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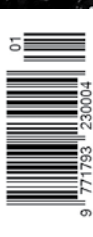
MAG(P) 007/11/2017 PPS 1786/04/2013(022947)

Jan-Feb 2018 | volume 58

Climate Change

Inside: City Profiles: Bangkok, Dhaka, Singapore — Climate Risk and Action | Daliana Suryawinata and Florian Heinzelmann, SHAU Architects, Bandung, Indonesia | Works of BIG and SHAU Architects

With projects from Bangladesh, India, Indonesia and USA.



southeast asia edition

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Letter from the editor

Dear *FuturArc* Readers,

The phrase, *climate change*, pushes many buttons.

Fear is the most common. To be sure, the science on climate change gives us a lot to fear: sea level rise, exceptional storms, extinction of species, and troubling questions about the future of humankind. It does not help that there is no certainty on timeline. Depending on whom you ask, we have a narrowing window for action *or* it may already be too late. That sense of foreboding is amplified by what appears to be inaction by those in charge. In this issue, you will read the response of three cities: Bangkok (page 26), Dhaka (page 34) and Singapore (page 42). And while the magnitude of the problem varies in each, the challenges, especially in Bangkok and Dhaka, are clearly more than just technical. Climate is partly a social question: how cities are planned, depending on who is at risk.

Hope is another emotion that we latch onto. We embrace hope that is implicit in new landscapes we see, where the green and blue of nature mask the grey and black of cities, where there seems to be a newfound balance between humans and the natural world. Turn to BIG's plans for the Manhattan waterfront (page 56) or SHAU Architects' master plan for Jakarta Jaya (page 48). These will uplift, for sure. BIG and SHAU are *eco-modernists* of our time: designers who bring together form and technology in new ways in the service of ecology. In the camp of hope, there are also the *humanists* who advocate a ground-up approach. Check out the floating school in Bangladesh (page 60). The focus, they say, must be on poverty, education or jobs—the rest will fall in place.

Who is right?

Paul Hawken's new book—*Drawdown: The Most Comprehensive Plan Ever Proposed to Reverse Global Warming* (page 68)—offers a list of 100 solutions, all doable today. In this list, we see the importance of action on both fronts: technology and society. He makes an interesting point that even if climate sceptics are right (which, it is increasingly clear, they are not) the things we do in the name of climate are 'no regrets' solutions—good and necessary, in and of themselves.

The third, and worst, reaction is *complacency*. Consider the fact that climate is not yet the focus of the design profession in Asia. In the curricula of many schools of architecture and in the criteria for design awards, gatekeepers of 'serious' design view climate action as something of a distraction. This may be because the industry—developers who sign the cheque and government agencies that regulate construction—does not demand a serious rethink. We seem content to fiddle at the margins. Is it enough that tomorrow's buildings are 10, 20 or 30 per cent more efficient? No. They need to be net zero, now. Therein lies the difference between doing something and doing something *in time*.

It has not been easy walking the line between fear and hope. The pages ahead may come across as ambivalent at times, alternating bad news with good. All we can say in defense is that we need a strong dose of both, if only to keep complacency at bay.

Dr Nirmal Kishnani
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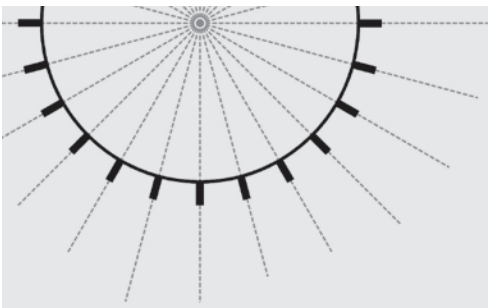
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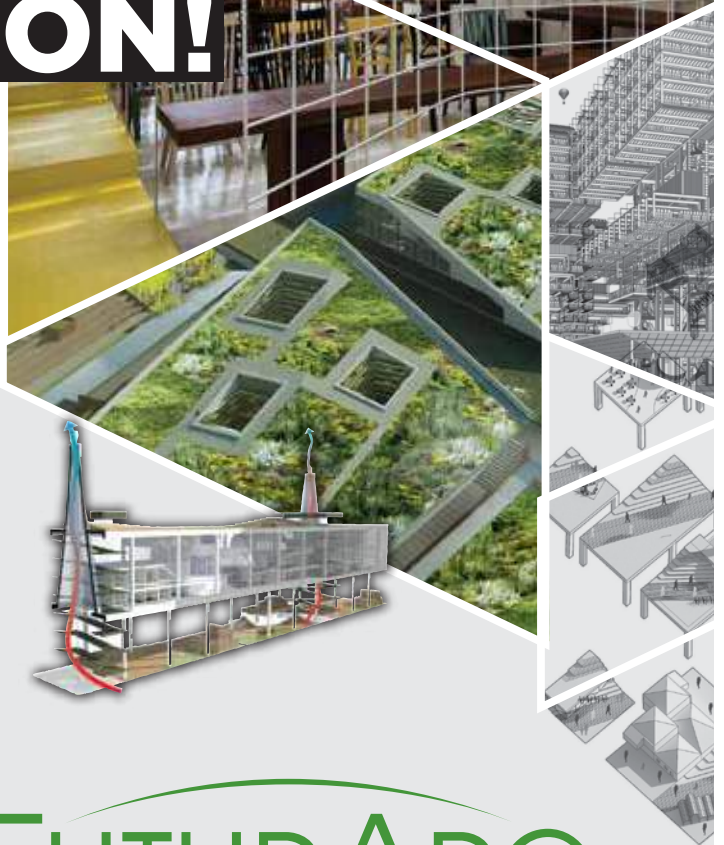
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Winners will be notified individually via email by the end of March 2018.

Look out for the winning entries that will be published in *FuturArc* May-June 2018 Green Awards Issue!



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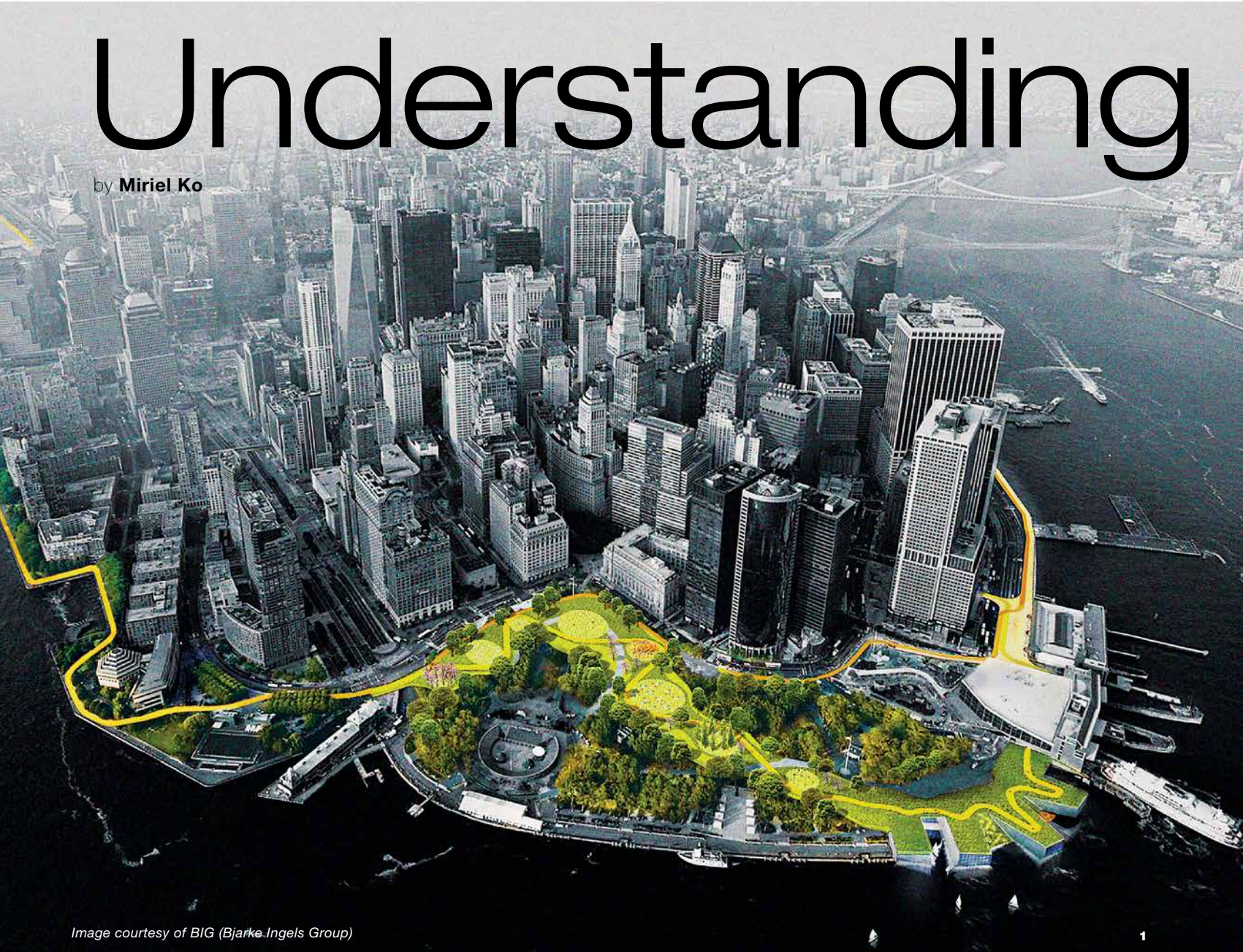
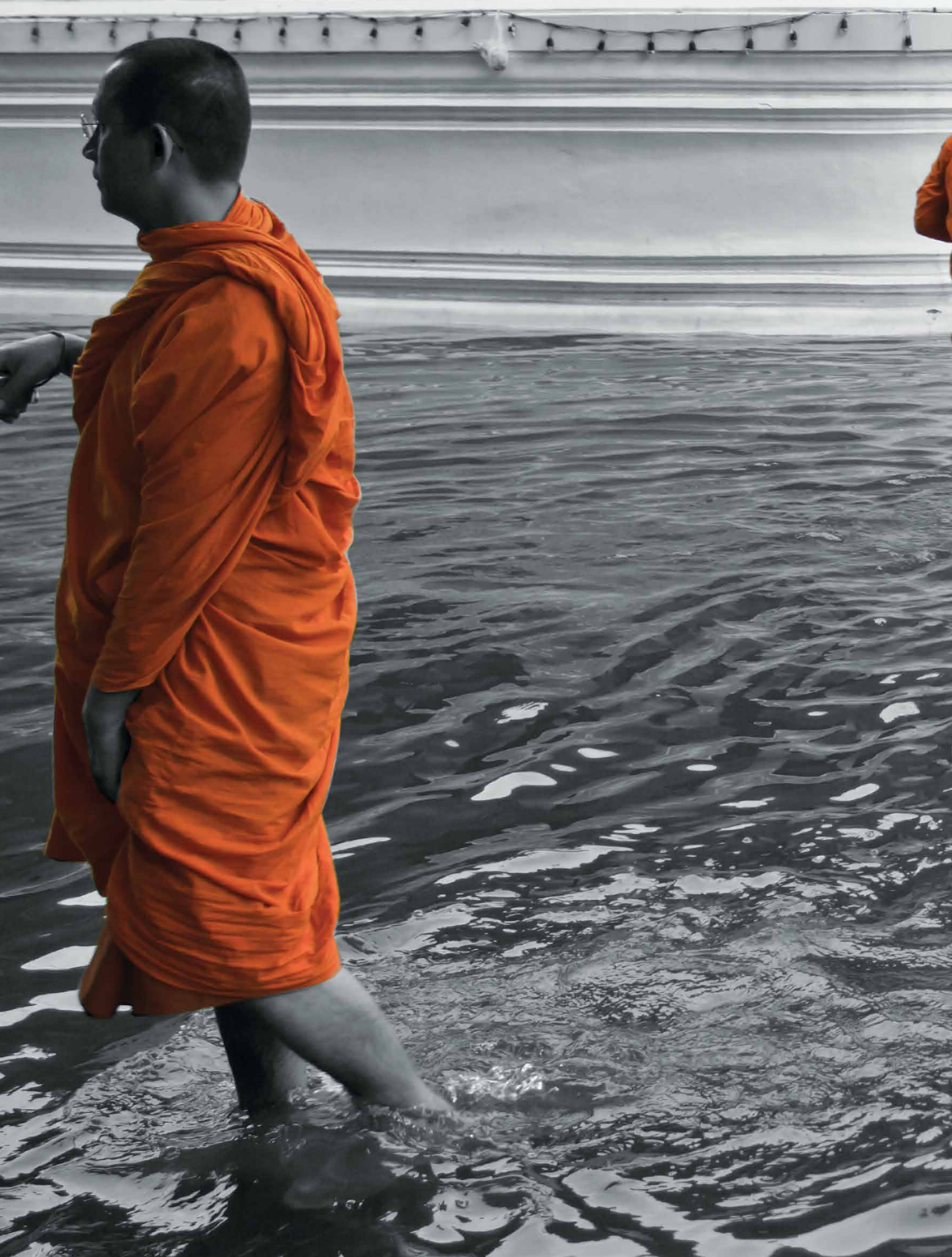


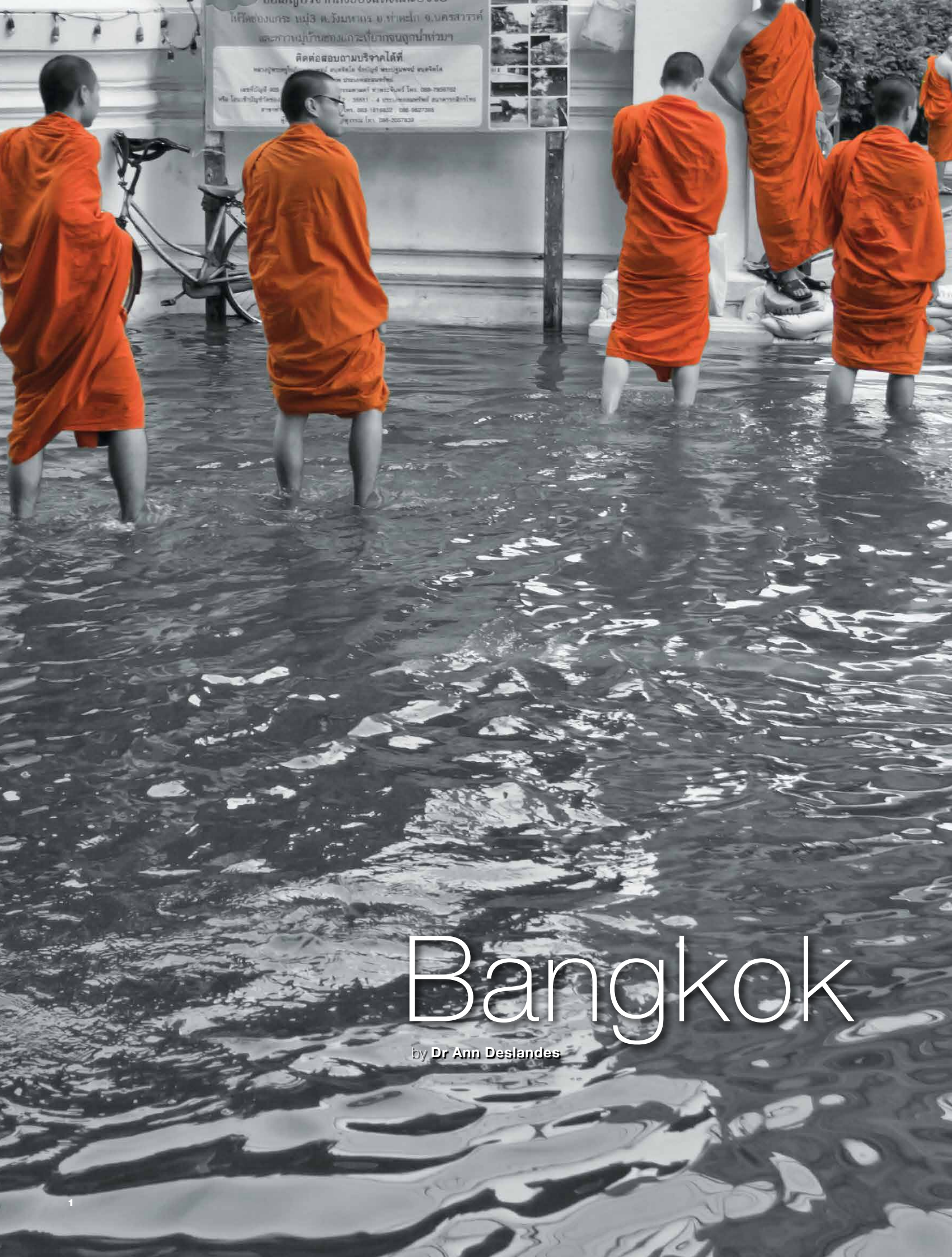
Image courtesy of BIG (Bjarke Ingels Group)

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Climate Change







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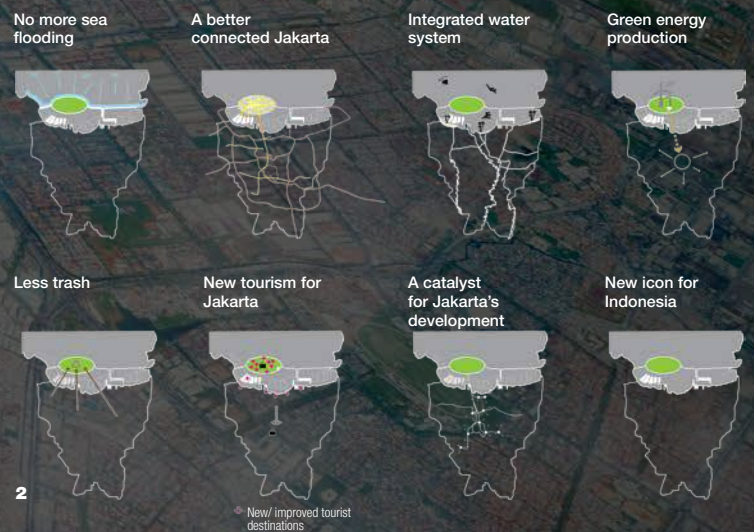


JAKARTA JAYA: THE GREEN MANHATTAN

by Heather Banerd

Coastal cities around the world today face the common challenge of sea level rise, and Jakarta is no exception. Compounded by land subsidence of up to 18 centimetres per year due to groundwater extraction and the increasing intensity of the monsoon rains, the city has an urgent need to protect itself from flooding. Frequently, the go-to solution seen from Sydney to Singapore is to build a sea wall. In Jakarta, a joint initiative between the Dutch and Indonesian governments is proposing to do just that, but with a difference—the proposal includes financing the sea wall through land reclamation, creating a whole new district of Jakarta in the middle of the bay.

One of the master plan proposals for this new district is Jakarta Jaya: The Green Manhattan proposal, which won the Smart Cities award at the World Architecture Festival 2017. Developed by Daliana Suryawinata and Florian Heinzlmann of SHAU Architects, in partnership with Jesse Kuijper of The Borneo Initiative, The Green Manhattan aspires beyond a Dubai Palm-style exclusive enclave to become “a smart city for everyone”, a live-work-play district that proposes an alternative solution to the multitude of challenges facing mainland Jakarta.



1 An aerial view of the proposal 2 Diagrams illustrating the proposal's benefits

WATER WORLD

Groundbreaking solutions are being invented by forward-thinking architects to show how coastal cities can become more resilient, viewing climate change as an opportunity to lead the way in waterborne and flood-resistant architecture.

by **Y-Jean Mun-Delsalle**

Sea levels are rising to new highs, temperatures are increasing, and floods and storms are getting fiercer and more widespread. Climate change is not just about the risk of floods and drowning, but also the financial cost of damaged property and businesses; as well as how it will redefine which parts of a city are sought after and which are unsafe. A 1-metre sea level rise would reorganise maps and affect financial stability in many of the world's biggest waterfronts, in cities like New York and Miami, and low-lying areas in Bangladesh, Vietnam and the Philippines. By resolving the issues stemming from climate change and urbanisation, water-based architecture is redefining urbanism. Offering a minimally invasive method of construction, modern floating developments take advantage of coastal zones, rivers, lakes and canals in space-starved cities and provide flexibility as they may be modified, moved and reused until the end of their life cycles when they are recycled. The technologies and innovations required for water-based constructions already exist, but now changing the perception towards floating schemes is key to a more sustainable and safer future that will be able to meet modern-day challenges.

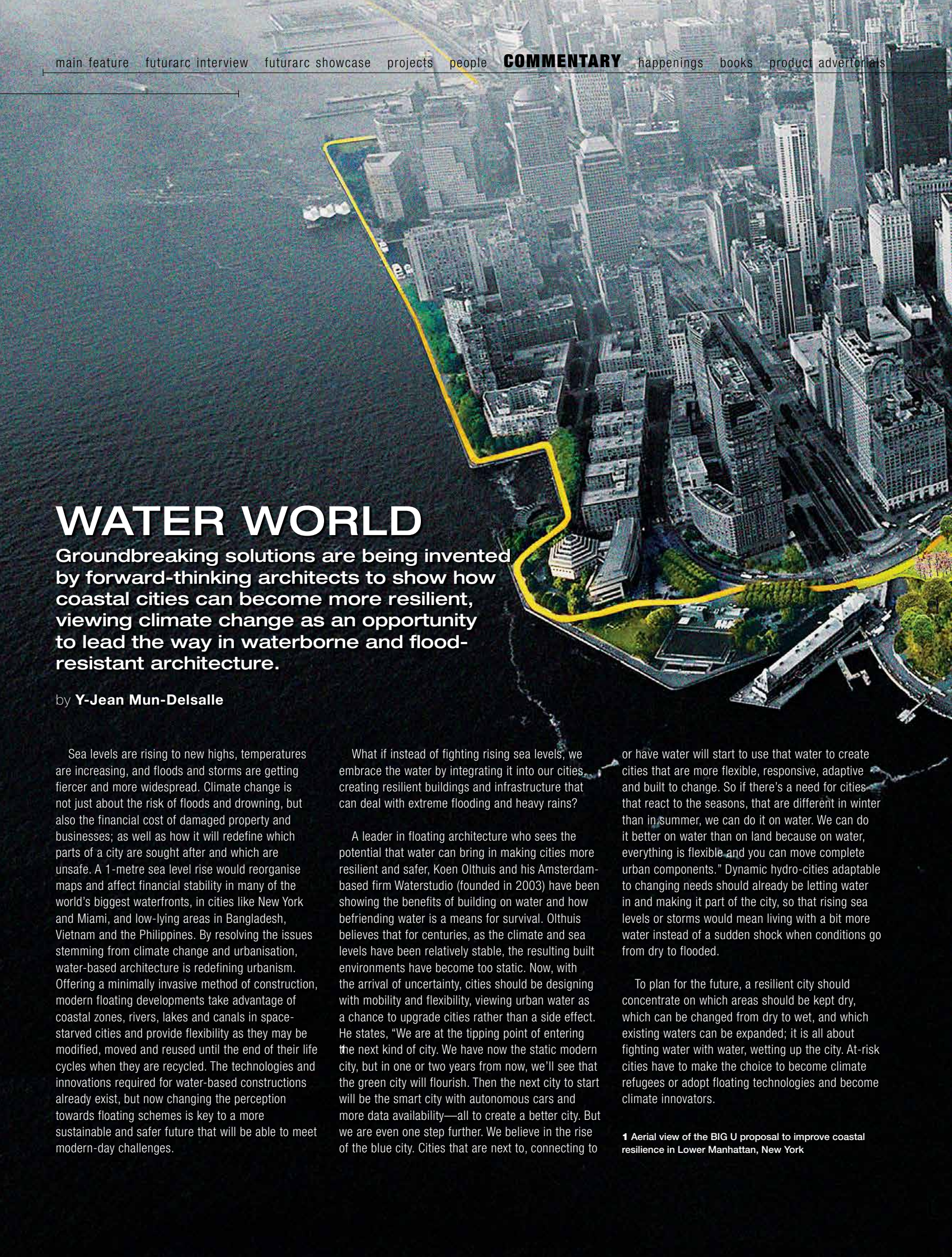
What if instead of fighting rising sea levels, we embrace the water by integrating it into our cities, creating resilient buildings and infrastructure that can deal with extreme flooding and heavy rains?

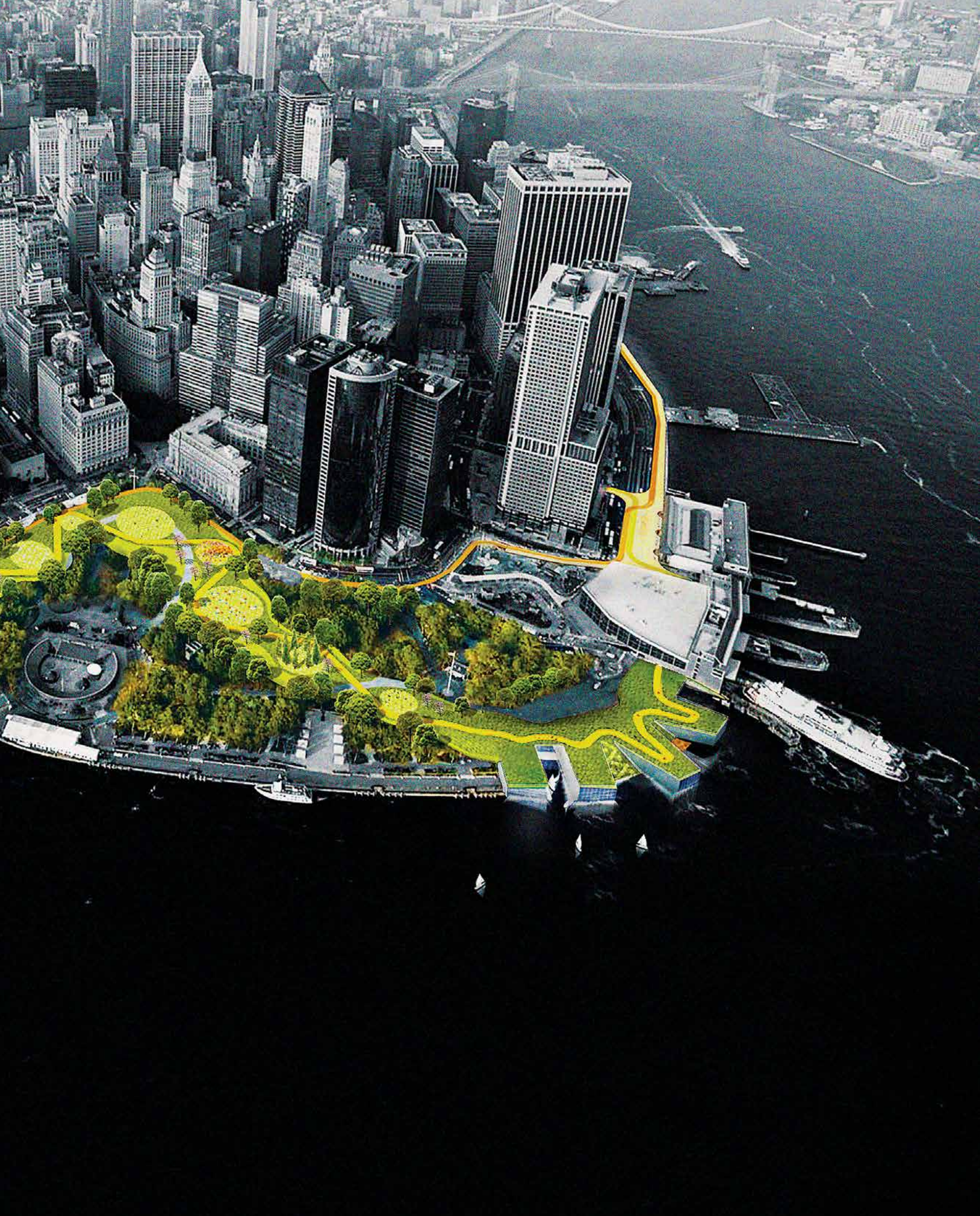
A leader in floating architecture who sees the potential that water can bring in making cities more resilient and safer, Koen Olthuis and his Amsterdam-based firm Waterstudio (founded in 2003) have been showing the benefits of building on water and how befriending water is a means for survival. Olthuis believes that for centuries, as the climate and sea levels have been relatively stable, the resulting built environments have become too static. Now, with the arrival of uncertainty, cities should be designing with mobility and flexibility, viewing urban water as a chance to upgrade cities rather than a side effect. He states, "We are at the tipping point of entering the next kind of city. We have now the static modern city, but in one or two years from now, we'll see that the green city will flourish. Then the next city to start will be the smart city with autonomous cars and more data availability—all to create a better city. But we are even one step further. We believe in the rise of the blue city. Cities that are next to, connecting to

or have water will start to use that water to create cities that are more flexible, responsive, adaptive and built to change. So if there's a need for cities that react to the seasons, that are different in winter than in summer, we can do it on water. We can do it better on water than on land because on water, everything is flexible and you can move complete urban components." Dynamic hydro-cities adaptable to changing needs should already be letting water in and making it part of the city, so that rising sea levels or storms would mean living with a bit more water instead of a sudden shock when conditions go from dry to flooded.

To plan for the future, a resilient city should concentrate on which areas should be kept dry, which can be changed from dry to wet, and which existing waters can be expanded; it is all about fighting water with water, wetting up the city. At-risk cities have to make the choice to become climate refugees or adopt floating technologies and become climate innovators.

1 Aerial view of the BIG U proposal to improve coastal resilience in Lower Manhattan, New York





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Greening our workplaces not only offers health benefits, research has also shown that it improves productivity and engagement. In the upcoming issue, we will look at office and workplace projects that aim to reduce their impact on the environment and incorporate passive design elements to bring about occupant comfort and efficient building operations.

If you have projects to nominate, please send an email with a brief profile and photos to c.lim@futurarc.com by end January 2018.

We will notify you if your project is shortlisted for publication. Please note that the selection of projects is subject to editorial discretion.



Medibank Place by Hassell
Photo by Earl Carter, Medibank Place



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