Transcript: Inclusive Spaces: Disability-Inclusive Design for Climate Resilient Cities

**SUMMARY KEYWORDS**

Inclusive Spaces, disability, built environment

**SPEAKERS**

Iain McKinnon, Mikaela Patrick, Anna Landre, Shivani Gupta

**IAIN MCKINNON**: Well, good afternoon, everyone and welcome to this Inclusive Spaces session run by The Bartlett Faculty of the Built Environment at University College London UCL. My name is Iain McKinnon and I am one of the co-founders and directors of the Global Disability Innovation hub or GDI hub, a research and practice centre host within University College London and in fact we've just moved to our new facility over at one Pool street at the new UCL East Campus on Queen Elizabeth Olympic Park in East London in the UK. So, I am delighted to chair this Inclusive Spaces session today which is going to look at disability-inclusive design for climate resilient cities and we have an excellent panel who I will introduce in a moment.

Someone's saying I'm muted, hopefully you can all hear me all right, but first of all let me do some housekeeping and if anyone else has any issues hearing me, please let us know.

So, this session has captioning enabled if you do require captioning, please push the closed caption button on screen. British Sign Language BSL interpretation is available our BSL interpreters will be swapping between speakers and so we will leave a short pause between speakers to allow them to do that. You can pose any questions that you have to the panel through the Q&A box, the chat functionality has been turned off and the slide deck should have been shared with attendees who require it in advance. If that's not been the case and you need it separately, please do let us know and if there are any issues with accessing the interpretation or the captions again, please just contact us using the Q&A function. Finally, I just wanted to make everyone aware that this session is being recorded.

So, we have an excellent panel of speakers for you today: Mikaela Patrick is a senior researcher at GDI hub and will talk about resilience and inclusion in urban development, Anna Landre is a PhD candidate at UCL's Department of Computer Science and will talk about disability and the built environment in climate driven humanitarian crises and we have Shivani Gupta, a technical advisor for inclusion for CBM International who will discuss the priorities for Asia and the Pacific region.

So, we're going to go through each panel speaker in turn and we hope to have left some time at the end for questions and discussion. So, I will pick up some questions from the audience as we go and as I said any questions you do have for us, please do type them in the Q&A box.

So, I am going to do a very quick introduction before handing over to our first speaker, Mikaela. I lead GDI hub's inclusive design team and we do research; we deliver on programmes; we do consultancy; we do global advocacy training and teaching on a number of topics. But the topic that I lead is Inclusive Design of the Built Environment. So, this includes delivering a module on the subject as part of our UCL awarded Masters course our MSc called Disability Design and Innovation.

Collectively we bring considerable sector experience and personally I was the inclusive design lead for the Legacy development that took place on and around Queen Elizabeth Olympic Park and East London following the 2012 Olympic and Paralympic games. However, our work now is mainly internationally focused and increasingly looking at supporting the creation of disability-inclusive and climate resilient cities in developing countries with a strong focus on Asia and the Pacific region and Africa. An example of this includes work we've been doing with clients such as the Asian development bank with whom we co-hosted the site event at COP26 in Glasgow last year. One of the very first events on disability ever to be hosted at the climate conference. The side event recognised the research that we've been doing and a growing interest in the region on the nexus between climate resilience and disability inclusion and urban development. The session was well received and has led to continued and ongoing collaborations.

Many cities in developing countries are experiencing rapid growth and urbanization as well as delivering large new infrastructure projects, many of which are tackling the growing need for climate resilience. Drawing in our inclusive design knowledge and experience, working with local people local agencies and local communities, our hope is to ensure that opportunities to embed inclusive design in these projects and in these places are not missed. The image on screen shows Kibera an informal settlement in Nairobi, Kenya that we had the honour to visit last month as part of our ongoing research work. So why cities? Well, our current research that Mikaela is going to talk more about is highlighting the intersection between climate change and disability inclusion in cities and the need for action. Climate change can create additional barriers for persons with disabilities living in the cities as a direct result of adverse weather and disasters and equally ever responds to climate change can create additional barriers the classic example being raising buildings to prevent flooding and in turn creating very inaccessible places.

However, cities also present an opportunity. In the run-up to 2050, 90 percent of our urban growth will take place across Asia and Africa, places where climate change is most keenly felt and sixty percent of the infrastructure we have, we will have in 2050 doesn't exist yet much of this development will take place in cities therefore cities present a huge opportunity to build better infrastructure that is both climate resilient and disability inclusive.

And then why disability inclusion? Well, climate change adversely affects people living in poverty and around 20 percent of the world's poorest are persons with disabilities. Around 15 percent of the world's population are disabled which is about 1.2-1.3 billion people with 80 percent living in low-income countries many prone to climate disasters. Therefore, beyond the fact that inclusion is a fundamental human right, if we don't include this huge and growing section of the population then our infrastructure will simply not be fit for purpose now or in the long term. It will not be sustainable so getting this right first time will benefit all of us serving both people and planet together and we must ensure we include persons with disabilities in the response.

Finally, from me, one of the ways we believe we can help achieve this is applying an inclusive design approach. Embedding an inclusive design process to all projects including those addressing climate change ensures the hardest to reach voices are present at the start of the conversation and only by having that representation genuine involvement and leadership will solutions be delivered that meet all of our needs supporting stronger more cohesive communities that can thrive in the future. And on screen we have a quote which is our GDI hub's definition of inclusive design. This is not to say it's the only definition or the correct one but for us: ‘inclusive design can help all human beings experience the world around them in a fair and equal way’.

And with that I am going to hand over to our first panel speaker Mikaela Patrick. Mikaela over to you.

**MIKAELA PATRICK**: All right hello everyone. I can see that jenny our interpreter is on the screen so I will get started. I'm Mikaela and as Iain mentioned I’m a senior researcher at GDI hub and I’m going to be talking today about the intersections between resilience and inclusion in urban development. Next slide please.

So, here's a bit of an outline of my 10 minutes today. I’ll talk a little bit about the background on inclusion and resilience in urban development and the conflicts between these two topics. I'll then give an overview of the study we've been conducting at GDI hub that is specifically looking at inclusive design in cities and with that presents some insights on climate resilient inclusive design. And to conclude, I’ll then link this to some wider themes and global development challenges and talk a little bit about what we think good might look like. Next slide.

So why inclusive design for urban development? Well firstly it's about human rights. So, the convention on the rights of persons with disabilities sets out the right to equal access and participation in society for all people and especially for disabled people. Inclusive design is one of the tools that can help enable that participation. Inclusive design is also for everyone it really does benefit us all and good inclusive design is simply good design it creates a better built environment for everybody. It also adds value, so this is social value strengthening our communities but also economic value enabling 15 percent of our population to better participate in society. We also strongly believe it's more sustainable when it's done right and it's really important that it is sustainable in order to maintain seamless inclusion. There's also growing demand, so our population of disabled people globally is increasing and we're also experiencing aging populations in most cities around the world which is increasing the need for inclusive environments. We also think it's an essential part of meeting global goals such as the sustainable development goals. Next slide please.

Then how about resilience for urban development, why do we need resilient urban development? Well, it's widely acknowledged that we're living in a climate emergency now and there are various reasons why the built environment and the construction sector are really key areas to act in terms of the climate emergency. So, it's widely acknowledged that the carbon footprint of construction is one of the biggest carbon emission producing sectors in the world, the energy consumption in cities is also particularly high. There are also various complex global challenges that are happening in relation to climate such as climate related migration so in some cases people are moving more to cities due to the changing impacts of climate change. All of this is also creating resource constraints and increasing pressure on cities meaning we need a solution to make sure that we can adapt to these changing circumstances and resilient urban design is going to be a part of that. Next slide.

However, resilience and inclusion can often come into conflict. So, we often see solutions that have been designed for the climate emergency to combat climate change are not always designed with accessibility and inclusion in mind which means that these solutions are then creating further barriers and exclusion for certain groups of the population, and this is something we want to avoid. A really common example is things like the massive growth of e-scooters and e-bikes which are often left slightly unregulated littering pavements creating obstacles and hazards for people well particularly for pedestrians moving through the built environment.

Then on the other hand we also need to make sure that inclusive solutions are sustainable and that's not always the case. So, some interventions that are done for accessibility particularly when we're talking about things like retrofitting may involve more intensive use of resources may involve large amounts of concrete to build things like ramps which is not necessarily the most sustainable construction solution, so we need to make sure that we have that in mind. We also need to think about the longevity and sustainability of the designs themselves to make sure that things need less frequent repair and have a longer life cycle. A really common example of an inclusive solution, sorry rather a sustainability solution that's not inclusive is the example of the revolving door which is designed to keep heat in buildings and maximize energy efficiency, but it always requires then the use of a side door to provide seamless access for disabled people and this then means that that door can still be left open leading to heat loss anyway and it at the very entrance of the building demonstrates that it's not a fully inclusive solution, it's an accessible solution and that's something we'd like to avoid. Next slide.

So, we've been doing research around the world to look more closely at what inclusive design looks like in cities and what the current state of accessibility is in these cities and I'm sharing this study with you today because one of the major findings has been around how important the element of resilience and climate is in that vision of a more inclusive City because all of these cities are being impacted by climate. So, we've been doing research looking at policy looking at the lived experience of disabled people living in these cities and trying to build a picture of what inclusive infrastructure looks like in those cities today. Next slide.

So, we're doing six case studies around the world as part of the UK aid funded AT2030 Inclusive Infrastructure program these case studies are in cities in Mongolia, Indonesia, India, Kenya, Sierra Leone and Colombia and in all of these cases we're working closely with local partners to deliver the research. Next slide please.

So, I'm just going to give you a couple of insights from three of the case studies to give a bit of a sense of the different ways that climate and inclusion are intersecting in these cities. I don't have a huge amount of time so it will be brief.

So firstly, Ulaanbaatar in Mongolia which was our first case study is the capital of Mongolia and has a population of around 1.3 million people. It experiences really extreme temperatures with winters down to -40 degrees which often lasts up to nine months so for a huge part of the year it's extremely cold. This leads to huge amounts of fuel consumption particularly in the unplanned settlements that surround the city as people struggle to keep warm. This is then creating large amounts of pollution and other environmental problems which show that we need a solution for infrastructure that will work for the whole population. Next slide please.

So here are just a couple of images from the case study in Ulaanbaatar which are looking to capture the daily lives of disabled people living in the city. I'll focus on the Central image and the image on the right which show one of our participants waiting for a bus in Ulaanbaatar. There's only one accessible bus route in the city which makes inclusive mobility really challenging in the city and because of the climatic conditions it's really not feasible for participants or for people to walk long distances to access this one accessible bus route. So, it really limits how much people are able to move around the city day to day. The last image is of one of our participants who uses a wheelchair in the informal settlements in Ulaanbaatar and as you can see in this image it's a steep unpaved gravelled road in in the informal settlement which is extremely problematic when it gets cold and icy and slippery and this lack of infrastructure in the informal settlements is really creating a large barrier to participation for disabled people living in the city. Next slide please.

Moving on to Varanasi in India which was our second case study. It's a similar size to Ulaanbaatar it's around 1.2 million people but in the context of India that's a relatively small sized city. In Varanasi what we see a different kind of climatic challenge where extreme temperatures of heat are a huge issue so the kind of urban heat island effect is increasingly being a problem in the city of Varanasi which can be a really congested and busy city it's a very high-density city and this is exacerbating climate problems which are in many cases likely to affect disabled people more seriously. Next slide please.

So, the photo diaries here capture a couple of the priorities that disabled people identified during the research in Varanasi. So, access to green spaces was something that people really valued, and I think we all know that the positive benefits of accessing green space for our health and well-being but in the actual city itself it's quite difficult to access these green spaces and participants also shared how some interventions to enhance urban greening have created accessibility barriers through things like tree roots growing up over roads and disrupting paving. Again, showing how we need to think about inclusion when we're doing you know urban greening solutions. Then the final image on the right here is one of our participants looking out at the river Ganges in Varanasi and I shared this image because I think something we forget about sometimes when we're thinking about climate and resilience is heritage conservation and cultural conservation which is actually a big part of this discussion of resilience and forms part of the sustainable development goals. In Varanasi accessing these heritage sites is a really key part of daily life and at the moment it's not accessible for disabled people to experience these spaces equally and that's something we'd like to change. Next slide please.

Very quickly then I’ll just mention Nairobi in Kenya which was our fourth case study in the study. So, Nairobi has a population of around 4.3 million and around 70 percent of its population are living in informal settlements where access to basic infrastructure is really lacking. There’re huge issues with flooding particularly around kind of increased events of heavy rain which is hugely disruptive to infrastructure and the whole immobility in the city but is also creating Health impacts as the increase of kind of waterborne diseases and things can be traced to to some of these flooding events. Next slide please.

Here you can see some of those examples of the kind of flooding and sewage and waste that we see in the informal settlements in Nairobi which are extremely detrimental to kind of well-being in general and people's health and kind of participation in daily life. In the image in the centre, you see a bit of infrastructure that's been built to help somebody access their home across an open drain so it's a three-step concrete sort of bridge that's been built so someone can access their home without having to sort of step across this open drain. However, this is not an accessible solution because it doesn't provide level access to the home, and we see this time and time again. Next slide please.

So, I just wanted to end by quickly mentioning the sort of intersecting themes that we're seeing when we look at resilience and inclusion in urban development. So, we see things like challenges around, mobility, public space, health and mental health, issues around maintenance and sustainability, issues around good implementation and planning, humanitarian issues, the issue of informality and how to address common issues in informal settlements having accessible and affordable housing and wider issues of social justice. And I included this here because I think it shows how we need the built environment to get involved here there are so many things that built environment practitioners can contribute and it's really for us and the sector to advocate making sure that we include disability in these discussions. Next slide please.

So, I’ll end here by saying you know disability really is a cross-cutting issue and links to all of the sustainable development goals. It may be more obvious how it connects to SDG 11 which is sustainable cities and communities, but we see how infrastructure in the built environment impacts on things like clean water and sanitation good health and well-being climate action and we'd really advocate for all built environment practitioners to think about how they can integrate more inclusion in their work. Next slide please.

I'll skip this one and then just move to the last slide which is just saying the best way to do this is to work with disabled people, listen to disabled people, and we think that you know if disabled people are front and centre in how we're designing our cities we will design more inclusive solutions for everyone. Thanks very much.

**IAIN**: Thank you Mikaela that was great. So, we'll move to our second panel speaker Anna Landre, and we'll just give the BSL interpreter a moment to switch over, but yeah, I'll hand over to you Anna.

**ANNA LANDRE**: My name is Anna I'm a PhD student in Computer Science working with GDI hub and I'm going to be speaking about disability in the built environment in humanitarian contexts of climate-driven crises because I think this is an area where barriers and inaccessibility of the built environment can become quite deadly and there's a lot of interventions that we can make to ensure that that doesn't happen. Next slide please.

So as I think many of us know climate change is causing more frequent and more severe disasters, including natural disasters, like hurricanes or fires, but also events like drought, famine, heat waves, and more that can create a humanitarian crisis and while in this area we're really only beginning to gather great statistics on the plight of disabled people in these events and the evidence that we do have, shows that disabled people are two to four times more likely to die or sustain a critical injury in the event of a disaster. And in line with the social model of disability it's very documented that inaccessible built environments are a large driver of risk here and I’ll go into some examples of this shortly. So essentially, if we build more inclusive spaces disabled people will have better chances of surviving climate driven humanitarian crises. Next slide please.

And here I have a quote from Dr Julia Watts Belser who is a professor at Georgetown University and a really great writer and researcher in the area of disability and climate change, so I encourage you to look into her work with lots of interest. And this quotation is “if we persist in framing disability and climate change as a problem of physical vulnerability, we miss the underlying realities of structural violence”. So, this is just to say that of course disabled people have many body or mind variations that might make them more biologically vulnerable to these crises a lot of times it is the environment around us as disabled people, for example I'm a wheelchair user, that create this vulnerability where there doesn't have to be some. Next slide. Thank you.

So, what risk can the built environment pose for disabled people in a disaster? Like I mentioned in a crisis and inaccessible environments become deadly environments and for those I have I have a list here of some important features and I’ll kind of go through them in relation to different disability types and how they might interact and play out in a disaster. For those with mobility disabilities a lack of step-free transport options or accessible pedestrian pathways would make it impossible to evacuate your city in advance of a flood or go to the store to stock up on essential supplies perhaps before a snowstorm. Additionally, things like fire doors without power assist mechanisms or automatic opening mechanisms could leave you trapped in a burning building. For deaf or hard of hearing people alarm or warning systems that rely just on audio cues might leave them completely unaware of a crisis situation and unable to protect themselves. Or for people with intellectual disabilities a lack of clear signage could make an emergency procedure confusing or distressing and prevent them from acting in accordance with the emergency procedures. Or for blind or visually impaired people a lack of Braille signage tactile paving or audio described cues could impede their movement or their correct action in the event of an emergency. And then one thing that I think is often very overlooked is electricity or power supply which when we lose power in the event of a disaster this might be inconvenient for some but for others who have complex medical needs who use a ventilator or another medical device it could instead be a matter of life or death. And I also want to add that this is an incomplete list. Disability is a really wide-ranging phenomenon and every disabled person, and every environment is a bit different so it's important to use this as examples but not as a checklist or complete guide. Next slide please.

So now I'd like to talk   briefly about the case study a case study of some hurricanes.  A lot of the literature on disabled people and disasters is clustered in the United States and around hurricanes, interestingly enough. So, we're working on kind of building that out but as of now this is one of the more complete pictures that we have and, in these hurricanes, specifically Katrina, Rita, Sandy and Maria you had problems like evacuation buses that didn't have lifts or ramps, shelters without accessible entrances or bathrooms, particularly those that were built as trailers or in mobile homes, there were inaccessible warning alarms and cues. Mobility disabled people became trapped in high-rise buildings when the lifts weren't working   and when the electricity went out and the lifts didn't have a backup power supply   and additionally the lack of backup power supply for medical devices and homes and institutions was a big source of risk. And finally, a lot of medical service locations so emergency clinics were placed upstairs or in similarly inaccessible locations. Next slide please.

So here I have a quote from Marcie Roth who's another fantastic leader in the area of disability and disasters she currently heads the world Institute on Disability and during hurricane Katrina she was heavily involved   particularly with attempting to save a woman named Benilda Caixeta who is a wheelchair user who tragically died in the hurricane and I shared this story because it's become a really tragic cautionary tale for these situations and one that I think sticks with people so the quote is from Marcie: “On August 29th Susan Daniels called me to enlist my help because her sister-in-law Benilda Caixeta, a quadriplegic woman in New Orleans had been unsuccessfully trying to evacuate… I stayed on the phone with Benilda, for the for the most part of the day… she kept telling me she'd been calling for a ride since Saturday but despite promises no one came. The very same paratransit system that people can't rely on in good weather is what was being relied on in the evacuation… I was on the phone with Benilda when she told me with panic in her voice ‘the water is rushing in’. And then her phone went dead. We learned five days later that she had been found in her apartment dead, floating next to her wheelchair. Benilda did not have to drown.” So, this is an example of many things that went wrong. Several failures are in here. The regular in air quotes ‘regular’ evacuation buses were not accessible the paratransit wasn't reliable and there was no feasible accessible pedestrian route from Benilda's home to the area that was sheltering people, the Superdome. Next slide please.

And I also want to encourage us overall to take a disability justice approach to design built environments for climate resilience and disasters, which means that disabled people and organisations need to be considered and included from the planning stages of any built environment, I think Mikaela mentioned this. And we have to take a holistic view of disability as well, disabled people are not just wheelchair users, and I think unfortunately that's often who spaces are being designed for if they are being designed with any disability in mind. But instead, we have to take a more holistic approach to the whole of the community. Additionally, it's important to think intersectionally. Maybe the wheelchair user or deaf person that you're designing for is also a parent with small children and that introduces different needs in the event of a disaster or in whatever you're using a built environment for.   And another really important point is to resist ableist assumptions about who is assistable or saveable in a crisis. Dr Watts Belser has talked a lot about how too often there are these thoughts that well not everybody's going to make it in the event of a disaster and so we don't have to design for every need in mind and this turns into a self-fulfilling prophecy because of course if we're not designing in ways for people to survive, they're not going to, so it's important to avoid that. And finally it's important to see reconstruction and recovery after a disaster as a huge opportunity to build more inclusively I’ve been doing work lately in Ukraine and now we're pivoting to thinking about rebuilding cities that have been destroyed in the war and how can we do that in a way that's inclusive of disabled people whereas many cities with older and accessible infrastructure we're really not consistent with principles of inclusive design and looking at how we can take a tragic event and turn it into an opportunity to build back more inclusively. Next slide please.

I want to close with a quote from Germán Parodi who works for The Partnership for Inclusive Disaster Strategies, he's a co-director there. And he is the first person with a major spinal cord injury, a wheelchair user, to be deployed in an active disaster situation as a responder. And he and The Partnership do really great work which I encourage you to look into. this is an excerpt from his interview in the Disability and Climate Change Public Archive which is another great resource. Herman says: “Growing up I did not see people with visible disabilities in the disaster response world. If they existed, I didn't see them. What I did see was this: When disability-led organisations are not involved in recovery efforts, a less accessible world tends to be constructed.” And I think this goes back to this overarching theme that both Mikaela and I have mentioned which is that disabled people need to be included from the planning stages of any space because disability is such a complex and unique experience, a lived experience that people who haven't experienced disability or who have only experienced one facet of it are not going to be able to design for the whole community and it's really important to acknowledge and respect that. Next slide please.

And these are just some resources, many I’ve already mentioned and the sides that got sent out will have links so you can reach them. And now I’ll hand it over to Shivani.

**IAIN**: Thank you Anna that was great. So, we will hand over to our third and final speaker Shivani Gupta. Just give a short pause to allow our BSL interpreters to swap over. I see a couple of questions in the Q&A box, that's good. Remember to keep your questions coming and we'll try and get some at the end. Otherwise over to you Shivani.

**SHIVANI GUPTA**: Thank you Iain. Have our interpreters been able to change? Just making sure.

Yeah, so thank you Iain and hi everyone I am the technical advisor on inclusion with CBM and it's really great for me to be here to make a presentation that looks at priorities for the Asia-Pacific region, but you know, I generally address the challenges and provide some recommendations. Next slide.

So, I begin first by giving a little overview of the presentation. I will start by setting the frame of the presentation by sharing some facts about Asia-Pacific region in relation to climate change and talking briefly about the link between disability and poverty, especially because the intersection of these with climate change disproportionately increases the risk of negative impact of climate change on persons with disabilities. Then I would elaborate on the impact of climate displacement on disability followed by some key milestones both global and regional that promote inclusive climate change. Then I would highlight on some of the challenges in disability inclusive climate change and finally present my recommendation. Next slide please.

So why is it important to consider inclusive climate change in the Asia-Pacific region? So, Asia-Pacific region is the most vulnerable to natural disasters with many informal settlements located in fragile environmental areas on seashores and major river basins. Asia-Pacific recorded the highest number of displacements between 2010 and 2021 with over 225 million as a result of climate related hazards, including droughts, extreme temperatures etc. While there is no data on how many of them were persons with disabilities but according to a very recent WHO report, there is about one in every sixth person who is a person with disabilities. So, we can imagine the number. So, Asia-Pacific has the second highest prevalence of food insecurity which can be a big outcome of climate change with 48 percent of the population deems food insecure. And with the closed link between disability and poverty we can expect that the large number of persons with disabilities are the ones who are impacted by this food insecurity. However again there is no disability disaggregated data present. Then by 2050 two thirds of the population in Asia-Pacific would be living in urban cities. And Asia-Pacific was half of the world's slum or let's say, informal settlement population with growing urban poverty and inequality. We can go to the next slide please.

So, Asia-Pacific is home for over 70 percent of the global population of persons with disabilities which is around 690 million people. And they are amongst the poorest and lack access to education, social protection, health, social care services, employment, livelihood opportunities etc. There is a very close link between disability and poverty. And extreme poverty causes disability due to many factors such as malnutrition, inadequate living arrangement, access to health services etc. On the other hand, people with disabilities are specially affected by poverty and often excluded from accessing services like education or work due to barriers in their environment thus becoming trapped in poverty. And social and economic exclusion and stigma faced, isolates them from human development and they remain in the infringement of social economic activities which results in their reduced participation in decision making and getting left out and forgotten from different processes, such as those for building climate resilience. Next slide please.

Picking on this further, climate risk is seen at the intersection of hazards, vulnerability, exposure, and climate adaptability. Unpacking the heightened risks encountered by persons with disabilities, as I already mentioned, Asia-Pacific is most prone to natural disasters in the world with a high number of man-made disasters as well. Climate change and extreme weather in events increase the incidence of disability through injury and impairment. Disability specific needs such as accessibility, assistive devices, support services are often unaddressed. That makes it difficult for them to stay informed about the disaster or to evacuate. Further being clubbed with a larger vulnerable group prevents specific attention that needs to be paid to ensure that persons with disabilities are included. Then persons with disabilities are overrepresented in poverty and it is well known that persons living in poverty are more at risk of exposure of extreme weather, poor access to health, and other services. And finally, persons with disabilities encounter aggravated challenges of adapting to climate risk because of inaccessibility in adequate safety net, lack of community engagement etc. Next slide please.

So, climate change often results in displacement and internal migration and often as a result of climate displacement families migrate to urban hubs for better opportunities. Most of the disaster or climate displacement are in the Asia-Pacific region as I mentioned earlier. And people with disabilities report feeling particularly unsafe and at increased risk when their support networks break due to migration and the stigma and discrimination that they face. And the relocation does not always improve the situation in any way. Relocation to unfamiliar places can be challenging especially because of inaccessibility and very often people migrate due to climate risk are often those who find shelter in informal settlements or slums. And these high-density settlements are completely inaccessible as even Mikaela mentioned to persons with disabilities often making them completely homebound. Then urban hubs are no longer places of unlimited resources and such displaced persons, specifically persons with disabilities, experience poor access to basic services such as health, education, transport etc and find it difficult to earn a livelihood. And this in turn further traps them into poverty and they continue to face greater exposure to climate change. Next slide please.

So now very quickly I'm going to go through some global and regional frameworks that exist that are promoting inclusive climate change. The first actually was the United Nations framework Convention on climate change which is in fact really the key document guiding climate action however there is no reference of persons with disabilities. It was only after 2006 with the convention on the rights of persons with disabilities came into force that there is a growing recognition of inclusive climate change. It was in 2010 that the agreement recognized the disproportionate impact of climate change on persons with disabilities, followed by the Doha Work Plan that recognized the need to prepare different groups of people including persons with disabilities to adapt to the impact of climate change. And while all this was happening in climate change simultaneously on the side of disability there was the Incheon Strategy which was the ministerial declaration on the Asia-Pacific decade of persons with disabilities and the strategy is a mechanism that the region has adopted to implement the convention on the rights of persons with disabilities. And one of the goals of this strategy relates to disability-inclusive disaster risk reduction. Then in 2015 there were several very major steps or progress that happened towards disaster and climate change matters and also in terms of inclusive climate change or disaster risk reduction. For instance, in 2015 the Sendai Framework for Disaster Risk Reduction, call for integration of persons with disabilities in all policies and practices, for accessibility and data which is disaggregated based on disability. And the framework places persons with disabilities as partners to lead universal accessible approaches to respond to recovery, rehabilitation, and reconstruction and to ensure build back better. Then in 2015 the Agenda 2030 and the 17 Sustainable Goals something that even Mikaela pointed out. The interdependence of the Goals links the Goal 13 which is on effective climate action to Goal 11 which is on building cities that are safe inclusive and resilient. And then it was also in 2015 that the Paris agreement was signed, and the preamble of the agreement required all country governments to respect promote and consider the human rights of all people including persons with disabilities. Then there was the New Urban Agenda that refers to climate change in urban context addressing accessibility and universal design. Then it was during COP26 that there was the formulation of the GLAD Disability-Inclusive Climate Action Working Group chaired by the World Bank, the ILO and the International Disability Alliance and it has very key members who are other development corporations and other actors, important actors, who can make a significant impact on inclusive climate action. Then the most recent I'd like to point out is the Glasgow Pact which strongly embeds the state’s duty to take action to address climate change from a human rights perspective and respect, promote and obligates them to uphold the rights of persons with disabilities and other groups such as indigenous groups, migrants, children etc. So, while a human right approach towards disability inclusion is really creeping into the global frameworks, but the implementation at the national and local level still remains very siloed and as a result disability-inclusive action has been limited. Next slide please.

So, what are some of the specific challenges in disability inclusion? So most often, voices and demands of persons with disabilities get left out and they get lost in all other competing priorities and persons with disabilities and their organisation may not really be updated of about the climate risk and the urgency to build inclusive resilience and then decision makers may not fully consider persons. Persons with disabilities have not been studied as much as other vulnerable populations. Then there is an in and persons with disabilities such as heat and water stress internal displacement informal settlements etc. And finally, an extremely important is that mechanism within the country may not be fully inclusive and therefore not support inclusive climate action. For instance, there may be a lack of inclusive design standards and legislative frameworks. The concept of build back better may not always adopt inclusion and the planning processes may not be inclusive. All of this which has an impact on climate action as well. Next slide please.

So, I would like to end with a few recommendations and priorities from my perspective. First all development projects must build resilience for everybody including persons with disabilities and adopt inclusive design standards in build back better of all reconstruction. Then there needs to be awareness raising of the decision makers about specific requirements for inclusion of persons with disabilities and simultaneously organisations of persons with disabilities also require awareness raising in different aspects of climate change. Steps may be taken to consult persons with disabilities and engage them in decision-making processes for development and climate resilience projects. This is something that Mikaela as well pointed out extremely important persons with disabilities need to be at the centre. Then there needs to be increase in research on topics related to inclusive climate change generating specific knowledge on understanding issues such as heat water stress, informal settlements, migration resilience from a disability-inclusive lens. And then finally I think country-level mechanisms need to be strengthened and to become more disability inclusive. And here national advocacy groups and persons with disabilities and their organisations within the countries can play a very important role to achieve this. So, thank you and with that I hand it back to Iain.

**IAIN**: Thank you Shivani. I'll pause at the end here just to let the BSL interpreters hand over.

Perfect, so, we've run just marginally over time, but I do see that panelists have been answering some of the questions in the box so that's excellent. I wonder if we might just do one question which may have been answered I’ve been trying to keep up which is quite difficult, but there was a question that was unanswered a moment ago about the role of the state, so you know: What is the role of national of local government to get this right? And I wondered if, I think Mikaela may have typed the answer, so I wonder if, this very quickly, just to make sure that we've covered a question at the end here, Mikaela if you just quickly jump in and give us your view on the role of the state, national local government to really support better inclusive climate resilient planning and delivery.

**MIKAELA**: Sure, thanks Iain. So, as I mentioned in my typed answer most countries are signatories of the UN Convention on the rights of persons with disabilities which is really the global policy framework that underpins why states have responsibilities and should be acting and integrating disability inclusion across their development work. And I think that's really the starting point. But from there, there's also then a need for national legislation that upholds those rights within the specific country and in most cases, we then also need local government legislation. So we need policy to be working at different scales in order to really integrate and implement good disability-inclusive design and that normally means that let's say at the city level we also need legislation or bylaws or standards that dictate how we integrate disability in inclusive design in that specific city, because we know although there are shared challenges every city is also unique and it's important that the local legislation reflects, you know, a real picture of that city itself. So of course, states have responsibilities and what I'd end on, is just saying that you know, please remember that disability isn't or shouldn't be a siloed sector and often that is how it is treated but we should be thinking about integrating disability inclusion and inclusive design across urban development challenges. So, I think in the question the attendee mentioned things like food insecurity and interventions for poverty. These are all things that should always be thinking about disability as well. Thanks.

**IAIN**: Thank you Mikaela, that's perfect. So, we've run out of time, I think. The information from today will be shared. I just finally like to do a round of thanks. I'd like to thank, The Bartlett for running today's session and the team there, Alma of course. I'd like to thank our fantastic panelists. So, thanks to Mikaela, thanks to Anna and thanks to Shivani for joining us today. I'd also like to say a big thank you to our BSL interpreters, Darren and Jenny for doing the interpretation for us today. If you used the BSL interpretation, if you could please share your feedback via email at bartlett.comms@ucl.ac.uk that would be much appreciated. Thank you so much for joining, we hope you've enjoyed the session and from all of us here it's goodbye. Bye.