

## Episode 7 - Sustainable Cities

This is Radio Australia. Hello, I'm Barry Clarke and welcome to the seventh and final program in our series, 'Sustainable Cities - Challenges for the Asia Pacific'.

Four post graduate students from the University of Melbourne's Faculty of Architecture came together in the ABC's Southbank studios to discuss some of the challenges identified in making our cities more livable and sustainable.

I'm Jennifer Chang from Taiwan and studying urban design. I'm Peter Sagar from Melbourne and completing a post graduate diploma in urban design. I'm Conor Larkins from Melbourne and studying my masters of architecture. I'm Derek Tan from Singapore and I'm doing a masters of urban design.

**BARTER:** One of the very interesting contrasts we can now see between places that did restrain private vehicles and places that didn't, is what's happened to the urban fabric since then. What shape has the city taken since then. It turns out that transport has a very strong influence on the way the city can develop.

**CLARKE:** Paul Barter from the National University of Singapore.

One of the big issues in determining the livability of a city is the ease of moving around. And Singapore is a good example, with its efficient public transport and its extensive road network.

**TAN:** Even in the car owning households, many members of the family, such as non-drivers, the young and aged, still lack mobility. So, I think expressways do not necessarily maximize mobility for everyone. So I think it's important that car users pay for the full cost of owning a car. And I think in Singapore a good policy was the use of ERP – electronic road pricing – where the users are made to pay for the use of certain roads, during certain hours when there's congestion.

**SAGAR:** It obviously works for Singapore in managing congestion. But I guess some people have to question its effects on fairness and equity because if we were going to introduce extensive road pricing in Melbourne there'd be cries about it being unfair for poor people. They're not going to be able to get around, because there isn't the public transport network to facilitate ease of access.

**LARKINS:** We really need to look at our public transport system because I believe that there is a lot of existing infrastructure but it's generally not used. The service levels are poor and I think that Melbournians generally suffer from a lack of faith in their public transport system. They wouldn't assume that they could use it at irregular times and I think we can definitely learn a lot from Singapore and hopefully having a mindset where we don't all depend on the car would be something to aim for.

**TAN:** I think in Singapore the public transport is very efficient and in terms of provision, the intervals are very regular and it goes on till about 12 midnight or 1 o'clock in the morning. So I think in Melbourne it's a bit different where you have to wait maybe half an hour between buses. So I think it has to be a two-pronged approach.

**LAQUIAN:** A transport strategy should not really rely on transport means. A transport strategy should mean the location of jobs and homes should be close enough together so that you could walk or take a bicycle between your home and your job place.

**CLARKE:** Emeritus Professor Aprodicio Laquian. Peter Sagar sees Singapore as a well planned city in terms of its overall transport strategy.

**SAGAR:** Singapore's cities or towns have sprung up very recently, so you've got shopping centers right next to the rail stations which then connect immediately to housing. Melbourne is trying to facilitate that change now with Melbourne 2030 and the creation of activity centers. But the planning framework still doesn't facilitate that intensive mixed use environment around train stations. I think it's about convincing Melbournians it's a good way to live. That having activity centers based around train stations creates vibrant communities.

**LARKINS:** The interesting thing that I've learnt after reading about Melbourne's public transport network. It was actually the train network that allowed Melbourne to become so suburban. It was established early, between 1850 and 1880 and that allowed us to have all these far flung suburbs and that in turn has led to a dependence on cars. So it's a reversal of the typical situation where the dependence on cars engenders the urban sprawl.

**SAGAR:** Private ownership of vehicles in these newly-industrialised countries or cities that are expanding at such rapid rates, it's a symbol of wealth or success. So like in Beijing, the shift from bicycles to cars is a symbol of progress or perceived progress by those citizens. So, part of transport is the mental game, it's the sociological game, convincing people public transport is good to use, that cars aren't necessarily a symbol of success.

**ALLEN WILLIAMS:** It's almost a paradox that if we look at large cities we see all of the modern development, the skyscrapers, the shopping malls and extreme wealth, but also within that significant pockets of poverty. In some cities there can be up to 50 per cent of the population actually would be classed as being poor.

**SOMSOOK BOONYABANCHA:** The urban poor community have something people in general don't have, they have community, some kind of community because they don't have much so they have to help each other. While the middleclass urban people don't have community. So when we build a city you need community of people.

**HUANG PING:** So recognizing that, many people including some local communities are talking about community rebuilding. So they would like to regain that sense of community identity and neighbourhood.

**CLARKE:** Having or needing a sense of community is a common theme especially in cities. And this was expressed from the mega cities of Bangkok to Beijing. Can planning and architecture help facilitate a sense of community?

**CHANG:** In urban Chinese architecture, houses used to have courtyards so the community was really good because the kids can play in the courtyards, you can see all of the neighbourhoods. But now, with the population growing fast, people tend to move into skyscrapers or high rise buildings where you don't have those courtyards or gardens. So the government has built some public parks or public squares for people to use. But the parents are worried about the safety for their kids playing in these parks so people don't tend to use these.

**CLARKE:** I suppose it's a problem because of the space issue. As you say there is enormous growth in these cities so you can't afford to have low rise development. You inevitably must have high rise development, so how can you maintain a sense of community in the face of that?

**SAGAR:** I'm cynical about this whole sense of community. You know Jane Jacobs, who's a theorist, talked about trying to re-connect or bring everyone back to having a sense of community.

Like in Melbourne we have suburban streets where people still don't know their neighbours. They're not living in skyscrapers. They're living in detached houses and they don't know their neighbours. So I think it's a myth that skyscrapers automatically remove a sense of community. The street there is the lobby where they catch the lift. So there are opportunities for people to connect more and perhaps it's just that we have a different form of community now. Instead of it being based around where we live, it could be our work mates, it could be the clubs we belong to, our virtual communities through the internet. So it's not physically based and I think this cry for a sense of community is a sense of having a physical spaced community rather than a dispersed community.

**TAN:** In Singapore, it's interesting because we live in high rise flats, the majority, I think 85 or 95 per cent of the population, and there are certain neighbourhoods which are less well off and what I've noticed is that in those less well off neighbourhoods, people tend to leave their doors open and they tend to sit along the corridors and interact with each other. In the more well off neighbourhoods, people tend to keep their doors closed. I don't know, it's probably related to personal wealth or as you progress in your wealth accumulation, you value your sense of privacy, maybe something like that.

**CLARKE:** Conor, this whole notion of architecture and community, is it something you think about as you build housing whether it be medium density or high density?

**LARKINS:** Yeah, I think the role of architecture in terms of creating community is limited, but I do think there's potential when designing to create public spaces and spaces within your buildings that are conducive to socializing. I don't think you could say that the architecture could create a community but I do think there are things you could do to help that sort of thing and I think that's a problem I guess with a lot of this development in Asia, the scale and the speed of it, and perhaps architectural quality and consideration is left behind.

**CLARKE:** So can you be specific and say what architecture can do to help in the creation of community or building community?

**SAGAR:** I think where urban design and architecture can contribute is by making sure buildings have a lot of connections to other buildings. So it's about spaces being permeable, spaces having pedestrian accessibility, so there are those connections so people can have chance encounters, they can bump into each other and form a lifelong friendship if they want to or just have a meaningful spot moment.

**LARKINS:** I think there's also issues to do with human scale that you perhaps don't see happening in a lot of the skyscraper developments that are happening in Asia at the moment and also I think there's something to be said for maintaining diversity within your buildings and structures rather than homogenized or internalized spaces. Spaces that reflect different scales and activities and functions, so you get vitality and as Peter was saying, moments where chance events can happen.

**CLARKE:** I mean how important is this in a city like Taipei for example? As a big high rise modern city, does it allow for people to connect with one another?

**CHANG:** Not really, because when you live in a high rise building, security becomes a problem. So when you get into the elevator, you only have access to the floor you live on, you don't have access to other floors. So it's a big problem of getting to know your neighbours within the building.

**CLARKE:** That is a problem with security these days and access just to the floor you live on.

**SAGAR:** Yeah, so the only common spaces are at ground and it's that moment of entry, moment of access that's important. But at the same time does the residential environment have to be the only

place that you can have a sense of community? Isn't there a sense of community when you go to a local restaurant or a local bar? It's not just the domestic environment.

**LARKINS:** I would suggest that the domestic environment in Melbourne in some ways is about the opposite of fostering a sense of community. It's about retreat. I suppose primarily from the city but in a sense from other people and the suburban house, which is focused around the backyard represents this ultimate moment of retreat.

**SAGAR:** That's right. So low scale suburban development doesn't equal sense of community, nor does skyscraper, so I actually don't think density contributes to a sense of community, it's those other things, the work place, the public spaces, the recreational spaces.

**CLARKE:** You're listening to Sustainable Cities on Radio Australia and post graduate students from the University of Melbourne's Faculty of Architecture discussing some of the challenges in making our cities more livable and sustainable.

Conservation and preservation of a city's heritage is a complex issue. Often there are competing interests and a lack of political will and there's always economic considerations.

**SIEW LING FAN:** Conservation is a very important part of our master plan in transforming the Singapore River. We also drew up urban design guidelines to guide new developments in this area. This is to ensure that the traditional scale, which is a very nice, comfortable human scale, is kept for the Singapore River.

**CLARKE:** Siew Ling Fan is with the Urban Redevelopment Authority of Singapore.

**TAN:** With the Singapore River, I personally feel that the way it's been re-developed, it's lost its purpose. If you talk about conservation, you try to conserve the building and conserve the feeling and the quality of the building, but by re-doing it in such a commercial fashion, it loses that quality, and I don't really see the point of doing that.

**SAGAR:** It is interesting because when does preservation turn an area into a theme park? And I think with the Singapore River, the area near the government area, the Clarke Quay area, parts of it do look like a theme park. The buildings are nice to look at. It's nice to see that obviously this was from the past but all one side of it is, is a strip of restaurants now and then you've got these hideous additions on another side of the river and you don't get a sense of what the place was. But there are some little statues and urban art sculptures that probably do a much better job at explaining the history of the Singapore River and the trading that was going on there rather than the actual preservation of the building. So it's telling the stories of the past so that other people can reinterpret and understand them. I'm interested in Asian cities how they preserve relics of colonial past and I think probably Singapore and Hong Kong have done that quite well in terms of keeping their previous colonial government buildings.

**CLARKE:** While China was not colonised, there is concern by some that as Beijing continues its current building boom and urbanisation process, it's losing its 'Chineseness'.

Conor Larkins visited the Chinese capital in 2004.

**LARKINS:** One of the interesting things I did notice in Beijing was the 'big roof' tendency or tradition which is where they would take a building built anytime over the last hundred years, whether it has a classical base or an international style, modern base or even post modern skyscraper base, and then literally attach a Chinese roof to the top of it, as in a roof that would normally be

associated with a temple or spiritually significant building. And that was a way of doing both things, satisfying this need for a Chinese identity and at the same time, a building that is western or modern.

**TAN:** It has also to do with the speed of the development. I think a lot of times there isn't really time for design to occur, so a lot of architects work to templates where they take on an old design, change the floor plans a little bit and slap on a roof and that's it. It's probably why urban architecture in Beijing is so unsatisfactory I think.

**SAGAR:** It's something that's occurred all over the place. Where you've got a western architect going into a new territory, there's always some local reference they try to put into the design. I think of Sir Edwin Lutyens in New Delhi designing the Viceroy Building. It's a classic building but it has these local indigenous references put into it. It's not satisfactory.

**LARKINS:** I think one of the reasons that the 'big roof' approach doesn't ring true is because it's the easy way out. You're looking for the most obvious characteristic of an indigenous or local building tradition but you're ignoring qualities of scale and material and density and building form that actually come together to create the real experience of these structures.

**CLARKE:** Melbourne, too, has experienced a building boom, particularly with the development of high rise inner city apartments. Some of these raise questions of sustainability.

**LARKINS:** There's currently massive growth in student housing, lots of growth around universities and these apartment buildings tend to be composed mainly of single bedroom or even single rooms, tiny little studio apartments that are incredibly services intensive as they all have individual bathrooms and so on. Obviously there's financial incentive for developers because people are buying them but say there's a downturn in international student numbers coming to Melbourne in the next 20 years, we're going to be left with all these buildings that are not fit for any other purpose. And I think possibly a large number of these buildings are being built with the intention of a quite limited lifespan.

**SAGAR:** The issue with their sustainability also comes down to how they're sold. In Melbourne we have strata titling which enables individual apartments to have their own title. So to pull down an entire building, you have to buy or consolidate all those individual titles. If it's a massive building, there needs to be a change. I'm not quite sure how it's ever going to happen. There needs to be new instruments of title packaging to facilitate urban change in the future with larger strata title buildings.

**SAGAR:** It obviously works for Singapore in managing congestion. But I guess some people have to question its effects on fairness and equity because if we were going to introduce extensive road pricing in Melbourne there'd be cries about it being unfair for poor people. They're not going to be able to get around, because there isn't the public transport network to facilitate ease of access.

**CULLEN:** Well I think it's really interesting, Australians know they live in a dry country, but we've really been remarkably profligate with our use of water, not only in our irrigation communities but in our cities.

**CLARKE:** Peter Cullen is Emeritus Professor of Ecology at the University of Canberra. After a sustained drought, water is a topical issue in Australia. We have much to learn about the management of this precious and limited resource from our neighbours in Asia.

**TAN:** Water is a very pertinent issue for Singapore. All our water is bought and it's bought from across the causeway, Malaysia, so there's both a political and security sense in terms of water. So in Singapore there's research and government funding spent on ensuring a future where we no longer

have to depend on others for water. We have desalination plants, we have something called 'Nu-water', which is taking recycled water and making it useable, drinkable again. I think in terms of water conservation, one of the major users of water is the manufacturing industry and I think that probably has to be one of the first areas we look at in terms of water usage.

**SAGAR:** I was really astounded by Singapore's approach to water. They announced that they would create a new city reservoir which is meant to store 10 per cent of the current water demand. And the Minister Mentor Lee Kuan Yew said that Singapore wants to be self sufficient in water by 2061, which is when the water agreements with Malaysia are due to expire and I think that's just such a dynamic, bold vision. Melbourne has a lot to learn from Asian cities and the Middle East.

**LARKINS:** I think it's quite interesting in terms of the role the political powers play in Singapore as opposed to Melbourne in terms of the water, public transport, congestion charging and a lot of things. It seems they're quite willing to make these very bold statements, whereas in Melbourne I don't think it happens like that.

**WHITELEGG:** We know that oil, although it's not going to run out, but the rate at which we discover new resources is in rapid decline. This tends to be known as the 'peaking' problem and we've passed the peak already. And I've suggested to the Chinese, as I've done in other countries in the world, that we have to find a way of reducing our oil dependency.

**CLARKE:** Professor John Whitelegg is from the Stockholm Environment Institute and currently working on a project with Chinese authorities called, Sustainable Urbanisation. Can we learn to do more with less? Is an oil dependent model sustainable?

**SAGAR:** Part of me questions whether there is a serious effort by governments or commercial organizations to promote new forms of energy. We seem to be so reliant on oil. We fight wars over oil. Whoever has oil has control over their lifestyle and their way of life. But to then ask a country to change its urban form rollout, it's a hard thing to do unless you have alternative models for them. If China and India are growing at such a rate, then I assume they're building or constructing in ways that are tested and ways that are known. So unless we are able to give them concrete, solid examples of a new way of living or a new form of development, then I think it's pretty rich that we say, 'don't construct with a reliance on oil', because we want it.

**CLARKE:** Well there is a lot already known about how you can do more with less, and how you can construct buildings that don't use as much energy, don't use as much water. What's your response to that?

**TAN:** I think yeah, we do have to do something, but maybe the cost of this new approach has to be shared with the countries that have already industrialized and done a lot of polluting over the past hundreds of years. Probably that sort of model would be fairer for countries like India and China.

**SAGAR:** If we're going to be less energy dependent and less oil dependent, then what's preventing us from doing it is shared knowledge, that knowledge is not universally known and accepted and that the potential up front costs of implementing new building design or new movement or access design. So, unless we're able to find a way to encourage builders and commercial operators to absorb more of that up front cost, or have that cost shifted, then I don't think we're going to see that reduction in energy absorbing buildings or oil absorbing urban forms.

**CLARKE:** There's a whole movement of 'green architecture'. How much does that figure in your current day course? Do you design buildings that are less energy intensive?

**SAGAR:** The planning code in Victoria requires new residential buildings to be energy efficient up to a certain star rating. So I guess Melbourne has taken the approach that buildings need to be energy efficient up to a point, and I guess the continual expansion of that star rating approach for commercial buildings and potentially other buildings is a step forward in the right direction. But until we're faced with a crisis, we're not going to change. I think we say it's not going to happen to us, so we'll pay lip service, but I think we'll only see action when we're really forced to do something.

**CLARKE:** Over seven programs, we've looked at what makes our cities more livable and sustainable. As we've heard, the challenges range from urban sprawl to waste management, pollution to poverty, to strategies that deal with transport and limited resources.

So what do our studio guests take from it all?

**TAN:** For me it would be that there is a need to do something, but just what is not really clear, so there's a need to find out options, different ways to approach the problems we are going to face, in terms of population, water and energy use.

**LARKINS:** The thing that I find most concerning is that in the face of incredibly rapid development that's generally market driven, what the actual role of architects and urban designers is and when they actually come into the equation because it seems to me, a lot of the time they don't.

**SAGAR:** I think part of it comes down to the individual having to act in a responsible and reasonable manner. It's about the individual realizing their own water use, their waste, their energy dependence and we perhaps want governments or administrations to fix it, but perhaps it's the partnership between people, their government and the private sector.

**CHANG:** I agree with Peter and I think we can't just sit there and wait until the government does something because everything is growing so fast.

**CLARKE:** Our thanks to Jennifer Chang, Peter Sagar, Conor Larkins and Derek Tan from the University of Melbourne.

Sustainable Cities is produced by Radio Australia. Don't forget to check out our website at [radioaustralia.net.au/cities](http://radioaustralia.net.au/cities)

I'm Barry Clarke, thanks for listening.