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BROOKINGS CAFETERIA PODCAST

GIRLS' EDUCATION IS KEY TO CLIMATE CHANGE SOLUTIONS

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DEWS: Welcome to the Brookings Cafeteria, the podcast about ideas and the experts who have them. I'm Fred Dews.

The global ambition to limit Earth's temperature rise to 1.5 degrees Celsius by century's end has been challenged by the economic uncertainty and social unrest brought about by the coronavirus pandemic. The pandemic has also disrupted education in countries around the world, and in particular girls' access to educational opportunities, which itself is a cause for concern in the response to climate change.

On this episode of the Brookings Cafeteria, three people involved in addressing climate change through girls' and gender-equal education share their insights and policy ideas about how a green learning agenda can help address the climate crisis through education.

Christina Kwauk is a nonresident fellow in the Center for Universal Education at Brookings and along with Olivia Casey the co-author of the Brookings report "A New Green Learning Agenda: Approaches to quality education for climate action."

Lucia Fry, director of research and policy at Malala Fund, is co-author with Philippa Lei of the Malala Fund report "A greener, fairer future: Why leaders need to invest in climate and girls' education."

And finally, during the interview, you'll hear from Raju Narzary, a Malala Fund Education Champion and executive director of North East Research and Social Work Networking in India's Assam State. He is on the front line of fighting for the rights of young people in his region who are displaced by conflict and regional flooding.

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And now, here's the interview.

Welcome to you both, Christina and Lucia.

(both): Hi, Fred.

DEWS: Let me ask you to both to introduce yourselves to the audience. Christina, why don't you go first?

KWAUK: Great. Yes. So my name is Christina Kwauk and I am a nonresident fellow in the Center for Universal Education at Brookings, where I write on topics on the intersection of gender education and climate change.

FRY: And I'm Lucia Fry, I'm the director of research and policy at Malala Fund, where I lead our research program for the organization.

DEWS: Well, terrific. And again, it's great to have you both on the podcast. Christina, we last spoke on girls' education and climate change in 2018 on the Brookings Cafeteria after the release of a report called "Three Platforms for Girls Education and Climate Strategies." Listeners can find that in the show notes. And that report highlighted evidence for why climate education actors need to pay more attention to girls education and climate change and where they intersect. And in that conversation, in that report, you provided recommendations for how climate education actors could do so. But that was three years ago. So what's changed since then?

KWAUK: Yeah, well, unsurprisingly, since the publication of our report, it's been primarily girls' education organizations and advocates to really caught on to the arguments around why we need to start investing in girls' education as a climate solution. Several notable girls' education organizations have even begun to pivot some of their programming to really position girls and young women as change agents of sustainability as well as climate resilience in their communities.

But notably absent has been movement among climate actors and donors who continue to prioritize technological innovations over social change. But I'm optimistic that as some of these actors begin to see the importance of investing in solutions that address issues of climate justice, that they'll also begin to see how gender justice is deeply intertwined.

The global education community has also been incredibly slow to move, probably because they're seeing these issues as low on a long list of priorities, especially in the context of COVID learning disruptions and learning loss.

But the interesting thing is that in the last six months or so, there has been a sea change in terms of the level of attention that the climate crisis is receiving by global education actors. And these are actors that are traditionally not paying attention to things like environmental education or climate literacy. And it really feels like all of a sudden the global education community is recognizing that the time is now to ensure that education prepares children and youth for a future world that will be very different than what we know today due to climate change.

So, I think the next step will be to ensure that the global education community that's coming into this space connects with the climate and the girls' education communities on the need to push forward a New Green Learning Agenda that multi-solves for some of our greatest challenges, not least of which include climate change and gender inequality. And as countries begin to think about green COVID recovery strategies and a just transition to a greener economic system, countries need to also be thinking about the mindsets, the skills, and the training required to support such transitions. It's really easy to forget education when the focus is on technological innovation and climate policy. But we're in a marathon, not a sprint, when it comes to addressing the climate crisis. And we can't win this without behavioral change as well as consciousness shifts that enable us to see how our social challenges are intricately tied to our planetary challenges. So this is what spurred our collaboration with the Malala Fund on the New Green Learning Agenda.

DEWS: So, let me turn to you now, Lucia. Why was climate change a topic that you felt as an organization needed to become a priority for you?

FRY: I think there were a couple of kind of catalysts for that, if you like. One was our increasing awareness of the evidence that the next looming crisis for girls' education is likely to be climate change. And in fact, it's already here with things like girls dropping out of school due to climate-related displacement, missing out on learning when schools close due to flooding, or

families using coping strategies like marrying off girls to deal with the impacts of drought when they've got a cash crunch and that often ends their education altogether. And as I say, it's actually already here. It's not really a looming crisis at all.

I think Malala puts it quite nicely, actually, in a recent panel presentation when she said our mission has remained the same. Our mission is 12 years of quality education for girls so that they can lead and live without fear. We just see this now as kind of central to our mission, I suppose.

I think the second spur to us getting involved was really around girls themselves—the girls that we engage with through things like our online magazine *Assembly* and our social network supporter base. And that's shown us that climate change and climate justice is a huge issue for them. It's usually second only to girls' education in terms of what they prioritize as big global challenges. And then also they're the ones at the forefront of fighting for climate justice, for climate education, and for girls' education. And I'm thinking of girls like Eduek and Uforo Nsentip in Nigeria who are currently campaigning for the inclusion of climate education in the national curriculum. Or Vanessa Nakate, more famously, who has recently been using her platform as a TIME 100 Next Influencer to promote girls' education as a climate change solution, along with her more well-known work on climate change in Uganda, solar schools, and so on.

And then I suppose the third and sort of more familiar territory for you is the co-benefits of investing in girls' education as a contribution to climate action. And I think it is becoming increasingly obvious that there are these large co-benefits. There's lots of evidence around education's role in building individual resilience, which translates into wider effects. So, for example, when girls go to school, they learn the skills to overcome climate-related shocks, like having critical thinking abilities to process and act on weather reports. And that translates into a social-level benefit in the countries that have invested in girls' education have been shown to suffer far fewer deaths from droughts and floods than countries with lower levels of girls' education.

And then finally, sort of picking up, I guess, on Christina's point about the gender equality dimension there. So, it's not just about getting girls through the classroom doors, it's also about

making sure that the education that girls and boys receive provides the ability to interrogate and generate gender-transformative values, structures, challenge relations of power in those learners. And that in itself then increases its potential for a positive contribution to climate change. So, for example, investing in girls' education, especially when it's a gender transformative education, promotes women's political participation and leadership. And that, in turn, is going to lead to more pro-environmental policies. So when I when I say it all like that, I guess it sounds like a bit of a no brainer for a girls' education advocacy organization.

DEWS: Excellent. And before we go on, I just want to let listeners know that they can find Malala Fund's online magazine *Assembly* at the website assembly.malala.org. It's got a lot of great resources there. So let's go on and take a deeper dive into the two reports, which again, are "A New Green Learning Agenda: Approaches to Quality Education for Climate Action," by Christina and also Olivia Casey. And that's from the Center for Universal Education at Brookings. And then "A greener, fairer future: Why leaders need to invest in climate and girls' education," by Lucia and Philippa Lei at Malala Fund. Christina, let's start with you again. What is a New Green Learning Agenda?

KWAUK: So, a New Green Learning Agenda is, at its core, a new way of educating children, youth, and adults for both climate action and climate justice. It draws on what we know from the field of girls' education around gender-empowering education, and combines this with decades of research on transformational learning for sustainability to offer a framework for policymakers and decision-makers to gauge their entry points along three different approaches in their education system to address the climate crisis.

So, on the one side of the continuum is a more technical approach focused on increasing the specific capacities of learners, especially girls, to transition to green jobs. In the middle is a more general approach focused on strengthening the generic capacities of learners to think, do, and be in this world in more sustainable ways. And on the other side is a more radical approach grounded in building learners' transformative capacities, capable of catalyzing the transformation of inequitable

and unsustainable social and economic systems. So, just as the Green New Deal intends to address through public policy issues of climate change, as well as issues of social and economic justice like job creation and the reduction of economic inequality, a New Green Learning Agenda addresses through education issues of climate change, along with issues of climate justice, which includes gender inequality, racial inequality, and the legacies of colonialism and environmental racism.

DEWS: I like to quote from reports and ask authors to react to that. So, again, from the Brookings report, I'll quote: "The values that drive the domination and exploitation of the natural world, which fuel climate change and increase humanity's vulnerability to zoonotic disease transfer, are the same values that drive the oppression, exploitation, and violence against vulnerable groups, especially girls and women."

KWAUK: So, I should have also said earlier that a New Green Learning Agenda is a whole heartedly feminist approach to education for climate action and climate justice. It starts from the assumption that education as we currently know it is part of the problem underlying the climate crisis. This is particularly relevant today as education actors more broadly, and even non-education actors, seek to identify ways of building back better from COVID. So, in reality, building back better is a form of conformative change that maintains much of the same systems and structures that got us into our present circumstances. In other words, it's about achieving greater efficiency, greater effectiveness, solving problems in education, like potentially improving the carbon footprint of school buildings, but still maintaining our high consumption lifestyles. On the other hand, doing better things doesn't necessarily get us much further either. While this sort of reformative change does address issues of equity by granting equal access and opportunity to previously disenfranchised populations, it often does so into an existing system. So, like ensuring schools in low-income communities and communities of color have access to COVID relief funds in order to rehabilitate their school buildings, while also retrofitting them with greener materials and greener energy sources, but not addressing the underlying structures that have led those schools to be chronically under-resourced and underfunded.

So, instead, a New Green Learning Agenda urges actors to see things differently or to confront long time problems of education and really to commit to the difficult, transformative change that can not only significantly alter the system itself, but its underlying purpose and its underlying values. And so this means that in order to address the climate crisis, we have to also address the social values that sustain systems of inequality, patriarchy, and colonialism. We can't expect to achieve environmentally sustainable societies if our education systems continue to teach girls and women that their labor is less value than boys' and men's, or that their lives are worth less than those of boys and men. So, if our education systems pass on the idea that it's okay to commit violence against girls and women, how is it going to pass on the idea that it is not okay to continue destroying our natural world?

So, a New Green Learning Agenda aims to build the skills and the values that support what we call a feminist planetary consciousness, or a sense of awareness that our social challenges are intricately tied to our planetary challenges and also a desire to address those challenges simultaneously.

DEWS: I'm glad you brought up the term feminist planetary consciousness. I mean, this whole report is very much to me—and not just the one of the three approaches—the whole report is radical, I think. It's arguing for a completely transformative reimagining, rethinking of what our education systems need to do in this space. Can you talk more about that framework, that three-part framework that you mentioned a few minutes ago, the third of which is radical, but again, the whole thing is radical. But again, you talk a bit more detail about what those three approaches are, how they kind of build on each other?

KWAUK: Yeah, so, core to the structure of a New Green Learning Agenda is the green skills framework, or what my coauthor Olivia Casey and I developed after we synthesized a very diverse body of literature on green skills. So, I think in order to understand a New Green Learning Agenda, you have to also understand sort of what are green skills. And we found that definitions of

green skills largely coalesced around two distinct but overlapping paradigms, which then structure the New Green Learning Agenda.

So, on the one hand, green skills are understood through a technical lens as the specific capacities needed to thrive in green jobs that help transition economies to low-carbon sectors. So these could include your typical science, technology, engineering, and math skills—or STEM skills—as well as workplace skills like project management or even sales and marketing.

But then, on the other hand, green skills are understood through a more sociological lens as the transformative capacities that are needed to disrupt and transform not only our individual behaviors, but more importantly the structural factors that also exacerbate the climate crisis. So, these are skills like some that Lucia mentioned, the ability to analyze unequal systems of power, collective action, coalition building, political agency, solidarity. Some of the more radical skills.

But then shared between these two paradigms is a set of what we're calling generic capacities like critical thinking, adaptability, empathy, open mindedness—your typical 21st-century skills or your breadth of skills that can serve both technical and transformative ends, really depending on how they're taught or how they're applied. So, the important thing about this is that generic skills, or what we call in the report green life skills, are crosscutting skills that enhance one's ability to solve practical problems in greener ways.

So, together, these three buckets of skills align with those three educational approaches to a New Green Learning Agenda. So the first is that more gender-empowering greener technical and vocational education and training that's tied to a frame of thinking of the climate crisis as the technical challenge, which in this case is a problem of too much greenhouse gases that can be solved by a just transition to a greener economy and greener jobs, but then importantly, that are filled by a gender-equal workforce with green technical skills. And then the overlapping part of that skills framework aligns with an approach to climate change education that is tied to framing the climate crisis as a product of unsustainable individual behaviors that could be rectified if people

were to develop a suite of green life skills that shape their day-to-day behaviors and decision-making.

And then finally, the third, more radical, bucket of skills aligns with a more transformative approach to education for climate action. And this approach is tied to understanding the climate crisis as a symptom of unjust social and economic systems that can only be addressed by tackling their underlying root causes. So, just as we need all climate solutions when it comes to tackling food waste, getting rid of dangerous fluorocarbons, we need all green skills from the specific to the generic to the transformative. So we can think about a New Green Learning Agenda similar to how, for example, Project Drawdown has conceptualized their eighty to one hundred climate solutions. We need all of them, not just one or one subset. Some might have a greater impact than others, but we need all of them at the end of the day. And there might be a different set of actors within the education system, for example, that might be better positioned to focus on specific approaches and specific kinds of skills. But again, the bottom line is we need all of them.

DEWS: And we need all of them because the climate is in crisis, right?

KWAUK: Absolutely, yes.

DEWS: Lucia, let me turn to you now. The two reports, the one from Brookings, the one from Malala Fund, they seem complementary in many ways. And let me quote from your report and ask you to react to it. From the report, quote, “By treating climate change, girls’ education, and gender inequality as separate crises, governments fail to recognize that climate action helps girls stay in school and gender equal education is good for the climate in turn.” So can you unpack that in the context of the gender-equal green learning agenda discussed in your report?

FRY: Yeah, well, I think it’s only fair to say, first of all, that the agenda in our report is derived from our collaboration with Brookings on green learning. So, yeah, that complementarity is to be expected and welcomed. I think what my coauthor Philippa Lei and I tried to do with our report was focus a little bit more on the kinds of assets and attributes that would accrue to learners themselves through the realization of the green learning agenda. So, it starts with all girls and boys

having access to a good quality education, but it doesn't end there, and that's when the green learning agenda comes into it.

So, it means, as Christine has really been talking about, acquiring a breadth of skills that enable you to thrive in and contribute to a gender-just economy, economic transformation, but also creates new concepts around what a future green economy could look like and what it could value. So, for us, bringing in that feminist analysis means very much thinking about an economy that promotes not only care of the planet, but of each other. And that would be one which would see and value and presumably reward women's labor in the care economy. It means promoting pro-environmental values that go beyond wanting to change your individual behavior, like using renewable energy or doing your recycling, towards a greater commitment to addressing communal environmental challenges. And then ultimately, it should lead to the kind of societal or even global-level activism that can challenge the structures and patterns that cause us to breach planetary boundaries now. So, things like unfettered consumption, pursuit of growth at any cost, extractivism, and really the host of exploitative practices and behaviors that go along with that: exploitation of racial inequalities, of gender inequalities and others.

So, yeah, I think coming back to your question, governments possibly fail to realize some of this full agenda because it's in their interest not to realize it. I mean, it can be willful ignorance, right. But even mindful of that, I think we feel that there is unrealized potential to bring together the three agendas in the minds of perhaps a coalition of the willing of government to really not only instrumentalize girls' education as a climate solution, but look at the whole sort of system and approach of education and how it can be transformed to speak to those larger climate justice issues.

DEWS: I'm glad you brought up that issue of individual versus kind of communal action, I've been thinking about that a lot in my own in my own life. I recycle once a week and try to reduce my consumption. And I'm sure most of my neighbors do. But it just feels like we need practices and structures and more education that both the organizations are suggesting here to instill a more communal sense. And I know I'm simplifying it greatly, but it's just something that I'm I

want people to think about a lot, that individual virtue versus the collective action that I think we all need.

Lucia, Malala Fund has a program, I understand, called Education Champions, some of whose work is focused on ensuring that girls in climate hotspots go to schools. And I know that's a core part of Malala Fund's mission. Can you talk a little bit about that program? Because in a minute, we're going to bring in a voice from one of those Education Champions. So how does the New Green Learning Agenda support the Education Champions' efforts to create a greener and fairer future?

FRY: Let me start by talking a little bit about the work of those champions that you're talking about. So in Assam, the region that you're talking about in India, frequent flooding has led to widespread displacement, preventing girls from safely going to school. And at the same time, there's been a decline in district-level spending on education and a rise of ethnic conflict. And so our champions in that region, Raju and Digambar, they hail from the communities that are experiencing these problems. And they see a great value in looking at the range of constraints that are working against girls getting their education. And they're doing a number of things, including running clubs for girls who have either dropped out or at risk of dropping out. They are looking at training school management conditions, so are monitoring local schools and whether they're experiencing issues like flooding. And making sure that the local environments are safe for girls.

But they're also, crucially, advocating with those districts authorities to try to remove the school fees, which creates an extra deterrent for girls going to school, and for increased funding for education and expansion of the Right to Education Act to guarantee that all girls can go to school for 12 years. And that's really important, actually, because it's actually in the upper levels of education that the biggest benefits for the climate in terms of resilience, adaptation, and reduction of emissions starts to accrue.

And then, I think is probably worth flagging that we have other champions who might not be directly working on climate as an issue, but are very much in the nexus of these crises. So, trying to

secure girls' education rights in regions highly affected by climate change like northeast Nigeria or Afghanistan, or on the other hand, working with girls where environmental degradation is taking place, such as in northeast Brazil. And what we hope to do with our work is really to draw policymakers' attention to the impacts of climate change on girls' education. And then, as we've been discussing, the potential of gender equal and green education to be a climate solution, hopefully spurring action kind of across the piece.

And it's really pressing because new analysis that we've presented in the report shows that climate change is likely to be curtailing the education of 12 million extra girls each year by 2025. So, as I talked about the looming crisis and the present crisis, I'm very happy to hear Christina say earlier that she feels that this nexus of potential, unrealized potential around these groupings of issues, is finally coming to policymakers' attention, even if they're not yet acting on that as urgently and at the scale that we would need to see.

DEWS: Lucia, you mentioned Raju, one of the Malala Fund Education Champions, and he works in Assam State, and this is a good time to listers know that Christina actually interviewed him, Raju Narzary, separately. And just to situate where Assam State is, it's in northeastern India located between the country Bhutan to the north and Bangladesh to the south. And so we'd like to share some of that interview with listeners and have you, Christina, walk us through it a bit. So can you, Christina, tell us a little bit more about Raju Narzary?

KWAUK: I had the honor and privilege of speaking with Malala Fund Education Champion Raju Kumar Narzary. He is the co-founder of Northeast Research and Social Work Networking, or NERSWN, an organization that advocates for the rights of young people in Assam State in India, which you just provided an introduction for, Fred. It's a region that is displaced not only by regional flooding, but also a long history of ethnic conflict. So, Raju has been working most recently to gather data on girls' enrollment, especially as it's been impacted by flooding, and really in order to persuade local, state, and national officials to increase funding for girls' education in the region, to really help ensure that India's new Right to Education Act is fully realized as it's intended to

guarantee all children can learn for free through grade 12. So, I started my conversation with Raju by asking him to talk about how climate change is impacting the communities he works with in Assam State. And he focused in particular about the flooding problems and its impact on girls' learning.

NARZARY: See, the region that we are working in has this twin problem of the armed ethnic conflict and annual recurring floods. While the ethnic conflict seems to be at the end now with the successive peace accords recently being signed on 27 January of 2020, so the armed militancy as of now has ended.

But the floods since 1950—it is an annual event and it is always devastating every year. In the place where we work, there it is called the lower part of the Assam, where the flood has become like synonymous of this region. So, it is the communities are affected. Hundreds and thousands of people are displaced every year from the month of June, July, August, just three months, especially in one of the district where Malala Fund has supported us to work with girls. They remain under water for three months. And in these three months, hundreds and thousands of people migrate to cities and other towns. But those who cannot migrate, they remain in that deluge itself, and they remain with the flooded homes. So in that scenario, thousands of girls also migrate. They are forced to migrate to other cities. The schools are closed, the health centers are closed.

And if you look at the statistics, it is so, so it's a very sorry figure. India-wise the women's literacy rate is 70 percent. Assam-wise, it is 64 percent. But in Dhubri District it is just 58 percent. Look at the childhood marriage data in Dhubri. Assam, it is 22 percent children marry before the age of 18, but in Dhubri, 58.3 percent children marry before the age of 18. And when the government data, the National Family Health Survey data, which is published by the government, they have come out in 2018 and '19—those married girls at the age of 15 when they were being asked, they were already mother. They have already delivered babies before the age of 15. And look at this scenario that the children dying, out of the thousand live births, before even seeing first birthday, 68 infants are dying in Dhubri. So these are some statistics I can go on. But it's really a

terrible situation because of the because of the climate change and the developmental actions that are happening over the rivers.

KWAUK: So, Raju explains that the river flooding problems have really been exacerbated by a massive earthquake in Assam back in 1950, which altered the course of the Brahmaputra River, which is the major waterway in this region. And on top of that, dams and bridges have been built upstream from a neighboring district where he works. And together with the earthquake that shaped and shifted the riverbed, the river development, there's been increasingly severe and frequent monsoons that have really made things very difficult for the people there.

NARZARY: And today, the people, the riverine communities, they are losing land every year. From 2012 to 2019, there was a report by the government in Dhubri District itself—212 schools have been totally washed away by the flood rivers, the flood waters, and over 1,132 schools have been damaged badly. So these are some of the direct impacts of climate change into the lives of children and communities, especially in the lives of girls.

KWAUK: And so when I asked Raju how these ecological and climate shifts are impacting access to school in the region, he spoke about two sets of issues that particularly impact girls the hardest. The first, were ongoing issues in girls' education, like the gender sensitivity of books and the gender responsiveness of teachers. But a second dimension was also the gender sensitivity of school infrastructure and the services that are provided, including toilets and access to water, which during periods of flooding create increased barriers for girls for proper and dignified sanitation and hygiene.

NARZARY: So, why I'm linking this with the girls issue is that since anyways Indian society is patriarchal, more so among the Muslims. So, when it comes to access to schools, it is not only teaching and learning; it is not only books and teachers; it's all also things like toilets, like the midday meal, and all that. So the girls' access to toilets—because the school itself is not there. So there's no question of building toilets in schools. And during the floods because homes and schools are all flooded so people mostly use—like daytime, the male members of the family can go

anywhere but the girls they have to wait for the night, for the dark. They take out the boats, and then they release this thing. So they attend to the nature's call.

So that way, the girls are affected more. And when you face a crisis like first the families, Indian families, they tend to in the name of protecting girls, they will just send them off for marriage. They think that the girl would be safer in the hands of the husband. So when there is a flood, there is nothing, there's food crisis in the family, and there are hardly any place to stay. So they would always prefer to send them up their girls to marry.

So that is how the girls are affected more. And once you're married there is no access to school. So people would never prefer to go to the schools. They will have babies, they'll have children. So that is how the girls are affected more.

KWAUK: So, an important point to reiterate here is that once girls are married, their chances of continuing their educations fall dramatically as early marriage often leads to early childbearing and the transition to adulthood. And rarely then do girls return to school.

FRY: It just breaks my heart, really, to hear Raju talking about these impacts on girls and particularly the interaction between these, as it were, external crises and the social norms that girls are experiencing. And to think of girls having to hide away at home until they can go to use the bathroom in the dark is just really heartbreaking. It really makes you realize, actually, the kind of the sense of school as a place of safety and sanctuary and what it means when it's taken away. All too tragically, the experience around early marriage and its interaction with climate change is one that we see repeated in many, many contexts—happened in Somalia after a drought period. It's just a very frequent fallout of all kinds of crises, but increasingly apparent that it's a fallout of the climate crisis.

KWAUK: Yeah, I think just to build on what Lucia is saying, I mean, there's even a term now for this kind of thing, and that's "famine marriages." So, this is really seeing how as families are experiencing the numerous shocks caused by climate-related disasters and other sorts of conflict and disasters, that families are forced into these situations where the girls' lives and their families

are ultimately impacted for the long term. And as Lucia said, these are trends that are happening worldwide in countries that are especially experiencing the most immediate effects of the climate crisis. So, in fact, Raju actually offered some really alarming data that his organization has collected on the impacts that all of these factors, at least in Assam State, are having on girls learning.

NARZARY: It's actually very shocking, actually, to see the data in Dhubri District in our region, in fact. The out-of-school children is already 10.27 percent out of the total children. There are like out of 32 million population in Assam, 20 millions are children. And in Dhubri, it's out of the 2 million populations, it's almost 800,000 people are children. So, if you look at the out-of-school data, which is 10.21, but look at the girls' education, the government data itself says that the girls completing 10 years of education is just 16 percent of the girls in this one. Only 16 percent of girls have completed 10 years of education.

So, for mitigating or contributing to us increasing this level of education among girls, we are trying to do four things. One is to directly work with the community, build resilience of children, and make children go through a journey from being a recipient of services to a change agent where we are forming clubs, we are putting through these girls to a journey of life skill. Then we are using culture as a medium to kind of make them participants of the process that affects their lives. We are using sports as a medium to kind of go through a journey of empowerment. So that is one.

Secondly, we are working in system strengthening. When I say systems strengthening, it is work with school management committees. It is working with the village child protection committees, work with these child welfare committees, district child protection units. So it is basically systems strengthening work that is already an existing kind of a framework.

And next that we are trying to work is an advocacy, networking. That is the next intervention that we are doing, trying to work for new policies or support the government in implementing the existing policies.

And the next step we are working is documentation and dissemination.

So, these are four areas of work that we are engaged with for ensuring girls' access to education, at least 12 years of education for girls.

FRY: So, very heartening in turn to hear about the work that Raju is doing here. We mustn't miss out the importance of building resilience in girls and boys, and the leadership skills both for their own lives, the lives of their communities, and more widely as I talked about in my remarks earlier, the fact of girls' empowerment and leadership through education and through these additional types of supportive initiatives which can enable them to realize their potential as leaders and then themselves become advocates for the kind of changes in systems that Raju talks about.

KWAUK: In addition to that, I think one important thing that Raju's organization is doing is collecting this data. A big void in our understanding of girls' education and climate change is that there are so many data gaps to really help us understand the full scope of how climate the climate crisis is affecting girls' experiences in school, girls' access to school, and how families are coping. I mean, we have some data and that really gives us our current feel for how the intersections of girls' education and climate change manifest. But in order for school management committees, as Raju spoke about, or local governments, national governments to really be able to do something about the current advocacy that's happening around girls' education and climate change, we really need to begin to fill in data gaps. And that starts with local organizations, schools collecting consistent sex-disaggregated data that helps us understand and diagnose the problems that the climate crisis is unfolding for us.

DEWS: I want to come back in for a moment and ask you both to address something Raju said a minute ago, and which both reports refer to, and which you Lucia mentioned at the top of the interview as a core mission of Malala Fund. And that's the goal of increasing the number of years that girls are educated to at least 12, 12 years. So why that amount and why is that important?

FRY: First of all, 12 years of girls education is her right. But it's not only her right, it's also a source of a number of benefits for society as a whole, and climate no less than that in other

sectors. So, we know that the longer a girl stays in education, for example, the greater her chances of having a formal job, getting involved in political life or community life and so on.

In their higher years of education are also, sadly, where girls start to face some of the problems that are associated with the social norms around adolescence, I suppose. Therefore, it's an age where we really need to try and protect and extend girls' educational opportunity. It's also, I must say, the area where we get some of those benefits that I alluded to earlier in terms of reducing carbon emissions, because this is the age at which girls become sexually mature, might be married off, or might look to marry. So if they have the opportunity to both continue their education and have access to contraceptive choice, they are less likely to marry young and to have many children. They're more likely to have fewer children and bigger spaces between their births. I should emphasize that that is about realizing their rights and their stated unmet needs for modern contraception and education, is not a question of us sort of using girls' bodies, I suppose, as the means to reduce carbon emissions. That would be a terribly unjust approach because indeed it's those girls who are at the moment least responsible for creating the climate crisis.

KWAUK: Yeah, I think really when it comes to climate change, one of at least the main concerns is that the longer a girl stays in school, the later she's likely to marry and the later she's likely to start bearing children. And if she stays in school for at least 12 years, she's also more likely to go on to study further, which is how Raju put it.

NARZARY: First of all, I think the girls—as for the new education policy today in India, it talks about 12 years of free, compulsory quality education for everyone, including girls. Since the literacy rate among girls has remained behind for successive decades—today, the male literacy in India is 84 percent, but the women's literacy has remained at 70. There is a gap of at least 14 percent. So how do you bridge this gap? That is one question.

Secondly, if you talk about Assam, they must complete 12 years of education, and this will not only contribute to their literacy or their education, but this will in turn have a lot of positive impacts. First of all, they will get rid of the early marriage when they complete 12 years of

education. By the time they complete 12, they will already attain 18 years of age. When they are at least 18, and they get 12 years of education, most of the girls today the data says that once you complete 12 years of education they are likely to complete more education. Taking maybe three years of those bachelor courses, postgraduate courses, they're likely to take up.

So, and they will have more skills. And once they will have more skills, more educations, they will not marry early. So, the population explosion that is taking place in India, it is directly going to contribute towards reducing populations or having a balanced population in the country. Once you have a balanced population or there's a reduction in population, this will definitely reduce the emission rate and contribute towards controlling the climate change. So, definitely I will have a vision where every girl not only completes 12 years of education, but beyond 12 years of education, also, they should, kind of, acquire education.

DEWS: Well, Christina, let me jump in here again to ask about the solutions that Raju was thinking about in terms of green learning skills that are discussed in both reports. Can you talk about that a little bit?

KWAUK: Absolutely. So I think what Raju is getting at is essentially what in a New Green Learning Agenda we might conceptualize as green skills for transformation, those that are critical to helping to address underlying structures and systems and practices of inequity and inequality. So, Raju talks a little bit about wanting to ensure that girls have knowledge of their fundamental and legal rights, something that Lucia brought up earlier as well. So, both in terms of their constitutional rights as provided by legislation like the Right to Education Act, but also rights like their right to bodily autonomy, their rights as children, and their rights as girls and women.

NARZARY: Most of all, I think being in a democratic country and with all the fundamental and legal rights, constitutional rights, we need to make our girls aware about their constitutional rights. Today in India, education has become fundamental right after the Right to Education Act 2009. But how many of girls know about it? And even [if] they know, where do they go and demand these rights? Who will ensure that this fundamental right to education is given to the girls?

So every girl, every girl child must know that education today is a fundamental right. And every girls must know how to acquire this entitlement that they have.

Secondly, for years together, like for the last 50 years, there's not been adequate attention and adequate focus been given to reduce the vulnerabilities of communities, especially of women and girls, to the annual floodings. But what are the alternatives? We need to look at alternatives. The floods are going to happen. How do we ensure that they get the education, they get the health care facilities, they get a dignified life? India is trying to become a world leader, but its citizens today have to wait just to go to the toilets for the night for the dark. They have to use the boats. So for us, as a one of the biggest democratic countries, we should—and economically, India today is not very poor. So we should we should definitely think of alternatives.

DEWS: Well, I want to thank Raju for joining us in this conversation from Assam State in India and my best wishes to you, Raju, and your colleagues, Malala Fund Education Champions, for all the great work and important work that you're doing there. So, Christina, in your discussion with Raju, it struck me that implementing a New Green Learning Agenda entails a great deal of variation, depending on the context, whether you're in a school in the United States or in a flood-prone area in rural northeastern India. How do you see policy actors embracing a New Green Learning Agenda across the globe?

KWAUK: This is a great question and something that really sat with us as we developed this report and the concept of a New Green Learning Agenda. We wanted to be realistic and recognize that countries are at different stages of climate ambition. They have different levels of resources to expend on their education and training systems. And they might also be dealing with different levels of climate change acceptance within their congress of policymakers. So, in many ways, we were worried that a New Green Learning Agenda may be unrealistic, given where our education systems are globally. And if we think about it, as of today, only two countries, Italy and New Zealand and soon to be a third country with Mexico, have mandated climate change education across its national curriculum. And of the handful of countries that have a national climate change learning strategy

out there, none of them branched much further than targeting specific capacities or those green skills for green jobs. And curricular reform can take, on average, between 10 to 15 years to come to fruition.

So, with this in mind, at the same time our window for action is rapidly closing. And this is not the time to lower the bar just because countries might not be ready for this. So, in order to set decision-makers on a course to win the long game of transformative social change, we wanted to propose this New Green Learning Agenda in the hopes that countries could implement it progressively over time as awareness is raised, capacity is built, and the political will and resources are mobilized.

So, this is work which now we've developed with another colleague of mine, Rebecca Winthrop, who is a senior fellow and co-director of the Center for Universal Education. She and I introduced a moonshot idea that we believe could really get this agenda rolling. And this is to see climate action projects in every school by 2025. So, this could mean schools in Assam State engage girls and boys to develop a monsoon response plan that enlists girls and boys in the communities to identify those girls at risk of being married off in response to the economic hardships that are experienced during monsoon season that triggers families to then go into this spiral of thinking, how can we survive this? And then more importantly, triggers organizations like Raju's to intervene on behalf of the girl child.

And then meanwhile, climate action projects for schools in Bangladesh, for example. I'm thinking the girls and boys who attend floating schools there that have been created in response to the regular flooding that occurs. Girls and boys there might identify ways to link their biology classes and their math classes to the floating gardens that their communities have developed to help ensure families' agricultural livelihoods are not disrupted during the seasonal flooding that could then put girls at risk of school withdrawal and early marriage.

So, when we think about seeing climate action projects around the world, these student designed and student-led climate action projects could really enable local community responses to

climate change that help to also seed the demand for a top down policy level change that could kickstart that New Green Learning Agenda.

DEWS: Lucia, a similar kind of question to you about policy solutions, because that's one of the things we're all about around here. So, we heard Raju talking about at the local level—he's in the Dhubri District of Assam State in northeastern India—struggling to adapt to changing patterns of monsoon rains, the changing river flow. And he's struggling to ensure that girls continue to have access to 12 years of quality and empowering education. Then kind of on the other end of the spectrum, you have the global community of actors, and particularly I'm thinking of the Conference of the Parties. And their next big meeting is later this year, I believe, in Glasgow, Scotland. Then you also have the G7, the G20, and of course international NGOs like Malala Fund. You have Brookings. So can you talk about, maybe at that global action level, how do you see something like a New Green Learning Agenda even coming to fruition? What are your recommendations, especially for that global level of actors?

FRY: Yes, we've got kind of three clusters of recommendations for the big highlight events of this year, which all seem to be happening in the country where I live, in the UK. So, we see COP26 this year very much as being an opportunity to reenergize the global community around existing commitments to climate education and kind of build on those to bring in new dimensions, like a sort of feminist take on climate education, if you like.

So, first of all, we'd really like to see a high level political declaration at the end of this year in Glasgow. And at that moment of a high level political education, we'd like to see countries come forward, as I said, in a kind of sense of a coalition of the willing and make commitments to advancing the gender equal green learning agenda in their own countries. So that could include measures like reforming climate change education, reforming curriculums, training educators, and threading gender transformation through all of that.

Then going forwards, we want to leverage the process going forwards to take coordinated action on gender equality, education, and climate justice and really looking at ways to kind of

integrate these agendas via mechanisms that will enable governments to better coordinate agencies and ministries responsible for climate change adaptation and mitigation with the health and education sectors to incentivize those multi-sectoral approaches, which we really think are going to be a vital. The Nationally Determined Contributions could be a key tool here, and we'd like to see Nationally Determined Contributions commit to a twin-track approach to making education systems both more gender equal and resilient to the effects of climate change so that girls don't drop out of school or miss out on learning due to climate related events.

We'd also like to see governments start to adapt their national climate change learning strategies, and there's a couple of key things that we'd like to show up in those climate change learning strategies. I think one is an expanded definition of the kind of green skills and green jobs in the way that is talked about both in the Brookings report and in our own. So that means including care work and environmental stewardship in the definition of green jobs and green skills. Making sure that girls can access things like STEM skills and some of the breadth of skills or process skills that we talked about on equal terms with boys. And then looking at green jobs and the conceptualization of green jobs so that we do include caring jobs in those.

And then more radically, I suppose, is taking a climate justice perspective in their climate change learning strategies, reorienting learning environments and teacher-student relationships to really promote the co-construction of knowledge, critical inquiry, and political agency, especially around power and inequality that's needed to foster the necessary values and capabilities in students that will lead them on a path to climate justice activism.

And then finally, I think, as Christina discussed earlier, thinking about building our way beyond the COVID-19 crisis, committing to a green and just recovery that centers girls' education and climate justice. And I think that's tackled a bit more through things like the G7, the G20, and so on, looking at prioritizing public investment, not austerity, as the foundation of green economic recovery strategies, deploying economic stimulus measures that are careful not to rely on fossil fuels, but invest in things like renewable energy and so on. And paying attention, of course, coming

back to the core mission of Malala Fund, paying attention to the fact that every child still is not receiving 12 years of education. Girls do not have bodily autonomy and integrity and don't have access to those vital sexual and reproductive health services and rights.

DEWS: Well, Christina and Lucia, as we wrap up I'd like to ask both of you to reflect on the question of what more needs to be done. And by that, I mean just generally, globally, but also for you personally, what motivates you to continue to do this important work? And what more do you hope to do?

FRY: For me, I think it means for Malala Fund continuing our advocacy and of course, maximizing the potential of the unique platform and voice of our co-founders, Malala and Ziauddin Yousafzai. But in doing that, listening to the voices of girls and youth themselves who are on the front lines of fighting for climate justice, for girls' education, and for a quality climate education.

KWAUK: On my side, I think one of the biggest things that needs to be done is to fill some of those data gaps, and that's especially as they relate to current conversations by climate decision-makers and climate policymakers around the carbon impact of investing in girls' education. Right now, we really have one model, and that model is what Lucia and I talked about a little bit earlier when it comes to the interlinkages between girls' education and family formation. And then that goes on to affect overall carbon numbers.

But we know in our hearts that there is much more than just that particular relationship to carbon that girls' education has. And it's really exploring how can we best estimate and model the carbon impact of investing in girls' education as a green-skills pathway or as a pathway to political empowerment and political leadership. Because I feel like one of the reasons why the climate space hasn't picked up on this and hasn't made movements on this is for the simple fact that they can't put it in national carbon reduction strategies because there's no carbon number attached to it. So, I think for me, one of the big things that I want to work on moving forward is figuring out how can we best estimate this. There are emerging models that allow us to look at quality education and its impact on

behavioral change and then downstream its effects on measurable carbon outcomes. And I think we need to do the same thing for girls' education.

DEWS: Well, Christina Kwauk, Lucia Fry, I want to thank you both for spending so much time today and sharing your expertise on this vital issue for the planet, really. I appreciate it. Thank you.

KWAUK: Thank you so much.

FRY: Thanks so much.

DEWS: You can find both reports, "A New Green Learning Agenda: Approaches to quality education for climate action," by Christina Kwauk and Olivia Casey of the Center for Universal Education at Brookings.edu. And "A greener, fairer future: Why leaders need to invest in climate and girls' education," by Lucia Fry and Philippa Lei at the Malala Fund, malala.org.

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Until next time, I'm Fred Dews