The Flow of Urban Life – a podcast by KONE – Transcript
Episode 2: Is it too late to climate-proof our cities?

Aditya Bahadur [00:00:03]
40% of emissions are due to the building industry, and a rather startling fact is that 50% of everything that is extracted from this earth goes into construction. However, I think it's also a really interesting area to talk about because of the opportunity to affect change through it is immense.

Denise Wall [00:00:25]
Wherever you are in the world, there's a 50% chance that you're one of the 4.4 billion people living in a city.

Sam Kingsley [00:00:32]
And even if you're not, there's still a good probability that you might move to one someday.

Denise Wall [00:00:36]
Join us on a journey to understand the changing way we live, work, learn and play in cities.

Sam Kingsley [00:00:42]
And how we can ensure that our urban environments serve all kinds of people at all stages of life, today and in the future.

Female announcer [00:00:53]
Doors closing. The next stop is the flow of urban life.

Sam Kingsley [00:00:59]
I'm Sam Kingsley.

Denise Wall [00:01:00]
And I'm Denise Wall.

Sam Kingsley [00:01:02]
Denise, how much would you say right now that your life is impacted by climate change?

Denise Wall [00:01:06]
Well, I do know that we have seen record temperatures and even floods and fires here in Europe. But on a personal note, I have to say definitely nowhere near as much as other people in different parts of the world.

Sam Kingsley [00:01:20]
It's true, isn't it? We are in a very lucky position to be able to say that, and I know that a lot of people want and know that we need to be doing more to combat the climate emergency. And I also know that a question that many people are grappling with is, is it already too late?

Denise Wall [00:01:35]

Fair question, and it's something that we are going to put to our guest today. He is Aditya Bahadur, and he's a specialist in climate-resilient urban development.

Sam Kingsley [00:01:45]
Well, thank you so much for joining us, Aditya.

Denise Wall [00:01:48]
You are the principal researcher at the International Institute for Environment and Development in the UK. And this title, the subject that we're discussing, is the question: is it too late to climate-proof our cities? And so, the very simple question that we'd like to ask you as well at the outset is, is it too late?

Aditya Bahadur [00:02:09]
Absolutely not. I'm certainly not one of those believers that we can no longer do anything about it. It's looking very likely that the world is going to warm up to an average temperature increase of 1.5°C, which is the lower of the two thresholds that the world agreed to at the Paris Climate Agreement. So we are heading for a very uncomfortable, quite uncertain climate future with different kinds of shocks and stresses, as well as creeping changes that are going to happen. So, we need to act now. But I feel like a lot of damage can be prevented if we put in the right building mechanisms over the next decade.

Sam Kingsley [00:02:48]
If we think specifically about the way that we design and run our cities to try and create a more sustainable urban future, what do you think we're getting right, and what are we getting wrong?

Aditya Bahadur [00:03:03]
What I find pretty surprising is that people fail to acknowledge that, for the first time in the history of the world, more people live in towns and cities than anywhere else. Additionally, almost every city in the world is located along the coast or on a river and, therefore, they are highly exposed to the impacts of climate change. But apart from this, I think what is even less understood is that cities concentrate people who are highly vulnerable to the impacts of climate change. Just as an example, one in every three people that live in a city across the world lives in a slum.

So, in some of the cities with low levels of economic development and that are highly at risk of climate change, the number of people living in slums is up to 70% of the total urban population. And these are areas with poor governance, lack of access to basic services, very poor access to social safety nets. Now, at the same time, cities are responsible for 80% of the world's gross domestic product. The first thing that we're not doing is recognizing the critical importance of cities in this global war on climate change. The second thing that clearly we're not doing adequately is ensuring that cities have money to deal with the impacts of climate change. They produce most of the words GDP, yet they receive only something like 10% of international public finance that is allocated to dealing with climate change, which is really shocking.

And if we speak about climate finance that is meant to help people adapt to climate changes, only 5% of the global envelope of adaptation finance goes to cities. So, cities are massively under-resourced when it comes to the battle against climate change. And this has knock-on impacts on the ability of people running cities to be relevant. They don't have the money, they don't have the awareness, they don't have the resources, they don't know what to do to deal with climate change. Let me tell you a couple of things that I've seen we are doing well. I see in my own professional life the amount of attention that is now being paid to issues of urban climate have increased massively. We have big global players like Bloomberg who are building big global coalitions of mayors to deal with the impacts of climate change.

When politics in a particular country, and we all know which country we're talking about, about 10 years ago, when a certain President was elected and climate was off the agenda, coalitions of mayors across the United States came together to mount a defense against what were sort of very climate-unfriendly policies of the federal government. So, I think there's a high level of political awareness in cities, and I feel like there's a high level of mobilization of non-governmental organizations in cities as well on issues of climate.

Denise Wall [00:05:51]
Many of us, whether we live in the global north or in the global south, we live along coastal areas, we live along river banks, we live in areas that are very vulnerable to the effects of climate change. But if we think about how to build up climate resilience in cities, what are some of the concrete measures that you think policy-makers should be looking at if they're not already doing so going forward?

Aditya Bahadur [00:06:18]
Sure, there are three or four things that I think should be high on anyone's agenda wanting to build up resilience. One is acquiring and analyzing the right kind of data should be the foundation of any action to build resilience. And again and again, this is not done well. Either there's a heavy reliance on top-down scientific data that is produced in laboratories by scientists that doesn't reflect the lived reality of people actually suffering on the ground, or we have kind of wishy-washy data that cannot be relied on that emanates from anecdotal information of people living on the ground.

I think what we need is a mix of top-down scientific information with bottom-up participatory information, and that needs to be used to determine action on the ground. I also see we have to transition in the methods that we're using for acquiring and analyzing data. While the big climate impacts the cities are going to face across the world with heat, all the climate models are aligning on the critical importance of dealing with heat. Our challenge for all of us working on urban climate issues is understanding which part of the city will be how hot is very difficult.

But to overcome this challenge, a really remarkable startup in the United States has figured out that every Android mobile phone in the world is constantly monitoring its own battery temperature data. And that's because Android phones tend to explode if they're charging and the battery crosses a particular temperature threshold. So what the startup has done is, through real-world calibration, is develop an algorithm that converts battery temperature

data into air temperature data. And through this, they're now acquiring extremely precise air temperature readings from half a million mobile phones spread across America's cities. So they can start predicting that if you have three days of temperature over 28 degrees in Montreal, you can be certain that you're heading towards a two-week heat wave, so the city should deploy cooling centers and cooling mechanisms.

The second thing that we need to do is upskill people running cities. I feel like people don't really have an understanding of how climate change will impact critical urban systems and, moreover, what they can do to make these systems more resilient to the impacts of climate change. Another statistic for you is that global environmental facilities, one of these big international funds that funds the activities of climate change, only 2.6% of the money that has gone from the global environment facility to cities is invested in specifically in upscaling people and building capacities. None of this is possible if you don't have the right kind of finance, and, as I said right now, cities are massively under-resourced and current financial mechanisms are not adequate for helping cities deal with the impacts of the changing climate.

Sam Kingsley [00:09:13]
What about from industry and from consumers? What kind of role do you see for them?

Aditya Bahadur [00:09:18]
That's a big change also that I've seen over the last three to four years. A formal private sector has become a much more vocal constituent in global debates on urban climate and climate in general. I think one forgets that a majority of the spending in the world that happens on adaptation and resilience is private money being invested to take action as opposed to big public money. We think of the private sector as this one consolidated entity, but actually, we need to differentiate between what I would call the informal private sector and the formal private sector. And I think both have a very important role to play.

I often talk about how a big global corporation climate-proofing their supply chains can have a massive impact on global resilience. We are also seeing the informal private sector playing a role. I always say that the world's cities are not being built, at least the fastest of the rising cities in the world, are not being built by people from elite engineering schools wearing hard hats and high visibility vests, they're being built by informal coalitions of artisans and builders who are semi-trained, who are quasi-professional. Unless we can upskill and train these people in their contribution towards our development, we're not going to move the needle very much. So, I think the private sector is a critically important sector which is being increasingly recognized.

But I still think we as a community, and when I say we, I mean researchers and communicators that have been working on climate change from a technical perspective, have failed in our duty to communicate what the incentives might be for the private sector to play a more important role. But we are seeing some remarkable new analyses and arguments for the private sector engaging in building resilience, one small example of this being this whole argument around the resilience dividend, which simply says that building resilience is not only about preventing losses but can actually lead to the growth of a business, the growth of a city, the growth of an economy.

For instance, if you build a flood wall, you not only prevent losses by preventing flooding, but suddenly, the land that lies beyond the flood wall might become viable for a factory or a hotel, and so you might grow the economy and grow jobs.

Denise Wall [00:11:33]
It seems to me that very often, in rhetoric around building up climate resilience and trying to head off the dangers of climate change, there's a lot of responsibility that the ordinary citizen may feel that falls on his or her shoulders. How can I make a difference? And there's that kind of sense of futility, and how do you address that sentiment?

Aditya Bahadur [00:11:58]
Our role has to be a bit of both. I feel like climate change is such a big global problem that we're not going to solve it without governments cooperating with each other and playing nice and kind of coming to the table and getting concessions and putting money on the table and sharing resources. So, I think we really need, we can't under-emphasize the importance of big top-down policy pushes and of getting leaders talking to each other. At the same time, I think the individual also has quite a lot of agency in moving the needle. I mean, I always feel like the biggest contribution that we, as consumers, can make is through sustainable consumption.

As with so many problems in our world, greed and rampant sort of consumerism is one of the causes of what we're talking about. We can be much more mindful about what we're consuming. For instance, the movement around consuming more local food, I think, has benefits for the environment and for health. So, I think we have to find these sort of win-wins, you know, which are becoming more and more clear to us.

I feel like also, personally, we have to be a bit more mindful about the choices that we make. Fast fashion is something that we need to reconsider. As one example, you know, buying that seventh pair of chinos or the eighth pair of jeans, one needs to be a bit more mindful of. And I think small everyday things like running a washing machine that's half full, all these things when we add it up, can make a big difference.

Sam Kingsley [00:13:26]
I want to take you back a little bit to talk about industry and construction because we know that emissions from creating buildings and running buildings make up almost 40% of global emissions. So, it's clearly a huge, huge part of the emissions that we need to try and address. What would you say needs to change in the way that we build and modernize in our cities in order to try and make them more sustainable?

Aditya Bahadur [00:14:02]
Correct, I think you rightly said that 40% of emissions are due to the building industry. Another startling fact is that 50% of everything that is extracted from this earth goes into construction. So it is an extreme environmental burden on the environment. However, I think it's also a really interesting area to talk about because the opportunity to affect change through it is immense.

Another statistic that blew my mind is 80% of all the buildings that will exist in Sub-Saharan Africa in 2050 are yet to be built. So, taking action now can really change the course of what happens very quickly over the next couple of decades. And, so, I think the moment of change is now. I think a couple of things need to happen. One is, and my colleagues at IIED are doing some really exciting research on the supply chain of sustainable building materials. What we did was went into low-income neighborhoods in Sub-Saharan countries and tried to see what are the building materials that are available to most of the city's population, that is people living in poorer settlements. And no surprises there, they are extremely climate-unfriendly materials like corrugated irons or toxic materials like asbestos sheets that are most readily available and affordable to people living in these settlements and who are responsible for much of urban growth in the rapidly urbanizing countries across the globe itself.

And so, unless we make strides in developing cost-effective, sustainable, climate-friendly building materials, we're not going to go very far. So that's one thing. And this is not a pie in the sky, it's already a remarkable mix, very much taking place – I'll give you one small example of this. There's a fantastic community-based organization called the Mahila Housing Sewa Trust, which roughly translates as the Women's Housing Service Trust in India that basically works with women in informal settlements. They've done a remarkable project on urban heat, and the angle that they took on urban heat was looking at this whole idea of roofing materials because roofs are critically important in ambient air temperature in informal settlements. The usual trend would be 'let's get some world experts on building materials and create a fantastic new innovative roof'.

But most of the time when we try and attempt these silver bullet solutions, they fail because they fail to account for local cultural contexts in which these innovations will be applied. So, one example being that existing, sophisticated, effective, cool roofs would not work in the context of informal settlements in India, where the Mahila Housing Sewa Trust was working, because groups actively use roofs as a space where things are stored and people hang out on them and whatever they use for a bunch of different reasons. And so these roofs that exist in the West wouldn't work because they're quite fragile, they might be cool, but they're quite fragile.

So, what they did was brought innovators and slum dwellers together for a series of conversations where innovators could understand what they're dealing with and the slum dwellers could understand the limits of innovation, and they co-created a new cool roof which was made from waste packaging materials and some other waste material that was easily available. And it brings down the ambient air temperature by five degrees, which is really the difference between life and death; the difference between a whole host of health problems and a moderately decent standard of well-being. So, I feel like we need to kind of spot and scale these remarkable examples that are unfolding the process to really shape the way in which we build the buildings of the future.

And one other small thing that we need to do, that I'm going to say quickly, is again: let's not forget the upskilling piece of this. It is going to be informal, semi-trained people who are building the cities of the future. It is not the big engineering firms. And so we need to develop a system through which we are bringing all these people into the fore, giving them

the kind knowledge and awareness and co-creating an idea of a climate-friendly city together. And again, this is not pie in the sky – this is happening. After a big earthquake in Gujarat, I forget when in the early 2000s, when many cities across the province, this province in India, were flattened, it brought these semi-trained professionals together, gave them training on earthquake resilient housing and then they went out and rebuilt the city in a more earthquake resilient way.

Denise Wall [00:18:45]
In another episode of this podcast series, Aditya, we talked about a massive Indian city, Mumbai, where there is the opportunity to use things like AI and big data, for example, to shape services and transportation systems and infrastructural development.
What do you see as the role of AI and big data in helping us build resilience and adaptability into our cities of the future?

Aditya Bahadur [00:19:15]
So, I would caveat this answer by saying that I don't think of myself as a techno evangelist or a super techno optimist. However, I do think that we have to embrace AI machine learning, big data, in a much more meaningful way than we already are because I do think that it does deliver really rich insights and remarkable solutions to really pernicious problems. In my book, which was published last year called Resilience Reset, I have a whole chapter on how these types of approaches can complement existing approaches to build urban resilience.

Let me give you a couple of quick examples on why I think it's so important. So, one of the things then is it's very difficult to know in a city who has the ability to deal with shocks and stresses and who doesn't. You know, people live densely packed, people have different kinds of socio-economic statuses, doing surveys is expensive, you know, so it's really difficult to understand that. And I think big data machine learning can really help us.

And I was stupefied at the following example, where, in Baja California in Mexico, to understand who was able to deal with cyclones, they used data from point-of-sales machines, you know, those are those machines in which you run your card after you buy things at a store and used data coming out of ATMs. So what they did was when a cyclone warning was issued, they tracked which neighbourhoods were able to buy what goods using data crowdsourced from points of sales machine, so they could see who was able to buy rations, who was able to buy toilet paper, who was able to stock up on bottles of water. They were able to see who was able to cash out from ATMs their cash reserves with them. And then they could build a map of the city based on which areas are prepared, which areas are not prepared. They will be using big data which solves a lot of problems.

Another example that I was really impressed with is around food security, really understanding which households are food insecure is another very difficult challenge. It's expensive to do household surveys, and by the time there's a food emergency and you do a household survey and then you get food aid to people, you know, a lot of people might suffer. So, what one initiative did was figure out a relationship between mobile top-up information at the household level and food security. Again, through real-world calibration, what they figured out is that if a household is topping up their mobile phone less than $10 a

month, or whatever the threshold is, they're almost certainly not consuming the amount of calories that they're supposed to be.

So, again, through anonymized data collected at scale, they can parachute in food aid based on this sort of information, as opposed to the traditional approach of the household survey. So, again, I would feel we need to complement traditional approaches with new approaches, but overall, we need to be much more alive to the potential of big data, artificial intelligence and solving these kind of problems.

Sam Kingsley [00:22:09]
We are talking to you just as the COP28 climate conference is coming to an end. That's, of course, the forum for trying to plot a path towards climate sustainability. How are you feeling, having been at the conference? Are you hopeful?

Aditya Bahadur [00:22:28]
So I've been for many of these COPs now, and I always come back with mixed feelings. On one hand, after this COP, I'm filled with a sense of disappointment because there hasn't been any really earth-shattering breakthrough on any front at this COP. However, I've also seen the glass as half full, and I think this COP was different from the others because of its scale. I heard that 92,000 people were attending this COP, which is the size of a small city in Europe.

We've come a long way from when there was very little talk about these conferences in the mainstream press. So many diverse actors, from private sector players to government representatives to civil society organizations, are engaging actively. So, I think that's a positive. And the second silver lining is the big announcement that the fund that will help pay for the damage that the poor suffer as a result of climate change will come into being, and there is some initial commitment of money towards this fund.

So yes, I'm desperately clinging on to the good stuff while also acknowledging that some things could have gone better.

Sam Kingsley [00:23:46]
What do you think is the best way to get this message across to people that we need to take climate action? Is it with a kind of hopefulness and this sort of 'every little helps', or is it by highlighting the utter urgency and the terrible despair that we'll have if we don't act now?

Aditya Bahadur [00:24:09]
I think we have to communicate the urgency of taking action. We have to enumerate pathways of what people can do. I think we have seen that with similar but different areas of action. For instance, we have kind of solved the problem with the ozone layer. And that was a mixture of very dense and deep technical scientific research, very high-level policy brokering, policy discussion on what we can do – but also mass awareness raising, using messages that resonate with people.

So, we need to draw on these successful examples and bring them into the climate space. However, I do want to add one depressing thought: I have built my career as a technical

expert on climate resilience, and I feel like we're failing the world. I think we've spoken in an idiom that doesn't resonate with people. I think we have used methods and approaches that don't achieve the kind of changes that we need to at scale, and therefore I'm more and more beginning to realize that there is a massive role for the humanities and for the creative arts to play in communicating this message.

Often, I'm asked to be on organizing committees of big conferences and meetings and, inevitably, there's a big opening and a closing, and so people want to know which is the big technical expert we should invite to give the keynote speech. And my advice always is: please, let's not invite a technical expert. Let's invite an author, poet, an actor. Someone who is engaging with this from a different angle.

Again, this is a controversial example, but I will cite it. Around the world, plastic straws, what one documentary with David Attenborough was able to achieve in terms of completely phasing out plastic straws, I think has been remarkable. Yes, it may not amount to much in the global scheme of things, but it's emblematic of what popular culture-driven approaches can achieve. I was shocked earlier when I got a paper straw. Now I'm shocked when I get a plastic straw. It's become so mainstream to get more sustainable straws. And, therefore, I always say jokingly, but only half-jokingly, all the money that has been poured into think tanks, working papers that people like me produce, if you consolidated all that and funded a big Bollywood film with Shah Rukh Khan in the lead, on climate change, maybe we would change more minds than we are, at the moment.

Sam Kingsley [00:26:28]
Well, we've broken your rule there in that case in inviting you onto the podcast as a technical expert in the first place. But I, for one, found it really, really fascinating and full of actually really, really quite inspiring examples. So, thank you so much for joining us, and wishing you all the best.

Denise Wall [00:26:48]
Appreciate the time. Wish you all the best, Aditya.

Aditya Bahadur [00:26:51]
Thank you. Bye.

Denise Wall [00:26:53]
The Flow of Urban Life is a podcast that looks at how we live and move in urban landscapes.

Sam Kingsley [00:26:59]
We sit down with people at the forefront of making the world's cities better and more sustainable places to live.

Denise Wall [00:27:05]
If you like what you've heard, please share, subscribe and listen to our other episodes, where we explore other pressing issues around urban life.

Sam Kingsley [00:27:13]

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