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GREEN AWARDS

**CROSS-
GENERATIONAL
ARCHITECTURE**

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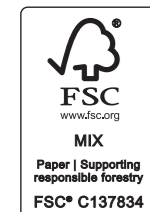
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Cover design by Hans Lim

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Dear *FuturArc* readers,

This edition is dedicated to the awarded submissions of FuturArc Prize (FAP) 2023 that presented sustainable ideas for a future that underscores cross-generational architecture, and in the same vein, it also explores other related stories of inclusive design.

What constitutes inclusive design or designing for all?

The answer is at once complex yet simple. It is simple when one considers who the space is for and what it is used for, i.e., when architects/designers ask the right users what they need or understand from the ground what needs to be accommodated or required. It becomes complex when assumptions are made, both on who the basic user is and how the space is to be used. However, simplicity is the hardest to achieve. Simply because human intelligence has become increasingly specialised.

Both sentiments are echoed by Dr Emi Kiyota (The FuturArc Interview with Alakesh Dutta) who made an observation that when it comes to designing specialised spaces such as a hospital, the first steps of asking for advice and talking to the right users are, although deemed essential, not done enough.

“For me, it’s okay if an architect admits this is a kind of place s/he has never learnt how it’s operated and reaches out to people who run such places and seeks their advice. This is okay as it’s not their profession. A lot of things are specialised these days, and one can’t be a specialist for everything and get everything right on their own. Instead, I feel the communication should be better between architects and the people who run and manage such spaces.”

Designing for all infers designing for all ages (Commentary: Design for Aging). Lekker Architects shared key insights on this as well as exemplary case studies and projects. This topic has personally highlighted an interesting observation of the human psyche: almost everyone wants to live longer, yet not all truly acknowledge the inevitable process of growing and living older. What does it mean to grow old and how does it affect the spaces in which one lives, works or plays? What does it mean for architects/designers who are of a younger age group to design for older users? Dr Emi also pointed this out: the architects/designers who design, say housing for seniors, should not assume users’ needs from reading literature or designing other housing typology, but to base their designs on asking the older persons because the architects/designers have never been old before.

Nipun Prabhakar wrote admirably about designing spaces for non-human species (Commentary: Designing for Non-humans as an Act of Service). He has captured remarkable images of birdhouses that have been published in *The New York Times*; since then, his interest grew and a story that included other animals was born in the following pages—we hope you will find his story as hopeful and uplifting as we did.

Here is yet another interesting observation to be made of the human psyche: it is a fact that all species are interdependent, and a fact that humans cannot survive without the ecosystems of other species. Yet, the way we have been ‘developing as usual’ seems to assume otherwise. Like growing old, we desire longevity, yet most of us are in denial of the process of aging, thus, this mindset is reflected in the way spaces are designed. Similarly, we want to develop like there is an endless well of resources that makes this planet, so although this is not true, we still bulldoze ahead like it is.

How can architecture help enable humanity to accept and be in alignment with the way things are?

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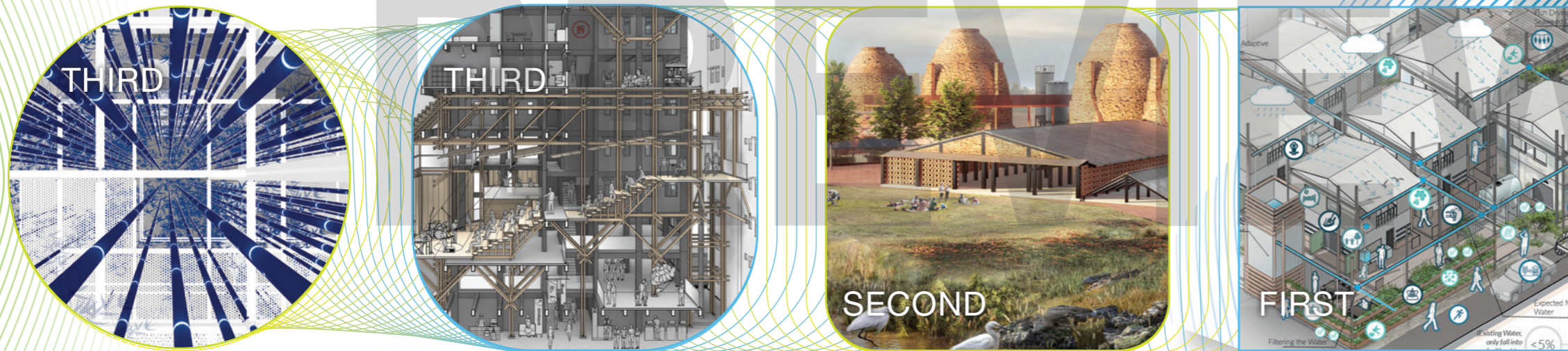
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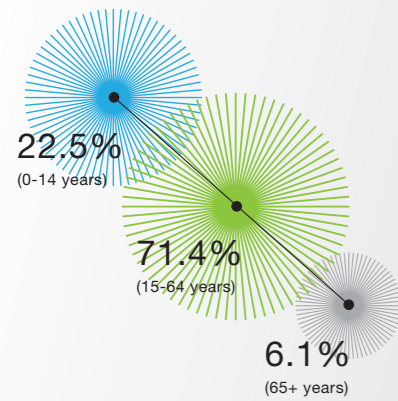
The following pages of Main Feature presents FuturArc Prize (FAP) 2023 winning and merit entries, as well as the awardees. Based on the theme of Cross-Generational Architecture, FAP 2023 asked professional and student entrants: How can architecture respond to societal issues for tomorrow's generations amidst ongoing climate and planet challenges? How can we address quality of life and well-being for all age groups together with Nature? How can these built spaces be sustainable and not add further distress to the environment?



**CROSS-
GENERATIONAL
ARCHITECTURE**

PROJECT DATA

Location
Kampung Muara Angke
Country
Indonesia
City
Jakarta
Site Area
49,892 square metres
Census



Source: Jakarta Statistics Agency 2022, Statistik Daerah Provinsi DKI Jakarta 2022, Interim Population Projection 2020-2023

RENEWING WATER-EDGE COMMUNITIES

CHALLENGES

Jakarta is the world's fastest-sinking city that is also facing persistent water shortages, flooding, sea-level rises and other related climate change impacts, along with pollution stemming from historical influences. Thus, communities living at coastal areas are most directly affected. These settlements or urban *kampungs*, according to the team, are deemed critical to the development of cities and their economic growth, and where 80 per cent of the population in big cities resides.

For the proposal, the team selected Kampung Muara Angke in North Jakarta, an old port town that dates back to the 16th century. A trading gateway in the colonial times, it remains a hub for fishing and maritime activities. Its location makes it expectedly environmentally vulnerable, made worse by issues such as rapid urbanisation, poor land use, etc. Due to the severity of these myriad challenges, the district is currently a priority intervention area under the local government's coastal and marine protection programme. On a larger scale, as the only coastal area in Jakarta, North Jakarta has a potential fish production value of up to 98.49 per cent, meeting the needs of fisheries in Greater Jakarta and export activities. Muara Angke, more than just the largest fishing industry in Indonesia, is also home to over 1,800 fishermen (both native and migrant).

SOLUTION

This project addresses the complex water issues in the impacted area and aims to renew the traditional lifestyle of urban *kampungs* at the water's edge, through sustainable human/wildlife-centred community planning and water-based solutions. It highlights comprehensive strategies to better transform water-edge settlements, fostering sustainability and adaptability to the local context and water challenges for all age groups. The proposal sought to challenge three pre-existing paradigms and carry forward a more inclusive legacy for the future.

1) Equity of contribution

Currently, productive-age adults bear the burden as the main contributors of labour, income and resources in the fishing community. The proposal seeks to provide infrastructure that can ensure equal access to resources for various age groups. Elderly people, whose daily movement tend to be under a radius of 200 metres from their homes, will have access to fresh fruit and vegetables from the household farms within each neighbourhood. Children whose movement tend to be around a radius of 350 metres from home could learn about household farming, in addition to helping out in their family's seaweed harvesting and fish drying facilities. With ecosystem improvement, productive-age adults will enjoy increased access to resources relevant to the area, such as vegetable farming, beekeeping and oyster farming.

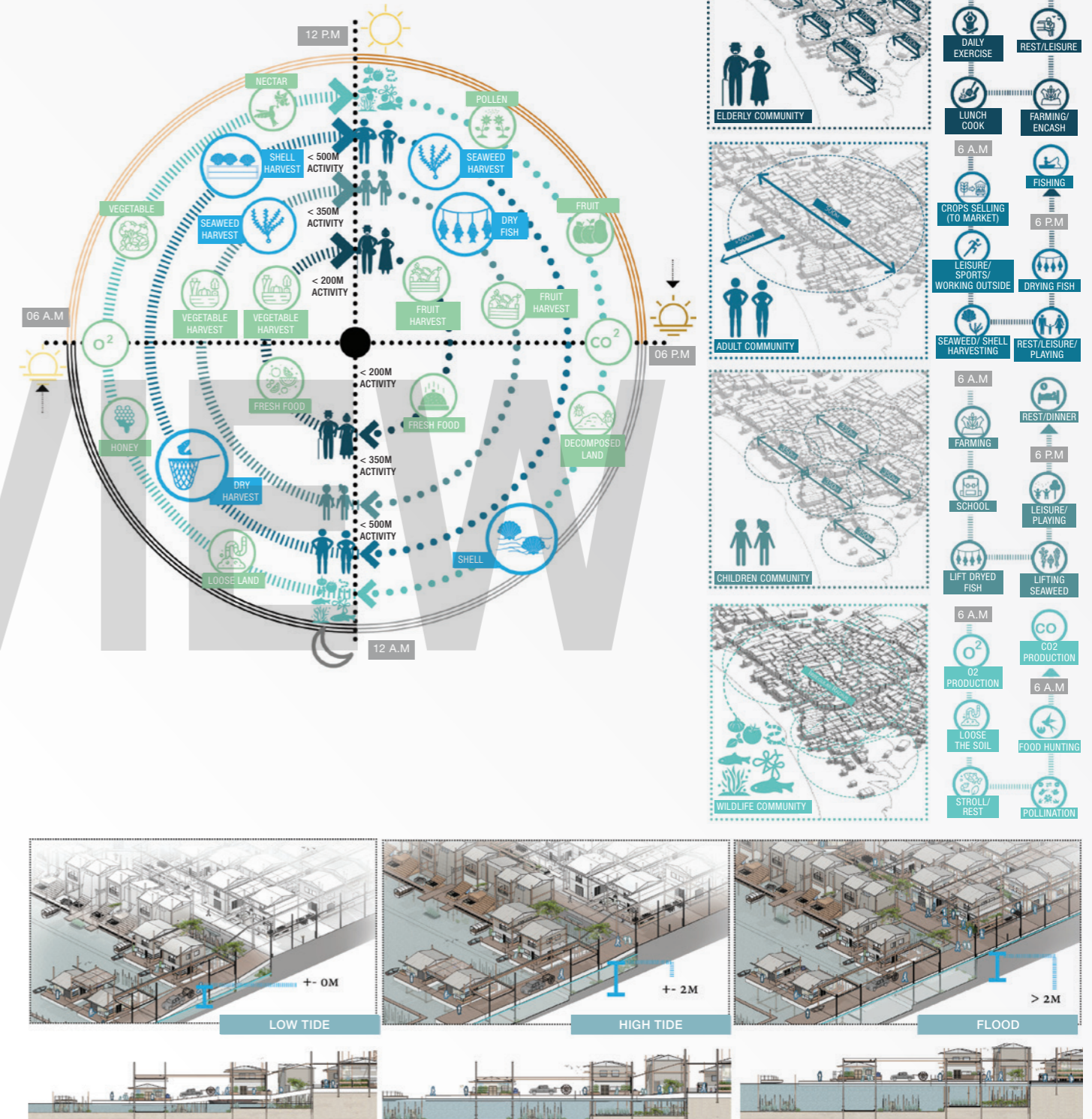
2) A mixed-production kampung

Fishing communities often rely solely on fishery as their source of income. The infrastructure proposed by this team seeks to diversify production streams to explore additional channels of profit, hence creating a more resilient community.

3) Water-oriented living

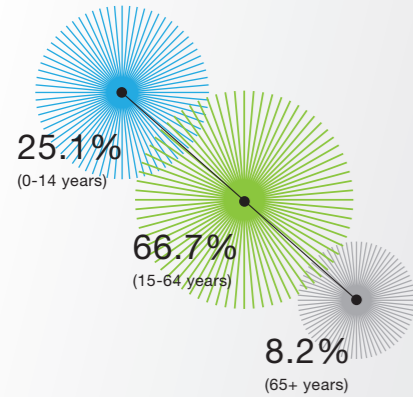
Water bodies and streams have become increasingly polluted and misused, causing people to avoid them. Clean water is considered to be a luxury in the area, with people spending up to 10 per cent of the minimum wage to obtain it on a monthly basis. This proposal treats the proximity towards water as a key element through which the community can build a 'water-agile' settlement, incorporating infrastructure such as rainwater collection pipes, reservoirs and filtration facilities to treat and distribute clean water to fulfil their needs.

The team hopes that the proposal's impact will extend beyond Jakarta to reach other water-edge communities in Indonesia and Asia.



PROJECT DATA

Location
Red River Delta
Country
Vietnam
City
Hanoi
Site Area
4,500 square metres
Census



Source: https://citypopulation.de/en/vietnam/prov/admin/01_hà_noi/

FLOATING COMMUNITY AND TRAINING CENTRE BY THE RIVER

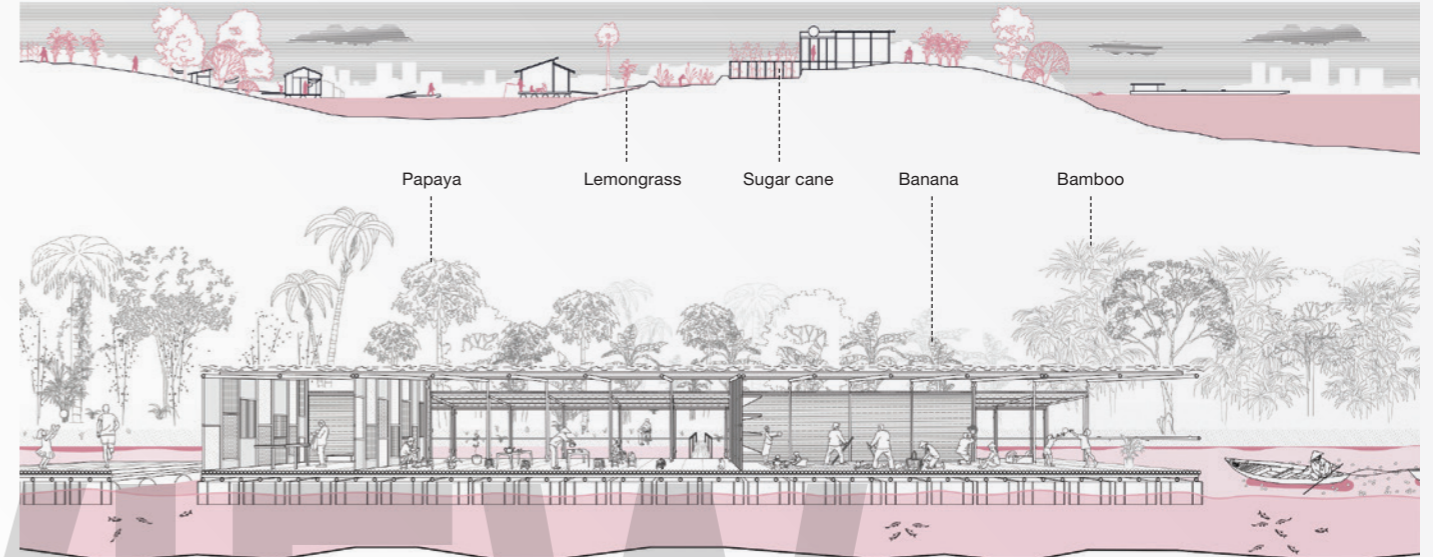
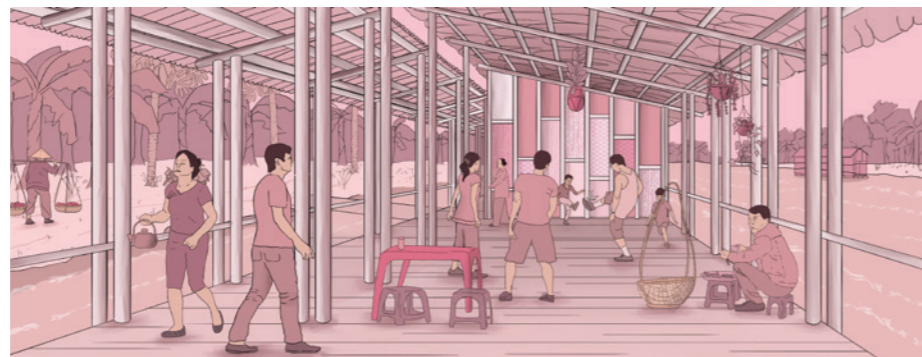
CHALLENGES

The Red River Island is an essential resource for the capital city of Hanoi. It supplies the capital with fresh foodstuff since there are nearly 200 agricultural households staying on the island. However, the fertility of the land today is strongly affected by the retention of the river's alluvium due to hydroelectric dams. Additionally, like many burgeoning cities in Asia, Hanoi, located in the Red River Delta, has undergone rapid economic and social changes, which have led to major changes in the delta's agricultural and artisanal society, as the rural areas are becoming urbanised and industrialised at the cost of agriculture. Craftsmen and fishermen who have lost their livelihoods would migrate temporarily to the outskirts of the city to seek out low-wage work to earn income to subsist and/or send their children to school. When they retire, they return to their native villages.

The migrant population has settled on a 'dead arm' of the Red River with an area of 41,000 square metres. As there is no land to build on, and the soil is too sandy and malleable, the village was forced to move. As the migration numbers increased, the village has grown each year and has even extended over the river. Today, the floating village consists of 37 households but with no common buildings. The children of the village attend school in the town centre.

SOLUTION

In response to this problem, the team proposes a floating non-institutional community and training centre occupying an area of 4,500 square metres (with plantations), located on the banks of the Red River. The community centre project aims to strengthen the intergenerational links among the inhabitants by the sharing of daily activities, as well as to integrate the village into the city dynamics, through the transmission of handicraft knowledge and the development of professional activities that could be additional sources of income. The project can also be part of a government-approved programme to upgrade the banks of the Red River. The design is based on an analysis carried out by the team, and their strategy is to build on the existing situation and improve it. The construction will also demonstrate the sharing of constructive knowledge from local techniques and resources, making the project sustainable as it is based on local human and material resources.



The FuturArc Interview

EMI KIYOTA, PhD

**Deputy Executive Director, Centre for Population Health;
Associate Professor, Yong Loo Lin School of Medicine and College of
Design and Engineering, National University of Singapore**

by **Alakesh Dutta**



Images by Yashuhiro Tanaka

1



2

Dr Emi Kiyota is an environmental gerontologist, consultant and organisational culture change specialist, with more than 20 years of experience in designing and implementing person-centred care practice in long-term care facilities and hospitals globally. She holds great concern for the needs of elders in low-middle income countries—her contributions include a vast array of national and international initiatives focused on quality improvement in the built environment for long-term care and aging services.

1 *Ibasha* workshop with elders and youth group in a nursing home in Nepal 2 Walking towards *Ibasha* garden with elders in the Philippines

Dr Kiyota is currently based in Singapore and looking into incorporating *Ibasha* into the Health District@Queenstown. This pilot programme aims to design an age-friendly community by creating integrated solutions to enhance the health and well-being of residents across their life stages.

DESIGN & PATTERNS OF BEHAVIOUR

AD: You have an interesting background—being academically educated in architecture and now working as an environmental gerontologist. How do these two domains overlap in your work?

KE: From the very early stages of my academic education, I decided that I was more interested in research than in becoming a practising designer. I therefore started doing research from the time I was in graduate school, all the way till I completed my PhD. All along, my interest has always been in the various ways that design impacts people's behaviours.

Today, I still work with designers on the aspects of both conceptual and strategic planning. I'm always more interested in the kind of conditions and elements that should be designed to influence people's behaviour, rather than how to actually design them. This is also the reason why I work quite well with architects. I come to them with information about present and future trends of care in hospitals and eldercare facilities, about how care strategy is going to change, how housing policies are going to change, etc. I bring the strategic thinking and conceptual background to the table and designers bring their creativity, and together we make the person-centric design happen.

FOR THE LOVE OF DOG

If one ever has a dog as companion, one would likely understand the deep bond between dogs and humans. In fact, this is true for most of us who have had the opportunity to share our lives with any animal. The space in which such a relationship develops over time then becomes a primary factor in the quality of life for both species.

For some, bringing a pet (such as a rabbit, hamster, guinea pigs) into the home may not have any spatial impact on the living space. For others, they might design their homes to take into account the needs of their pets alongside theirs.

The Dog/Human house is an exemplar of the latter—a project embodying a man's love for dogs.

This house is not just a residence for the owner, but one that his dogs could reside in comfort as well. Beyond that, he wishes to share the space with other dog owners too by designating a part of his house to function as a 'hotel' where other dogs can share facilities (grooming/salon) and 'hang out' with one another; as well as a waiting area in front of the house for the owners to watch their dogs interacting.

1 to 3 The architectural space takes into account the dogs' needs, visual points and interaction with humans

1



DESIGN FOR AGING IS DESIGN FOR ALL



PREVIEW

We need to have neighbourhoods and estates that are lovely places to live in as an elderly person.

Human lifespans are increasing around the world. According to WorldData.info, the average life expectancy worldwide rose from around 50.7 years for men and 54.6 for women in 1960 to 68.9 for men and 73.9 for women in 2021.¹ Currently, this trend of aging populations is observed most significantly in developed regions—with Hong Kong, Japan and Singapore among countries with the highest life expectancies. Emerging economies are also experiencing this shift in various degrees, and the World Health Organisation posits that by 2050, 80 per cent of older people will be living in low- and middle-income countries.²

Everybody wants to live longer even if aging comes with a set of challenges.

On the societal level, the composition of an increasingly aging population, paired with a decreasing birth rate, leads to a higher “burden of care” for the productive age groups in order to provide social support for dependants. Among the consequences are older adults having to remain longer in the workforce,³ and many countries seeking to increase the statutory retirement age.⁴

On the individual level, as each of us is unique, the conditions of aging will be experienced differently by each person. Aging is associated with changes in dynamic biological, physiological, environmental, psychological, behavioural and social processes.⁵ One may experience a decline in physical abilities and/or mental faculties, along with increased vulnerability to illnesses and/or environmental hazards. Even so, ‘reaching’ the peak of one’s life experiences is mainly perceived as something that accrues with age. Hence, having longevity is seen as a privilege, although it is one that most people prefer to have without the abovementioned ‘decline’.

The task of designers is thus to understand these multi-dimensional aspects of living longer and identify certain challenges in our existing built environments, which somehow make aging ‘an inconvenient truth’, so as to conceptualise solutions

for a healthy and fulfilling life. Here, we present in-depth examples from designers and exponents who advocate designing for living longer better.

AGE-FRIENDLY ENVIRONMENTS AS A FORM OF CARE

FuturArc reached out to Ong Ker-Shing and Dr Joshua Comaroff, Lekker Architects, for further insights about caring for the elderly in the larger scope of the built environment. They have been involved in research collaborations, including those under Dr Belinda Yuen from Singapore University of Technology and Design (SUTD), with Dr Wong Chek Hooi from Geriatric Education & Research Institute (GERI), and others to imagine how spaces could work better for older adults—be it in living spaces (read more in sidebar) or beyond the flat.

“We encounter a much more complex set of issues beyond the individual home. Cities—even smaller parts of cities—are fantastically complex systems. And what we find very quickly is that different users have competing, and equally compelling, needs and desires,” Lekker wrote.

For instance, bicycles are a major source of stress for older pedestrians, despite being a more carbon-friendly mode of transportation than cars. “We are constantly telling clients that being inclusive doesn’t just mean ‘adding’... it means arbitrating among a diverse public and its requirements. We need to have neighbourhoods and estates that are lovely places to live in as an elderly person. Figuring out how we get there, while not losing track of other priorities, is a whole new frontier for research and design.”

Good ‘bones’

Lekker felt that existing elements of Singapore’s built environment has good potential, owing to its urban system of Corbusian-type, Modernist superblocks that offer walkability and compactness. They appreciated the fact that “despite being ‘land-scarce,’ we have large open spaces for landscape because we’ve put most people into high-rise buildings”.



1 A woman takes care of her mother, who is in her 90s and living with dementia, inside a wooden house in Kuala Lumpur **2** A man sits crouched on the sidewalk in Bukit Mertajam, Penang while leaning on an elevated platform; not many public and semi-private spaces in cities have been designed to accommodate the resting needs of older citizens **3** Seating can serve as the centre of activity for older people; this seller in Tainan, Taiwan oversees her kiosk of temple offerings from the comfort of her chair