncle, who always comes to Thanksgiving loaded with all of these ridiculous arguments. And you can say, no, Uncle Charlie, that's myth number four on the Skeptical Science site. And the truth is, that, you know, the planet is warming, we had the three warmest years on record in a row. And all five of the last years were the five warmest years on record.

So, there are other resources as well online. That's one of them, but there are many others. There are some-- we started a blog called Real Climate, back in 2005. It's a group of about a dozen climate scientists. And that's a little more-- you know, a little more technical, and a little more wonk-ish, and a little more for people who are sort of familiar, a little familiar with the science, not necessarily at an overly technical level. But are sort of interested in the wonk-ish side of the climate science debate.

ALICIA PECK: Well, thank you so much, sir. For those of you who could not write fast enough to keep up with that, we'll go ahead and transcribe the video and make sure we make a list of those books that were recommended from Dr. Mann. And we'll probably post to the club's Facebook page.

We had some questions in the chat box, but to make sure you get out of here on time, I'm going to try to tie Justin's question in with our final question that we decided to ask. And he referenced the March 15th worldwide climate strikes by students. And what we were going to ask you was what gives you hope? What gives you hope to kick this problem in the tail?

MICHAEL MANN: Yeah, well, both of those things, it's the same answer to both of those questions. You know, the kids marching around the world on March 15th, which incidentally, as I said, the Ides of March, of course. But it was the 20th anniversary of The Thousand Year Hockey Stick Reconstruction.

It was on that same day that children around the world were marching, demanding action on climate. And to me, there was sort of something very profound to me about that, about that sort of synchronicity of seemingly disconnected events. That's what gives me optimism, is the passion, and energy, and just-- and the moral clarity with which these kids are speaking.

Like Greta Thunberg of Sweden, who's taken the world by storm. And she actually suffers from a mild form of autism, but she's an amazing public speaker. And maybe the autism gives her something very special that allows her-- she's fearless, she's absolutely fearless. And she spoke at this meeting of the-- what was it?

It was the-- it was the World-- not the World Bank, but it was some meeting in Europe of leaders of the industrial nations. And she chided them. She spoke at this meeting and chided them for not acting, for not doing what's necessary to reduce our carbon emissions fast enough to prevent mortgaging the planet for her and her generation, her children, and grandchildren.

That's what gives me hope. That they're taking matters into their own hands. And they're demanding accountability on the part of the adults of the world. To me, that was-- it's especially poignant, because that's what The Tantrum that Saved the World, this book that we wrote more than a year ago-- the character, the lead character is a girl, named Sophia, who-- and without giving the whole story away, these animals start showing up at her door. And there are animals-- first it's a polar bear.

And then there's a tiger. And these are all animals that have been displaced by climate change. And they have no home. And they come to her. And she gets very frustrated and throws a tantrum. But it becomes this sort of empowering effort on her part to change the world, to be the change she wishes to see in the world, and to hold the adults in the world accountable.

And so, when Greta, the efforts that she's made to raise awareness and to seize the narrative on this issue, and these children around the world, marching on March 15th, demanding action on climate, striking from school to raise awareness, to me that is sort of the re-edification of this scenario that we had imagined in the book. And so it's life imitating art in a very profound way.

And you combine that with sort of the shifting ground, when it comes to sort of public recognition about the problem that we face, and the increasing pressure on our politicians here in the US to do something about it. And the fact that even Republicans are starting to come to the table, moving away from the denial of the problem.

And trying to ensure that when-- if we institute policies that they have some say in the nature of those policies. That, to me, all of that, is reason for optimism. There are enough reasons for caution and worry that drive home the urgency of this problem. The fact that the impacts of climate change are no longer subtle. We now see them play out in the form of unprecedented extreme and very damaging weather events.

So, we are already venturing into dangerous territory. We have to be sober in recognizing that. And there is a certain amount of damage that's happening and a certain amount of additional damage that we're going to have to deal with because of the fossil fuels we've already burned.

But we can prevent the worst, if we act now. If we bring our carbon emissions down by 5% a year for the next decade and beyond, we can avoid ever more catastrophic warming of the planet. That, combined with the energy of our youth, and the shifting politics, and the way that renewable energy is just taking off exponentially around the world, including here in the US, those are all reasons for hope, reasons for cautious optimism that we can meet this challenge.

ALICIA PECK: Awesome, sir. Thank you so much. That's really motivating to hear you say. And I know that you have to take off pretty soon. So, I just wanted to let you know that is such an honor for us to have had you speak for our club meeting.

MICHAEL MANN: Well, thanks.

ALICIA PECK: Everybody, Sustainability Club, we're looking to make sure the club is set up for next school year, as a lot of us will be moving on, graduating and such. So I appreciate Dr. Mann you helping us out with that effort. And actually giving Justin and I something that we never thought we would be able to get, which is to actually talk to you somewhat in person.

MICHAEL MANN: Thank you. Thank you for the work you're doing. Best of luck. And let me know if there are ways that I can continue to help out.

ALICIA PECK: All right, thank you so much, sir. For everyone else, we need to actually do our club meeting now. If you are a student, stay on and let me talk to you about what Sustainability Club can do for you. If you're faculty, please feel free to stay on, so you can talk to students about Sustainability Club. And if you're just here for the show, you can stay on as well too. I'll talk to anybody who wants to stay here.

MICHAEL MANN: See y'all later. Thanks.

ALICIA PECK: Thank you, sir. I'm going to go ahead and unmute everyone. I don't think I have to go through and manually do it. How's everyone doing?

JUSTIN BOWEN: Very good, very good.

ALICIA PECK: Good. OK, so I hope everyone found that rewarding. Unfortunately, just due to the time that we had Dr. Mann for, we couldn't just allow everybody to throw out questions. So, I definitely got some motivation out of it and heard a lot of great things, and a lot of validation as a student that I'm kind of heading on the right path. So, I hope everybody else got the same. Do we have any other students in here, other than Justin and I? If you're a student, please let me know.

KATIE TAYLOR: I'm a student, Katie Taylor.

ALICIA PECK: Hi, Katie. Awesome, do you want to tell us a little bit about yourself?

KATIE: I just started at Penn State this January. So, I'm very-- I'm brand new to the Energy and Sustainability Policy degree. And I'm just kind of trying to get my feet underneath me and see where I want to take it.

ALICIA: Well, welcome. Where are you from?

KATIE: Right now, I live in Stafford, Virginia.

ALICIA: Oh, I used to live very close to there. I was stationed at Quantico.

KATIE: Oh, yeah, my husband's a marine.

ALICIA: All right, we can talk more later, since we have an audience here. Is Katie the only other student? All right, so I'm going to go--

JUSTIN: Looks like it, yes.

ALICIA: I'm sorry.

JUSTIN: No, go ahead.

ALICIA: Yeah, Justin's a student. We know that. OK, I have a Power Point. I'm going to share my screen and run through this PowerPoint if I can remember how to do this. Share screen-- sorry, guys, bear with me. And then here we go.

Like I was telling everybody else, this is actually our April meeting for Sustainability Club. So, what we decided to do, we had a little bit of turnover in our officers a few months ago. And we decided to try something new to help with our membership goals. And that is our Speaker Series. So last month, we had a awesome speaker about women in entrepreneurship. Her name was Paula. And she was from-- where is Paula from again, Justin? I guess Justin's muted. I can't-- I'm just going to un-mute him.

JUSTIN: From Paraguay.

ALICIA: I'm sorry.

JUSTIN: She was from Paraguay.

ALICIA: Paraguay, but it was a really awesome Speaker Series. And she was very motivating and had a lot to say. So, we're going to try to incorporate this into our monthly meetings from here on out. So, what this meeting's basically mostly about is, we want to talk to new student prospects about what World Campus Sustainability Club actually is and what you can get out of it.

I don't know if I you guys can see that or if the little bar is in the way. World Campus Sustainability--

JUSTIN: I can see it.

ALICIA: --OK, awesome-- is a virtual club that meets monthly online via Zoom. So that's the same platform we're using here. It's really user friendly. Mostly our meetings are on Thursday evenings. And we try to tailor it to capture the schedule of everybody who is most active. So, we'll definitely try to work with everybody's schedule.

And it adheres to the same rules and guidelines set out by Penn State Student Affairs. And in essence, it's the exact same as any other club or society on campus. So, I put that in there because I wanted to talk a little bit about what Sustainability Club has done for me.

I'm a veteran. I was a US Marine and an older student. So whenever I got to University Park and was going to school-- any veteran will tell you whenever they go back to school after leaving active duty, you feel like a grandma or grandpa in a classroom full of kindergartners. You just feel old and out of place, and sometimes you get sad, because you kind of missed out on that whole college experience because you chose to go into the military. And you can't have it all.

What Sustainability Club has given me is that camaraderie and that college experience that I didn't get. I met people through Sustainability Club online. And then I would go to conferences and I'd meet them in person. And it was nice to see a familiar face at these conferences. And then you could kind of team up and go networking. And I've learned so much from my classmates that I've met through Sustainability Club.

It's also great to put on your resume. It gives you [INAUDIBLE] experience. It gives you networking experience. And our advisor, Haley, who's here, she really just allows us to try different things. And she lets us fall, and then she picks us up, and brushes us off, gives us some advice, and lets us go again. So World Campus Sustainability Club can really do a lot, especially for our online, adult, and distance learners.

We're actually looking to see if we can use club funds, which we get as a student organization, at Penn State. We do have club funds. We're to see if we can put those to better use here in the future. So, with that being said, Katie, you're brand new, but I am leaving. And that means that I can no longer be president anymore.

So we are trying to find new members that want to try to take on this challenge. So if you could just spread that message out there, with any of the other ESPers that you're in class with, that I'm sure are just starting out too, this is definitely something that can help you in your career choices going forward. So with that being said, we have a general election going up for 2019-2020 school year. All officer positions will be opening up.

Like I said, you don't necessarily have to be and ESPer to be in Sustainability Club. You could just have an interest in sustainability or ideas that you want to put in. It doesn't really matter what your motivation is, as long as you want to put in the effort and get out of it what you put in.

So if anybody out there is interested, or you know somebody who this would really be at their alley, please feel free to contact us via email or message us on Facebook page. And this up here is just our contact information. Go ahead and like us on Facebook. Check out our Instagram page, which we're going to be starting up a photo contest soon. Or give us an email. And we'll get you involved with the club and possibly look at taking on some leadership. All right, so that's my message for this month. Do I have any comments or questions?

JUSTIN: Not from me. Katie, I didn't get a chance to introduce myself. Thank you, John, yes we will be linking to that book. Katie, I am the secretary for the club. I've been with the club now for a little over a year. And as Alicia already mentioned, all positions are going to be opening up for students who want to take on the opportunity and the challenge.

If you have any questions, obviously contact us via our Facebook page or email. If you are interested in maybe taking on the secretary position, I could explain to you a little bit about what's involved. And we look forward to hearing from you in the future.

ALICIA: So do you have any questions or comments from anybody else?

JOHN: I just want to say that we purchased Dr. Mann's book and donated it to our local library earlier this year, or late last year. Dr. Mann inscribed it during the Sustainability Club meeting on campus.

And on the inside he wrote a dedication to the children of the Dubois Public Library. And he said, be the hero of your own story. And that has stuck with me. And I would say that, to the graduates of the Sustainability Program World Campus, be the hero of your story. And good luck to you.

ALICIA: Thanks, John. That's so inspirational. We appreciate you being here for our meeting. All right, so, if no one else knows anything, thank you so, so, so, so much for coming to our meeting. We were really excited about this, as I said. Us being distance learners, we don't always get a chance to meet all the rock stars that are on campus.

So, we decided to go for it. And Dr. Mann miraculously agreed to humor us. And one of our dreams came true. So, there you go. Like I said, if you have anything for us, messages us on Facebook or email. And we look forward to hearing from you guys in the future. Details will go up for next month's meeting here soon. So, be on the lookout for that. All right, I'm going to unmute everybody again, and we can all say bye to each other.

JOHN: Good night.

ALICIA: Good night, thank you, guys.

KATIE: Thank you.

JUSTIN: Thank you.

ALICIA: Bye.