[MUSIC PLAYING] SPEAKER 1: Hello and welcome to the Harvard Center for International Development's weekly podcast.

Environmental degradation reduces the environmental capacity to meet social and ecological needs of societies. Which is exacerbated by natural hazards and extreme climate events and often intensifies existing vulnerabilities. Marginalized groups in cities particularly women and the poor are disproportionately at risk to face negative consequences of such environmental stressors.

But I understand the relationship between women's empowerment and environmental degradation in cities. Researchers and Omar Malik and Ahmed Patel surveyed over 1,000 households in 12 informal settlements of New Delhi, India, Dhaka, Bangladesh, And Islamabad, and Lahore Pakistan.

Today on CID's speaker series podcast Ghazi Mazer, student at the Harvard Graduate School of Education interviews Omar Malik and Ahmed Patel. Who tested several linkages between empowerment and measures of environmental degradation and found many significant associations.

SPEAKER 2: Thank you very much for being with us today Ahmed and Omar. Can you please give an overview of your research and your key findings from this paper.

SPEAKER 3: Thank you I'll start with explaining a little bit more about the study. And Ahmed can give a preview of some of the key findings. This project was one of seven that was funded under the growth and economic empowerment of women research program, funded by the Canadian RDRC and other donors.

The overarching question was to unpack the bidirectional relationship between women's economic empowerment on the one hand and economic growth on another. Other projects in this focused on things like gender based violence, and transportation, and trade liberalization. Where the focus really was on trying to unpack how men and women get affected differently.

The purpose of this study really was to try to understand how slums, or informal living conditions in cities in the developing world actually are a symbol of environmental degradation. And when environmental degradation takes place, how is it that it affects men and women differently, and what are some of the mechanisms that explain those differences.

SPEAKER 4: So Yeah as Omar said, we know that in the global sounds, slum dwellers are particularly a vulnerable group, partly because many of those slums are located in hazardous locations. They themselves are places with the lowest levels of access to basic services and infrastructure. Women living in those slums have additional vulnerabilities, partly because of traditional gender rules, highly prevalent in South Asian culture.

So this intersectionality of gender integrated living in environment in slums of cities are putting higher risk of degraded environment, raising sequence of climate change events. For example, a woman in

India, in New Delhi slum lives in a place where stormwater drainage is a problem. The additional task of cleaning the house after the place is waterlogged could deprived her of sleeping time, or work time and so on.

This is the kind of intersectionality we're talking about, the women particularly gets more burdened than men in those very slums. We wanted to understand these kind of relationships between how climate change events or general environmental degradation that we find in slums affect women more than men.

And we find quite a lot of relationships like this between environmental degradation and women empowerment in our state.

SPEAKER 2: Thank you. What was the motivation for conducting this research?

SPEAKER 3: Often a lot of the conversations about gender and climate change, turn into heated debates that are coming from people who take ideological positions on this and that's fine to have policy impact. But what we saw as a gap was, not having enough empirical evidence collected from the field. So not enough primary studies especially in urban areas and especially in slums of South Asia.

So our attempt was to bring fresh evidence from the field and contribute to the debate so that future conversations around these topics would be informed much more by substantive results from fieldwork.

SPEAKER 2: So it's evident from your paper that women bear a disproportionate burden of environmental degradation and climate change events, in both direct and indirect ways. So what are the steps that government and authorities can take to provide women the specific support that they need within such marginalized communities in South Asia?

SPEAKER 4: We believe that achieving gender equality requires multiple approaches, while we often pay a lot of attention to bring about cultural change to bridge this gap. Such changes meet with resistance and are usually a slow process because a cultural change. However, we suggest that there are many other interventions which are often gender neutral not even considered as gender policies, that policymakers can easily and immediately pursue.

A simple infrastructural interventions such as providing access to piped water supply, could allow a girl child to pursue education. Or a house maker to pursue economic activities since they no longer have to travel or wait in line for fetching water for the entire household. So these traditional roles should change but until they changed we could start providing water and achieve quite a lot of bridging the gap between two genders.

And so we are suggesting several such interventions for policymakers to pursue. Often they are gender neutral but the outcomes would be more empowering to women than men. Because our study finds that women suffer more than men as a result of poor environment in cities. And if they are not better equipped for climate change events and so on. So we suggest those measures.

SPEAKER 2: What are some of the challenges that you encountered when you were conducting this research especially the challenges that you might have faced on ground?

SPEAKER 3: Anybody who's done research on the ground, especially in slums would know that it's incredibly challenging fieldwork. So I think there's two levels at which we had challenges. The first was our desire initially to try to collect a representative sample of all slum dwellers in a particular city or in a country, it turned out to be extremely difficult. And that's because we didn't really have much data on the universe of slums in any given country.

In Pakistan, for example, there's no such systematic data collection of slums often. And so for researchers to come in and say, OK, these are the slums that we will pick was extremely difficult. Even setting the boundaries of the slums it was difficult. So the way we overcame that was by sending a lot of scoping teams around the city both in Lahore and Islamabad but also in Delhi and Dhaka, to try to get a sense of what these communities look like and what kind of dynamics we would encounter if we were to pick them.

Now once we had picked them we saw a second set of challenges, which was really going about drawing a random sample of households within a community. Even after we had defined the boundaries it was often very difficult to get our survey teams to interview people in a random fashion. Because often community leaders were concerned about who we were, why we were collecting data about them. They were extremely skeptical of our presence in the communities because a lot of them knew that they were living on illegal land and they were not supposed to be living there.

So because of all of those dynamics, it created a lot of tension. And here one thing that really helped us was to go through community leaders bring them on our side and explain to them why participation in the survey might actually benefit them and our research might bring benefits to them in the years to come.

SPEAKER 2: So as time progresses the issue of climate change appears to be worsening. So is it a fair inference to make based on the discussion that we had about women being a disproportionate burden of environmental degradation. So it fair inference to make that women will bear a disproportionately high impact because of climate change?

SPEAKER 4: Unfortunately, the short answer is Yes. Because climate change is much more rapid than our work in bridging the gender gap.

SPEAKER 3: One way of thinking about environmental degradation in these areas which again are low income communities, is that the deterioration of the environment actually adds as a stressor on top of existing vulnerabilities.

If you think of any development discussion in an urban policy seminar. The typical things that we talk about, land use, or people's access to public services. All of those factors still stand true in the case of our research but when an environmental event occurs, whether it's a slow moving or a fast moving disaster. It has this exacerbation effect where women continue to become more and more vulnerable as compared to men. So the gender gap in vulnerability increases quite dramatically.

SPEAKER 4: Unless we take adequate policy actions. And change a culture that recognizes this additional vulnerability, what we call intersectionality people who are living in slums. And in addition, women who live in slums. They have double burden of gender and poor living conditions. And we think that that change is much slower than climate change itself, which could lead to higher vulnerabilities for women in slums.

SPEAKER 2: well, I also understand that besides the quantitative analysis that you've done in your paper. There's also some qualitative elements, that you've covered within the report. Would you be able to share some of this qualitative insight with us?

SPEAKER 4: The large part of quantitative aspect was to see the relationship between climate change events and environmental degradation with women empowerment. And it was done quantitatively, but that just explains that these two things are related. It doesn't tell us much about why and how climate change events are related to lower women empowerment.

So what we did was interviewed people in slums, in each of those slums we've interviewed both men and women. Try to understand how climate change events might be affecting their empowerment. So in the words of one of the key informants from India. "During rains all of our work stops for at least a month, all the water from this drain gets filled up till our knees, it causes all sorts of diseases too."

So we see at least two mechanisms here that lowers empowerment. Part of empowerment is to be healthy, have less health care expenditure, and in how torrential rain might be affecting the frequency of communicable diseases it comes out. Also part of empowerment is economic empowerment, the income. And that gets affected too because of torrential rain their work could not start for a month.

So we get to see some of the mechanisms, how climate change events might be affecting women empowerment. So here is-- that's one of the example of qualitative insights into the relationship between the two.

SPEAKER 3: Qualitative research was conducted after the results of the quantitative study were completed. And we thought of that initially as a way for us to explore some of the causal mechanisms that we were finding in the quantitative work as Ahmed was just describing. But what we also discovered as a benefit of this was that we discovered. So many almost unintended consequences of things that were happening.

For instance, we discovered that in the local context when there is a poor sanitation or poor stormwater drainage and there's standing water in the streets. Women consider it improper for them to venture in the streets when there's like two feet of water and culturally that's less acceptable than for a man to do the same thing.

So that really creates an immobility that we had never imagined in our initial hypothesis would be the case. But I think would have incredible

consequences of a woman's ability to generate an income, especially if she's working outside the house.

SPEAKER 2: So in your paper you state that, "we found that women were significantly less empowered than their male counterparts in all three countries." So could you please talk about the women empowerment part in specifically. And how do you define empowerment as you've mentioned before. As well as what economic, social, and political mechanisms do you believe or different programs do you think that the government can run that would be effective to address this problem in gap?

SPEAKER 4: So in order to measure empowerment we used kabeer's framework that talks about agency and resources. That the ability of an individual to make decisions about their own life and for their household. And when it comes to resources and how much access do they have to resources as well as how much control they can exercise over them.

There are some other aspects that we included like, security and self care. And that are important for women whether they face violence, domestic or otherwise are they able to report them and so on. So we measured several aspects of empowerment social, economic, political, and cultural. To have a comprehensive measure of empowerment, we call it an empowerment index in slums.

It comprises of 23 such elements, where we ask individuals whether they have control over their resources or not in forms. That's the key quantitative aspect of measuring empowerment but in a conceptual sense it includes dimensions of access to resources and agency over their life and decisions.

SPEAKER 3: And to your point about the policy implications. When we talk to a lot of policymakers in South Asia, what we discovered is that they often think of gender and other projects in development as a binary. But what we have found here is that there are some quote unquote, "gender neutral things," like improving the condition of sanitation or water. That actually benefit women more than men.

And that could simply be because women have a responsibility of fetching clean drinking water. And if there is a pipe water access suddenly with good quality water that saves so much time that women can use to sleep, or for leisure, or for an economically productive activity. So I think we need to think more broadly and move away from these binaries and think more holistically about development in cities and how that affects different groups.

So we really hope that our study is a contribution in that direction. And in our experience of talking to parliamentarians in Pakistan for instance. It was such an eye opener for them to discover how in quantitative, certain interventions would benefit women more than men. And that they felt could lower the gaps between the two genders.

SPEAKER 2: Podcasts are heard from audiences all across the world. And climate change, environmental degradation, gender equality are all themes that many of our listeners are very interested in. So my question to you, and my last question is going to be, do you have any advice for investments based on your research? SPEAKER 3: I would say for the researchers. I think it's really important for us to continue to create rigorous evidence around these topics. I find so many times and in the media, as well as in policy debates that the discussion turns into as I said earlier, ideologically driven discussions on climate change and gender and positions on this, that, or the other.

I think there's a need to fill the evidence gap by expanding studies like this in other contexts. So that we can create a knowledge base based on which more effective policies can be made. So if there's one key takeaway for researchers I would say, please continue to engage in primary fieldwork, spend time on the field, and bring those stories out. Including in social media and using more creative data visualization tools, which really have the effect of elevating the debate.

SPEAKER 4: As an academic I also see the tendency of researchers who might be out there listening to work within our own disciplinary bounds. So for example, gender studies often do not consider infrastructure improvements necessarily as a gender policy to bridge gaps. And on the other hand policy scholars might not be looking at their project management and urban development et cetera, as a mechanism to bridge the gender gap.

So our paper demonstrate that there is a value in crossing the disciplinary bounds and explore novel areas of research at the intersections of mainstream research fields, such as gender housing and environmental studies to name a few.

SPEAKER 2: Thank you so much for your time today, Omar and Ahmed.

SPEAKER 4: Thank you for having us.

SPEAKER 2: Thank you very much.

SPEAKER 1: If you want to learn more about CID's research and events, please visit cid.harvard.edu. See you next week.

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