

Nature is the best physician

Hippocrates

NATURE IN CITIES: TONIC FOR HEALTH, JUSTICE & RESILIENCE

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Uta Dietrich - 14 October 2020
Urban Thinkers Campus

thinkCITY

REJUVENATING THE CITY TOGETHER

**WE ARE A
SOCIAL PURPOSE
ORGANISATION
DRIVEN BY
IMPACT IN
MALAYSIA**

We want to make cities
people-friendly and resilient by
being a catalyst for change in
the way cities are planned,
curated, developed, and
celebrated.



Urban Thinkers Campus

January 2016



<https://www.worldurbancampaign.org/uni-iigh-thrive-2-%E2%80%93-health-and-wellbeing-city-we-need>

Kuching Statement

On healthy, just and sustainable urban development

The hallmark of **successful** 21st century cities will be an understanding of **urban development** in terms of the **complex interconnections** between the ecological, economic and social foundations of **human development and health**.

[Health Promotion International:
https://doi.org/10.1093/heapro/daw046](https://doi.org/10.1093/heapro/daw046)

NBS & Green Public Spaces: Tonic for Health, Justice & Resilience

From the Kuching Statement, there are 3 key parallels



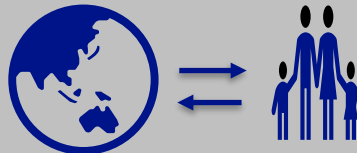
Health & Wellbeing of People

Nature's effect on all dimensions on health cannot be underestimated



Spatial Justice for all Populations

Distribution of NBS & green public spaces needs to be accessible by all and equitably distributed



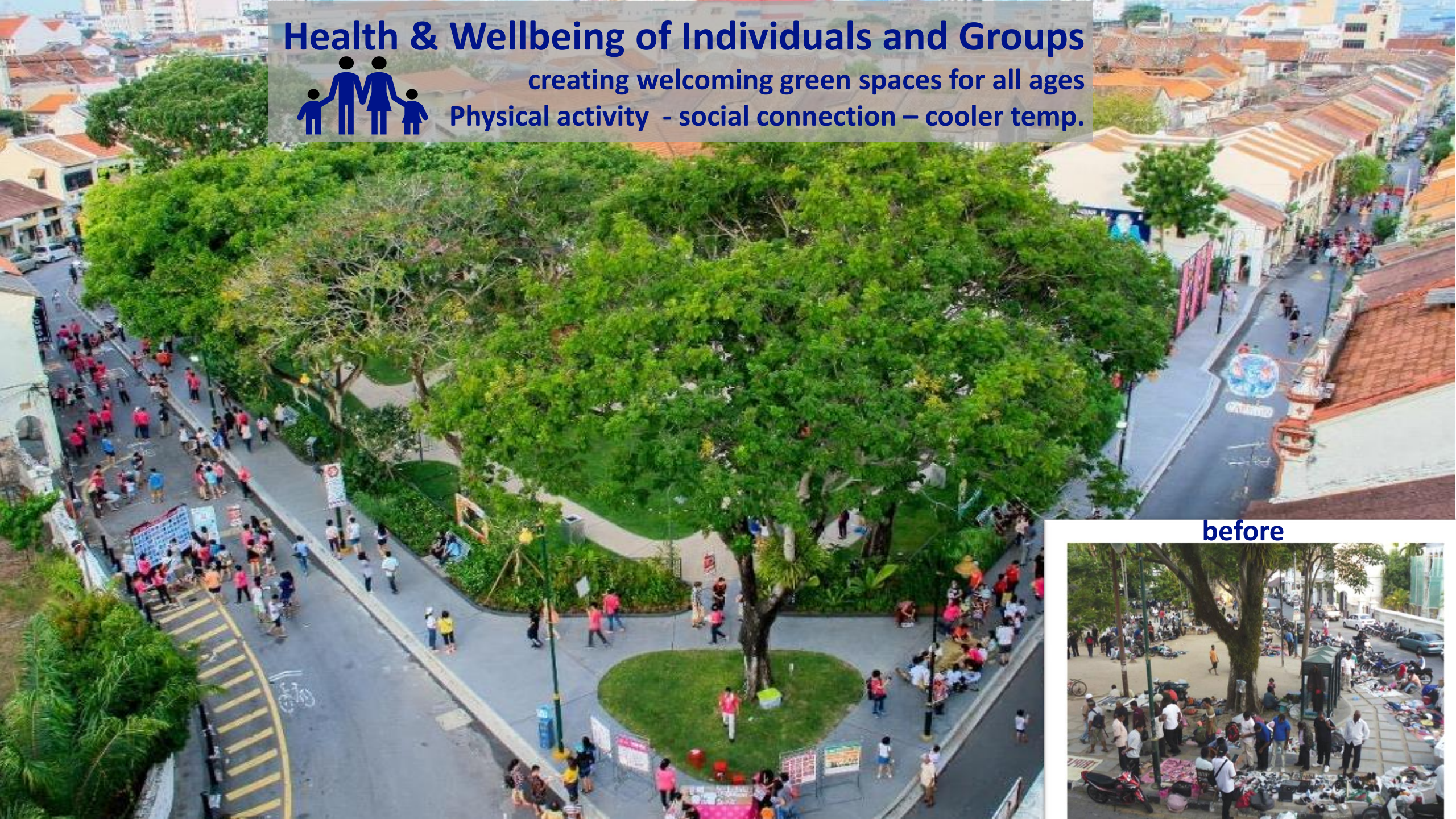
Resilience & Planetary Health

Build resilience by strengthening health of human civilisation and the state of the natural systems on which it depends

Health & Wellbeing of Individuals and Groups



creating welcoming green spaces for all ages
Physical activity - social connection – cooler temp.

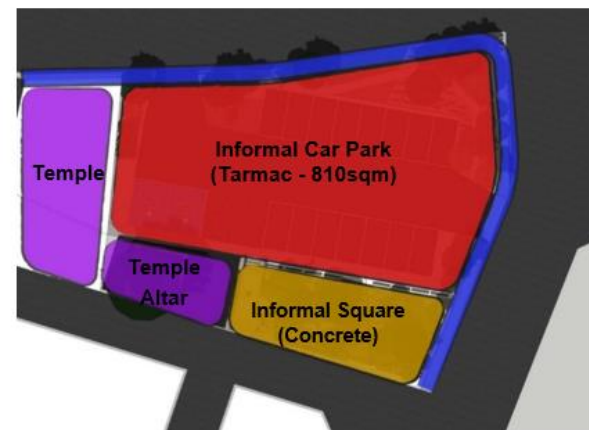


before





JETI LAMA RAIN GARDEN – ORIGINAL SITE



Existing Site Condition

- Tarmac area used as an informal car park
- No line markings; 'free-for-all' parking anywhere within the tarmac and concrete area
- Open drain surrounding Site perimeter



Proposed Rain Garden

- Rationalize and optimize tarmac area for car, OKU and motorcycle parking
- Leftover space converted into Green Space
- Convert Informal Square into Rain Garden



**Nature Intensity: more is better, but
anything is better than nothing**



Jeti Lama Rain Garden – current condition



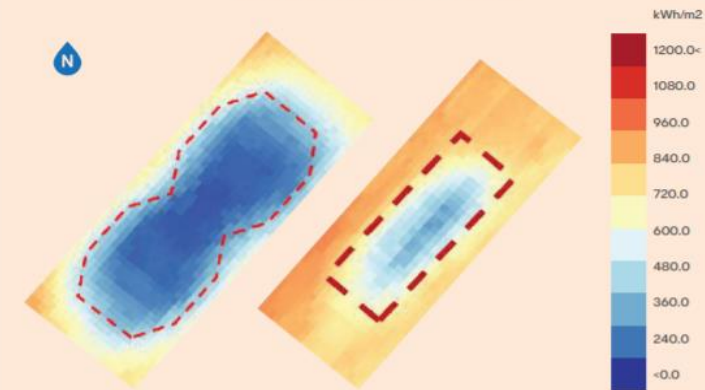
after

The greener bus shelter provides a larger area of cooler temperatures; It incorporates rain harvesting (columns) & solar panels for phone charging stations



before

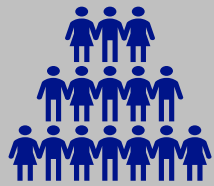
The K.U.L.S Green Bus Shelter design ensures lower solar radiation compared to the original bus shelter



Estimated solar radiation at K.U.L.S Green Bus Shelter

Estimated solar radiation at the original bus shelter

- Solar radiation is assessed based on the amount of direct solar radiation on site, as well as the diffused radiation that is reflected.
- Lower solar radiation means less infiltration of radiation, which tends to make a place cooler.
- Adding panels around the sides of the roof will help reduce solar radiation even more.



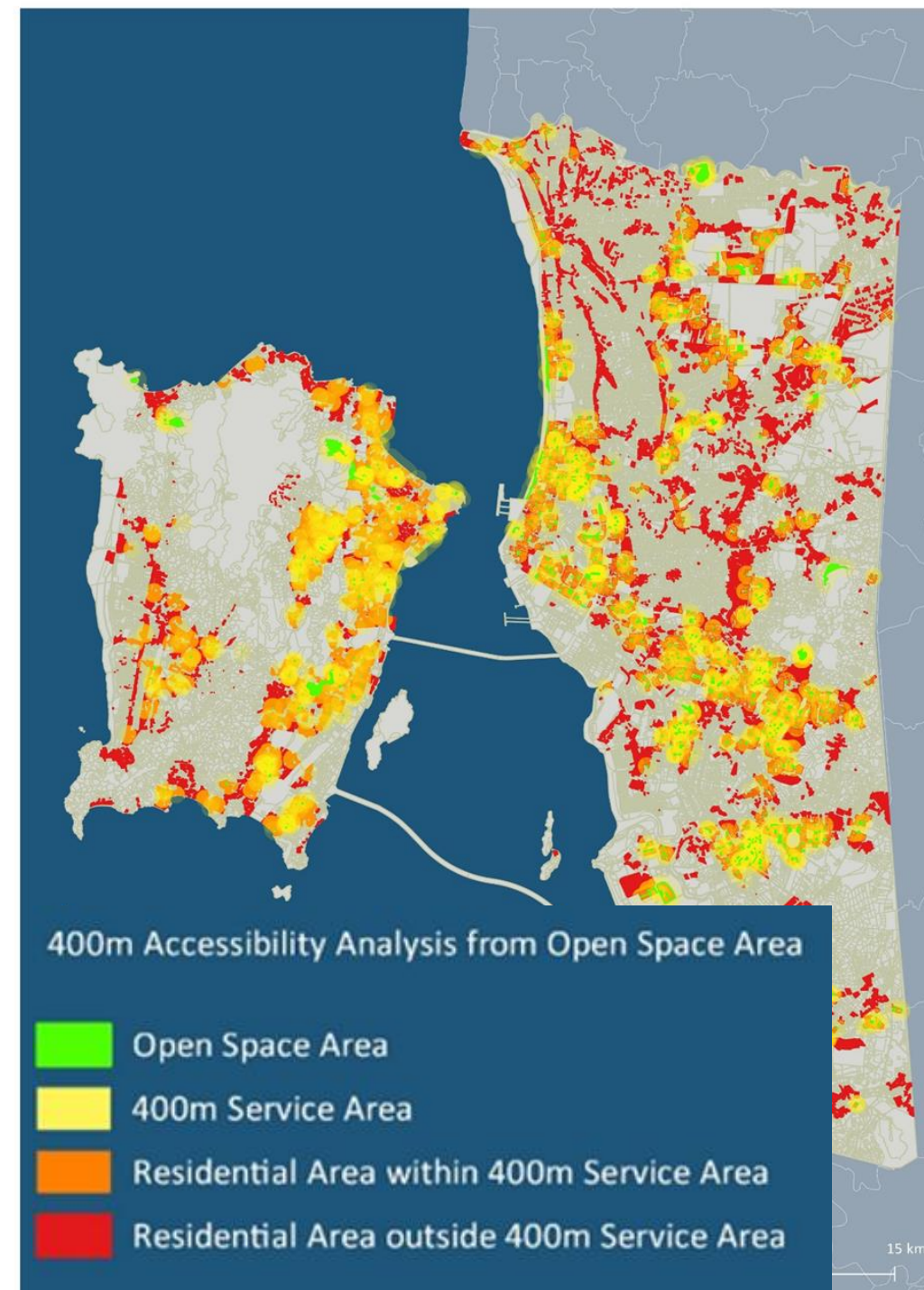
Justice for all Populations

equal access for all populations
of all socio-economic strata

Accessibility

39% of the Penang residential areas do not meet the international benchmark of living within a **5 min walk (400m)** of an open space.

- 20,000+ hectares identified (excluding open space and recreational areas) to achieve:
- **90%** of residential areas are within 400 meters of at least one of these spaces





Resilience & planetary health

Dose, Intensity, Diversity of interventions
for health of people, city & planet

Southeast Asia is one of three regions in the world which will be hardest hit by climate change in the near future.

Special Report on Global Warming of 1.5 ° C, IPCC, October 8th, 2018

Green Connector Project

Green
Connector Project



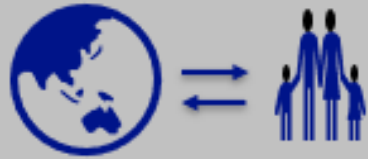
Penang 2030
Vision



Climate
Adaptation
Programme



Create connectivity of green and open spaces through green streets, eco-boulevard, blue corridors and protected areas with aim to create a well-defined network of open spaces that maximises the potential for **social interaction & physical activity**, economic activity and environmental preservation.



Resilience & planetary health

Dose, Intensity, Diversity of interventions
for health of people, city & planet

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NB-SOLUTIONS



HEAT STRESS



FLOODING



SOCIAL



INSTITUTIONAL

Women and girls
programme

Schools programme

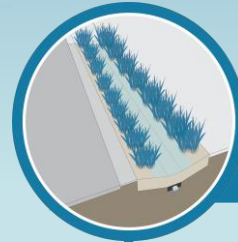
Comprehensive social
vulnerability
assessment

Knowledge transfer
platform

Penang Climate and
Disaster Risk Board

Public health pilot
project

Upstream retention



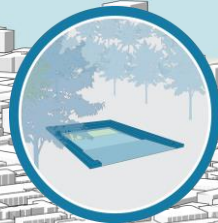
Swales



Green rooftops



Greening parking spaces



Blue corridors



Pocket parks



Connected canopies



Backlane

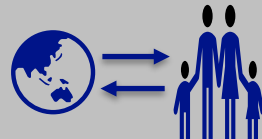
Green Public Spaces: Tonic for Health, Justice & Resilience



Each green space is good for health & resilience of its users



Sufficient green space equitably spread is good for health & resilience of populations



Intensity & diversity & connectivity of green & blue spaces is good for health of people and planet



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