*3rd National Landscape Day 2021*

# Interpreting SDG11 in Landscape Architectural Studio on Community Park Planning & Urban Farming


**Presented by :**

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# Challenges

- Urbanisation
- straining land and resources
- Covid-19 Pandemic
- Air Pollution
- Climate change
- Declining infrastructure

# Sustainable Development Goal (SDG 11)


Make cities and human settlements inclusive, safe, resilient and sustainable

Source: https://www.my.undp.org/content/malaysia/en/home/sustainable-development-goals.html/

- **SDG 11** is important in making cities sustainable means creating career and business opportunities, safe and affordable housing, and building resilient societies and economies.
- It involves investment in public transport, **creating green public spaces**, and improving urban planning and management in participatory and inclusive ways.
- By 2030, enhance inclusive and sustainable urbanization and capacity for participatory, integrated and sustainable human settlement planning and management in all countries.
- Local government target and proximity locals to understand the influence people's attitudes and behaviours to achieve SDG 11.

# SDG 11 Indicators

| Target | Indicator |
| --- | --- |
| **Target 11.7**<br>By 2030, provide universal **access to safe, inclusive and accessible, green and public space**s, in particular for women and children, older persons and persons with disabilities | **Indicator 11.7.1:** Average share of the **built-up area of cities that is open space for public** use for all, by sex, age and persons with disabilities |
| **Target 11.a**<br>Support **positive economic, social and environmental** links between urban, per-urban and rural areas by strengthening national and regional development planning | **Indicator 11.a.1:** Proportion of population living in cities that implement urban and regional development plans integrating population projections and resource needs, by size of city. |

Source: https://sdg-tracker.org/cities

# Landscape Architecture Contribute to SGDs

How does Landscape Architects student contribute to achieve Sustainable Development Goals ?

## urban farming + urban park


Urban Farming at Edible Park in Iskandar Puteri, Taman Tun Dr Ismail in Petaling Jaya, and successful urban parks are River of Life in Kuala Lumpur, Punggol Park and Bishan Ang-Mo Kio Park in Singapore,

# Importance of SDG 11 incorporating park planning

- SDG 11 makes cities important is their density, which emphasizes connections between people, physical and social infrastructure, education, science and cultural diversity.

- Educate students about the SDGs' future achievements on how urban dwellers transform their lifestyle towards sustainable practice.

- Implement transformative park connectors, green infrastructure, much needed to make cities resilient and sustainable.

# SDG 11 integrating in Landscape Architecture Studio

**Studio design process**

**SBEZ 2505 Community landscape and park design Studio**

**Promote SDGs**

**2nd year Landscape Architecture Studio**

**In collaboration with Local municipal (MBJB)**

**Teaching & learning**


**Integrate SDG 11 in design Vocabulary + indicators**

**Project interpretation for sustainable urban faming and urban riverine design**

**Design Manifestation**

**Park connectors & urban farming to improving food security, social cohesion, and well-being**

**Studio Learning experience in SDG 11**

**Responsibility & impact**

- Fostering resilient learners
- Young LA contributes to SDGs

**Expert input lectures**

# Studio Design process

***Community park design***
**People + space + function + environment**

*Identified SDGs*

**IAS**

*Inventory, Analysis & synthesis*

VS

***SDG 11***

*Design development*

*-Design experience*
*-Approach*

*-Concept explicit design aim and objectives*

Understand SDG indicators, site potential / limitations

synthesis ideas & design rationale

Concept & Conceptual development

+

Mapping
design rationale

&

mplementation strategy

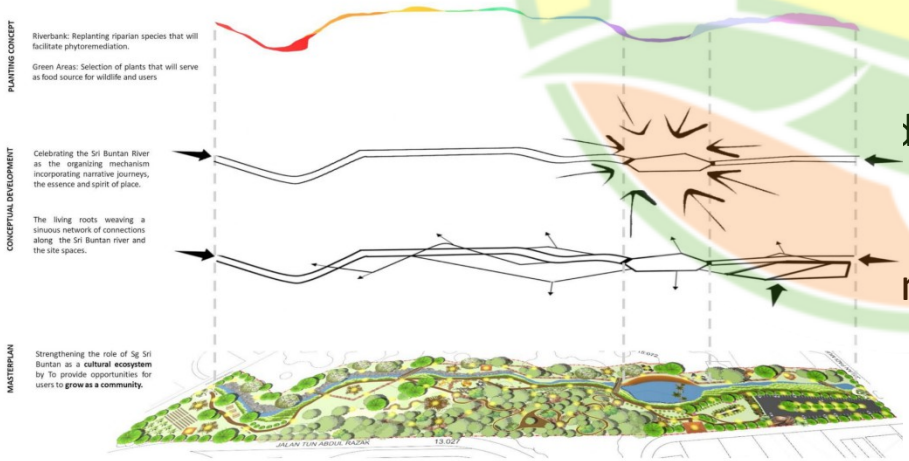
Decision making for Community park planning & urban farming

+

master plan & Detailed area design

&

Design Recommendation and framework



# SDG 11 & DESIGN INDICATORS

| Indicator | Park planning and urban farming design factors |
|---|---|
| **Environment and Health** | i. Ecological Benefits including restoration of biodiversity and improvement of air quality<br>ii. Park Connector and Ecological or Green Corridor<br>iii. Carbon and Water footprints as agricultural energy footprint<br>iv. Treed Streets including composition and structure for urban orchard<br>v. Health benefits generated by farming<br>vi. Natural learning for children<br>vii. Rural-urban linkage on food supply<br>viii. Park planning and spatial planning<br>ix. Urban wildlife species and habitat<br>x. Regulating ecosystem services<br>xi. High-density urban areas<br>xii. Land availability and access |
| **Economic** | i. Local economy of urban resident especially low-income populace<br>ii. Food supply and marketing systems<br>iii. Food security and urban food system<br>iv. Park Amenities<br>v. Green urban architecture<br>vi. Horticulture in small patches<br>vii. Continuous Productive Urban Landscape |
| **Sociality** | i. Social inclusion and equality in urban community<br>ii. Urban Society and Benefits of Park Visitation<br>iii. Socialization of residents in urban greenery<br>iv. Community food security<br>v. Sustainable Development Goal 11<br>vi. Social cohesion and social connectivity<br>vii. Urban Orchard as Play Space for Children<br>viii. Citizen Participation / Social cohesion |

# SDG 11 in urban farming

## APPROACHES

### LOAN/ INCENTIVES/ INVESTMENT
- Consumer be the shareholder of the farm and get reward based on their investment and yield.
- Example: Inner City Farm, Vancouver

### FINANCIAL
- Park and spatial planning
- Example: Rooftop garden,, develop abandoned site

### DEVELOP GREEN SPACE/ BUILDING

### ENVIRONMENT
### LEASE FROM MUNICIPAL GOVERNMENT
- Example: Community garden, schoolyard

### ECONOMY
### TECHNOLOGY
### CLEAN TECHNOLOGY
- Save resources
- Example: verticrop techonology, aquaponic system

### SOCIAL
### BEHAVIORAL
### PRACTICE NEW HABIT
- Example: support local fresh food, practice gardening

## URBAN FARMING

## OUTCOME

11 SUSTAINABLE CITIES AND COMMUNITIES

### ENVIRONMENT
- PROVIDE BIODIVERSITY → AGROBIODIVERSITY
- IMPROVE AIR QUALITY → REDUCE TRANSPORT DISTANCE → REDUCE CARBON EMISSION
- SUSTAINABLE AGRICULTURE

### ECONOMY
- GENERATE INCOME
- JOB CREATION
- ENHANCE LOCAL FOOD ECONOMY

### SOCIAL
- INCREASE SOCIAL INTERACTION
- REDUCE POVERTY
- INCREASE FOOD LITERACY
- IMPROVE HUMAN WELLBEING (PHYSICAL, MENTAL, EMOTIONAL)

## ADVANTAGES

In order to achieve Sustainable Development Goal 11 which is sustainable cities and communities, urban dwellers are encouraged to practice urban farming which can improve the quality of life of the society. The actions to maintain long term community participation in urban farming and improve the city infrastructure system should be took simultaneously so that the outcome of the practice of urban farming will be more significant.

## BOOSTER

- POLICY
- EDUCATION
- COMMUNITY PARTICIPATION
- COMPACT CITY CONCEPT

## CONCLUSION

# SUSTAINABLE CITIES AND COMMUNITIES

## INTRODUCTION


RURAL-URBAN MIGRATION AND URBANISATION HAVE LED TO A RAPID GROWTH OF POPULATION IN THE CITY. HOWEVER, THERE IS LIMIT TO THE URBAN CARRYING CAPACITY. THE CONTINUAL INCREASE IN URBAN POPULATION HAS CAUSED SEVERAL PROBLEMS.

AFTER A LONG TIME

- DEPLETION OF NATURAL RESOURCES
- INADEQUATE FOOD SOURCES
- ENVIRONMENTAL ISSUES
- URBAN POVERTY

## DEFINITIONS & SOLUTIONS

### SUSTAINABLE CITIES AND COMMUNITIES

11 SUSTAINABLE CITIES AND COMMUNITIES

source: https://www.un.org/sustainabledevelopment/cities/

A city or place which can constantly fulfill the demands of the citizens or communities using the available resources. (Macke, Sarate et al., 2019)

#### GOALS & CHARACTERISTICS
- SAFE
- INCLUSIVE
- RESILIENT
- LIVABLE

### GREEN ECONOMY

GREEN ECONOMY

source: https://sustainabledevelopment.un.org/partnerships/greeneconomy

Economy which can improve quality of life of people, reduce negative impacts on environment and conserve the biodiversity and ecosystem. (Abdelaal and Sallam, 2019)

- Protect biodiversity
- Develop green industry
- Compact city concept
- Increase efficiency of infrastructure system
- Increase and protect green areas

### SUSTAINABLE AGRICULTURE

The production of crops and livestock to meet the needs and simultaneously preserve the resources in order to improve the quality of life of society. (Heidelberger, Smith et al., 2017; Valley and Wittman, 2019)

### URBAN FARMING

The growing of fruits and vegetables in the urban area for commercial purpose instead of own consumption. (Valley, W. and H. Wittman, 2019).

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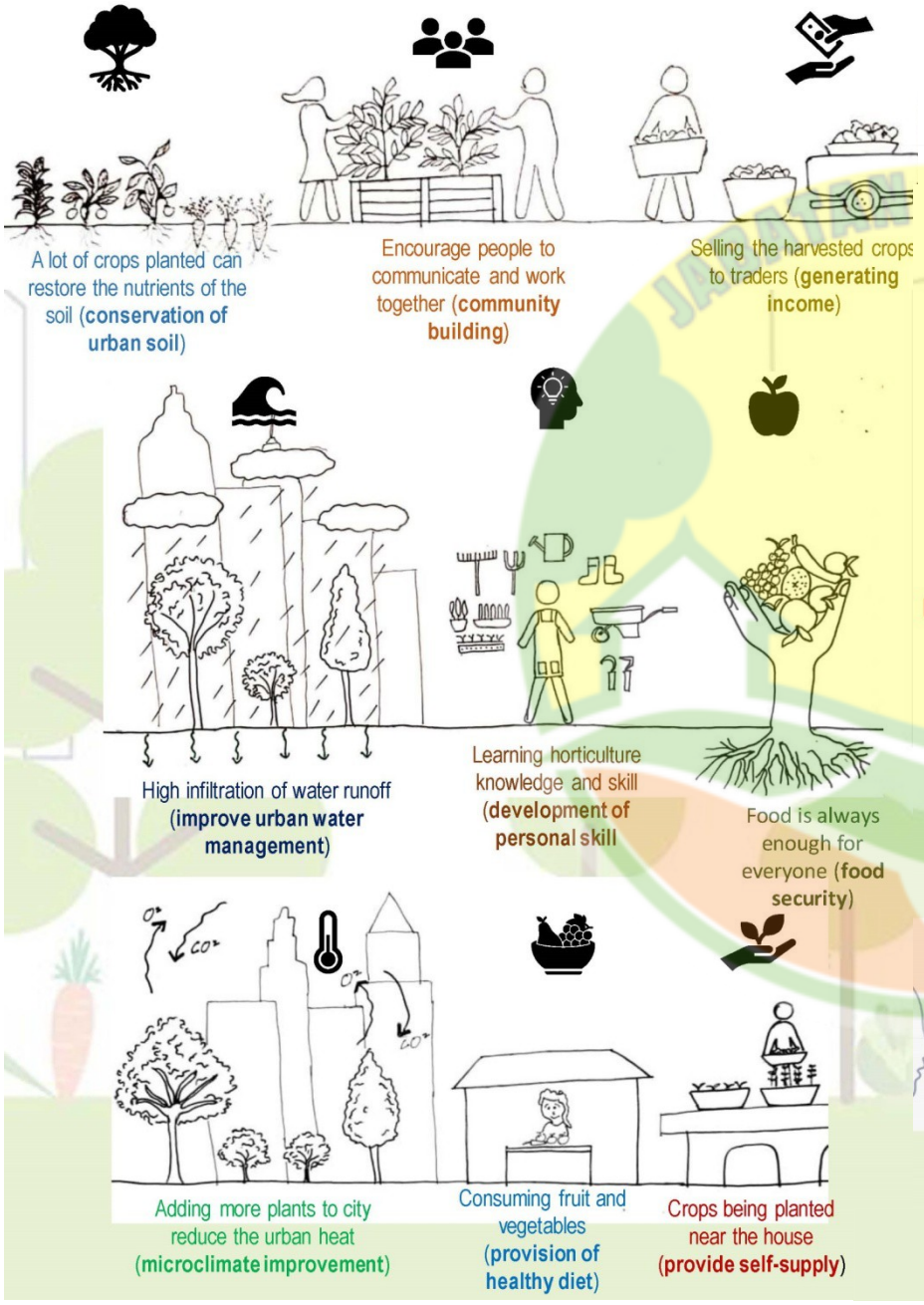
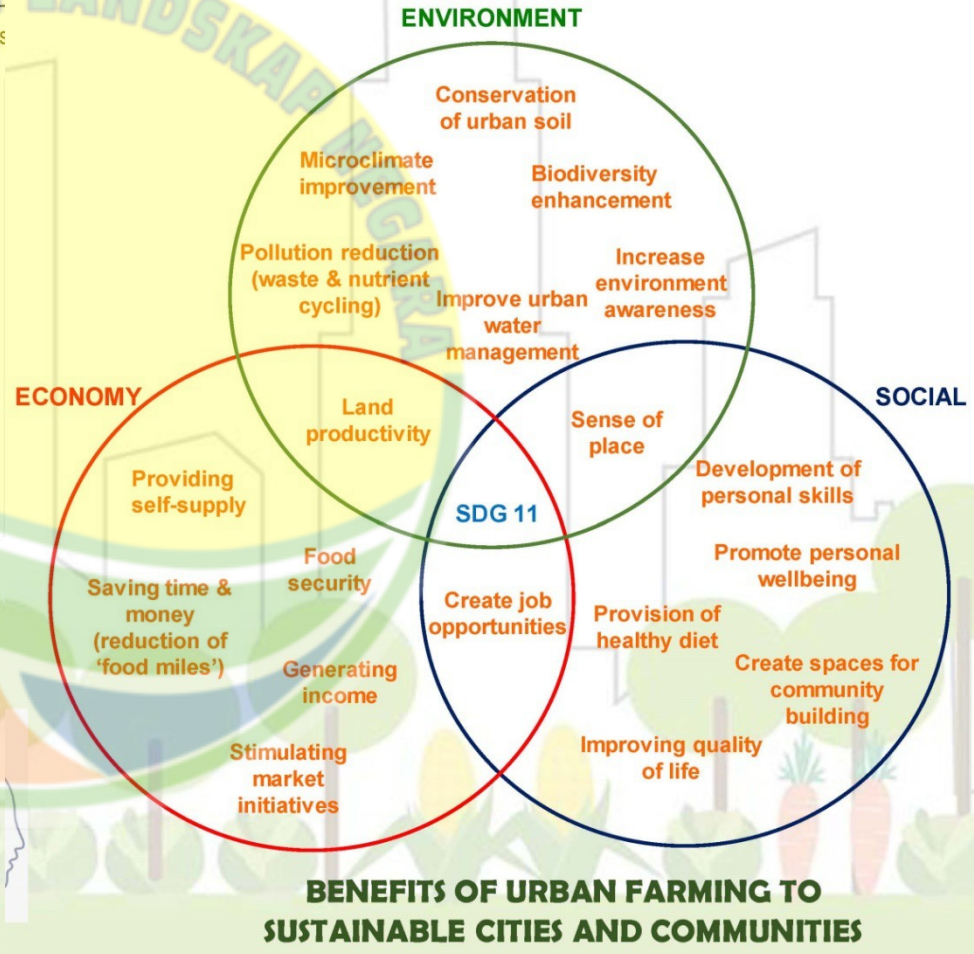
# SDG 11 in urban farming



# Urban Greenery

## SOCIALIZATION OF RESIDENTS IN URBAN GREENERY

### VOCABULARY

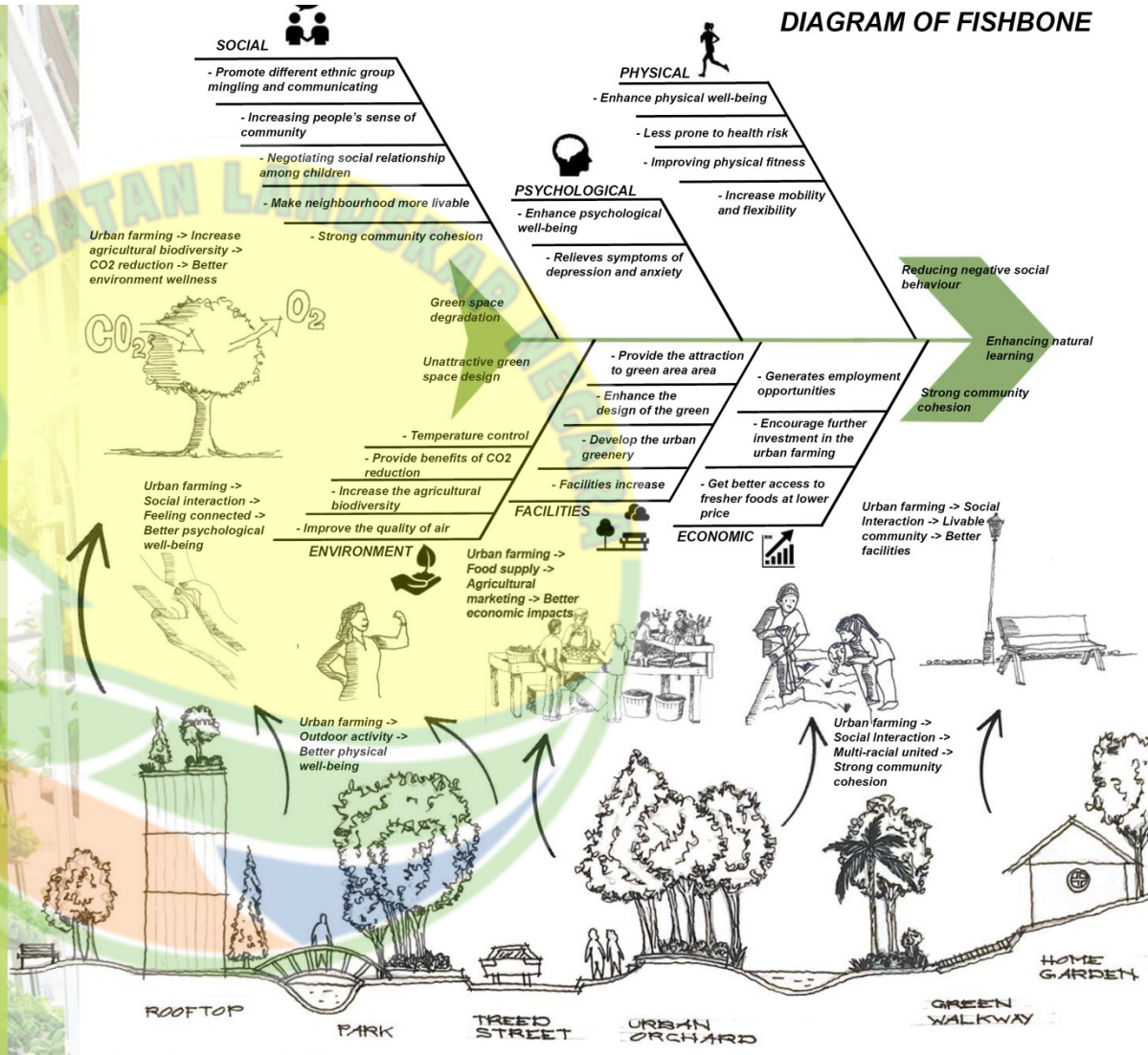
Urban farming, also called urban agriculture, is all about producing food inside city limits. It has its challenges, but it also offers many benefits like increased food security, community involvement and more.

Besides, it is also give a huge impact on socialization of residents especially for people who live in the city. When having an urban farming in the residential, people have come up with many unique approaches to urban farming that work in a variety of different conditions and settings. By having these kind of activities people can create a sense of belonging and indirectly strengthen the social ties among residents.

### DEFINITION

Urban farming can be found in pretty much every area of the city. In public spaces and parks, next to apartment buildings and condos, on top of rooftops, next to restaurants and other businesses, in backyards, at schools and anywhere else you can think of.

Urban farming adds and preserves green space in cities, providing places for residents to come together, strengthen bonds, and build strong community cohesion. Moreover, urban farming also giving an impact to reducing negative social behaviour, promote different group mingling and communicating, make neighbourhood more livable and and more in socialization aspect. It connects people with the earth and the source of their food as well as with each other. Besides, urban farms offer critical opportunities for youth leadership, intergenerational collaboration, and cross-cultural learning.

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### CONCLUSION

In conclusion, urban farming had confirmed that this type of activity eventually foster a social environment that enhances the activity itself by providing participants with a social network that becomes important particularly when they are feeling isolated. In fact, urban farming also proves to be "an important instrument for developing a sense of belonging and a sense of communal ownership that facilitates exchanges not only in the group, but also between the group and the rest of the community" (Bergeron et al., 2002).

# Treed Streets and Urban Orchard

LITERATURE REVIEW: **Treed Streets including composition and structure for urban orchard**

VOCABULARY

- **Treed Streets**
  - Boulevard
  - Avenue
  - commonly monocultured
- **Composition and structure**
  - Form
  - Layout
  - Design
- **Urban orchard**
  - Fruit & nut trees in urban area
    - Restored old orchards
    - Fruit trees in unutilised land

Definitions

- A street or road lined with trees on the side to provide shade and greenery.
- Plant selection and spatial planning.
- A group of fruit or nut trees planted in an urban area.

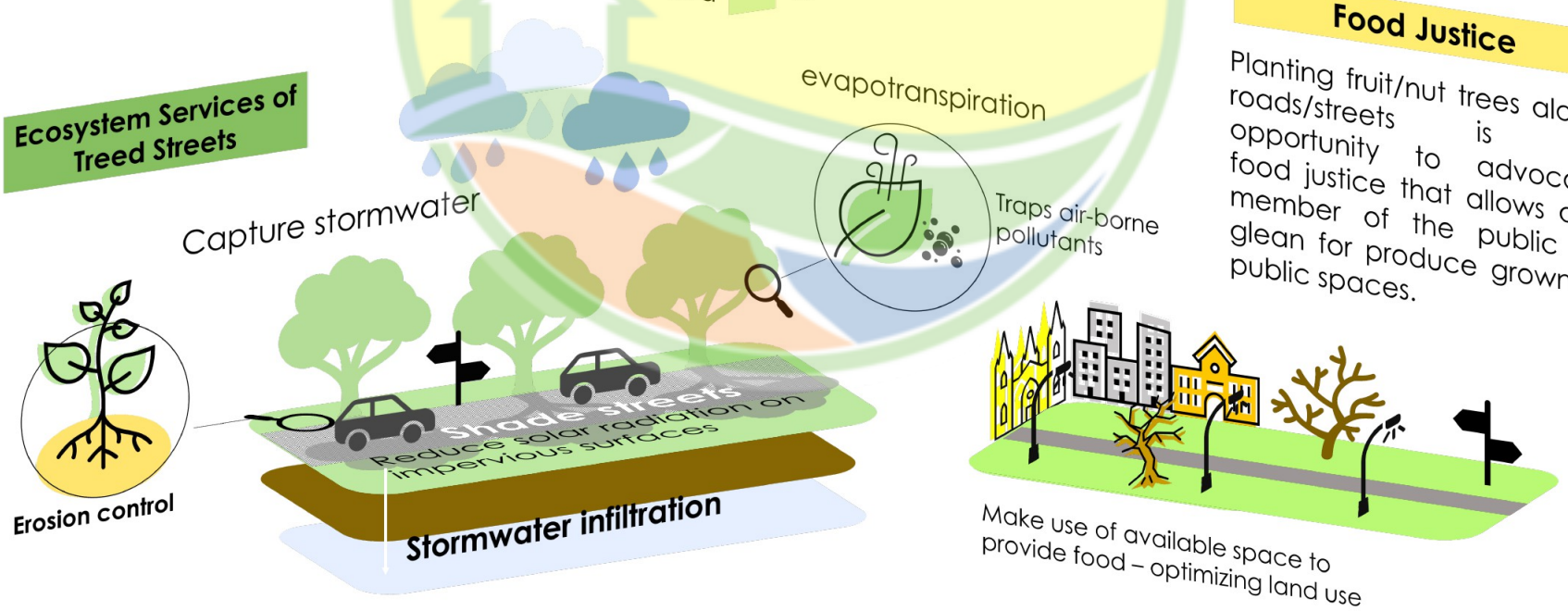
**Public Food**

Fruits or any other food sources that is grown on public property. Anyone is free to pick or harvest at anytime, for consumption or profit alike.

**Food Justice**

Planting fruit/nut trees along roads/streets is an opportunity to advocate food justice that allows any member of the public to glean for produce grown in public spaces.

**Ecosystem Services of Treed Streets**



# Community Park planning and urban farming design

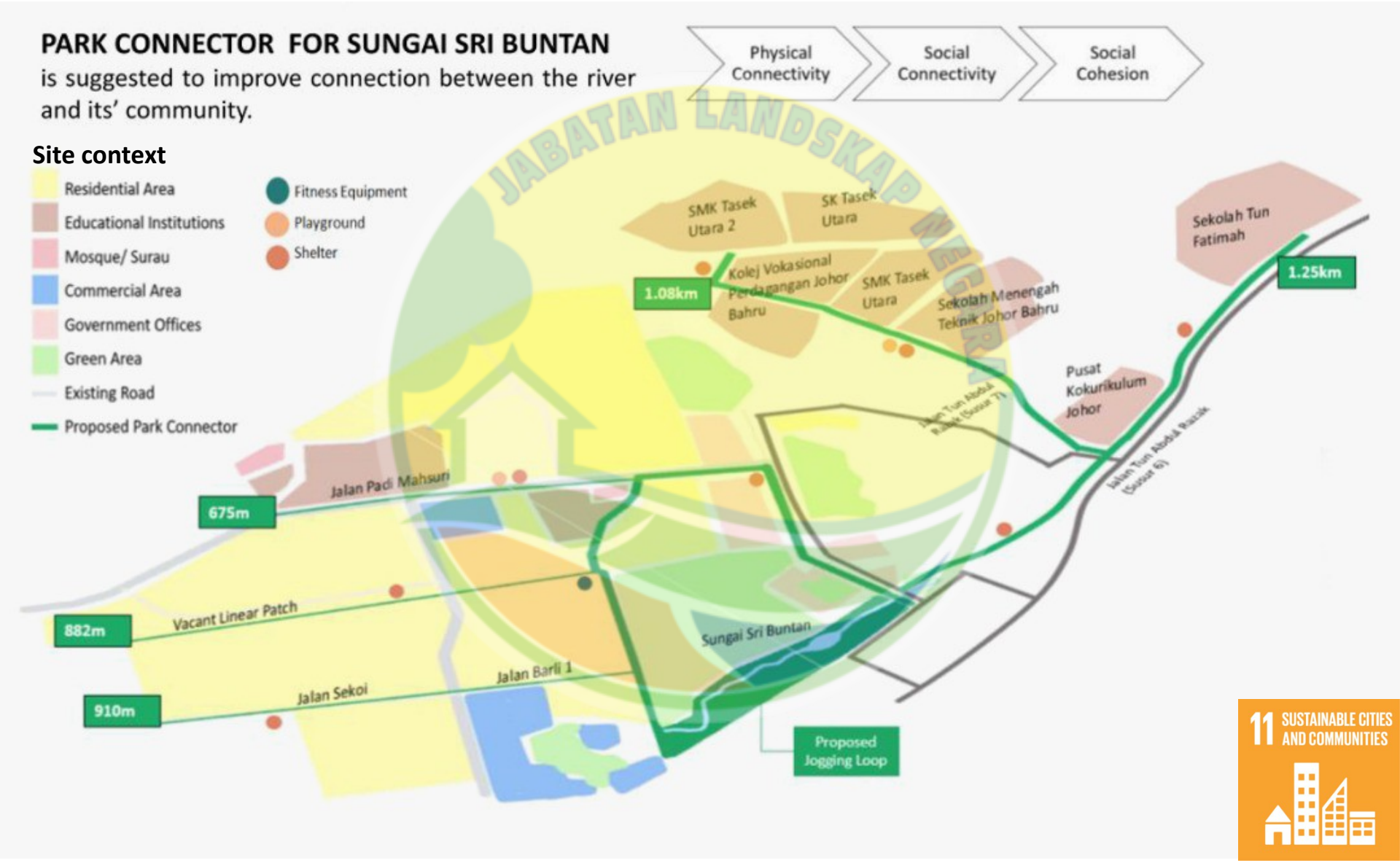
## Sungai Sri Buntan, Johor Bahru, Johor

- Sungai Sri Buntan is a 646m long river located at Kampung Muafakat, Johor Bahru, Johor.
- The river begins at the stream from the central area of Bandar Baru Uda and feeds toward Sungai Danga. The area of the proposed site is determined along the river which is 1.34ha.
- The design area is a stretch of secondary forest, grassed areas and disturbed vegetation, and it shall be planned and designed in relation to the recreational scheme designated by the Majlis landscape plan.
- The studio's philosophy based on the World Economic Forum Syndemic View as an underpinning of this studio. Three themes are to be adapted to this studio teaching, namely;

i. **Climate Change;**
ii. **Ecological Health and Wellbeing;**
iii. **Human Health and Wellbeing;**
iv. **Community Farming and Connectivity ***

# Sungai Sri Butan, Johor Bahru

# Park Connector




11 SUSTAINABLE CITIES AND COMMUNITIES

# Proposed Sg Sri Buntan Park & Urban Farm

# Sg. Sri Buntan Park activities

Green Gym (Saturday Morning), Farmers Market (Thursday Morning), Community Workday (Every Sunday)

**Themed Events**

Gardening Workshop

**New Year, New Tree**
Practical on Plant Propagation
Workshop on planting preparation

Appreciation Day

**Teachers' Day**
**Childrens' Day**
**Family Day**

**Cultural**

**Chinese New Year celebration**
Potluck party, Festivals

**Hari Raya Aidilfitri Celebration**
Open 'Park', Food Festival

**Deepavali Celebration**
Making Diyas handcraft, Food Festival

JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC

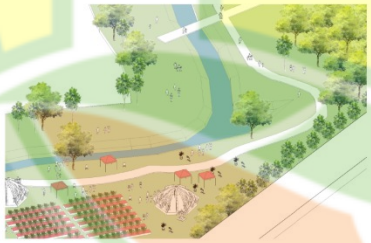
**Annual**

**Green Gym:**
**World Cancer Day**
Charity Walk,
Cancer awareness talk

**Earth Day**
Recycling activity

**Merdeka Day Celebration**
Merdeka theme handcraft,
Merdeka Walk

**Farmers Market**
Opportunities for local farmers to promote and sell their fresh products

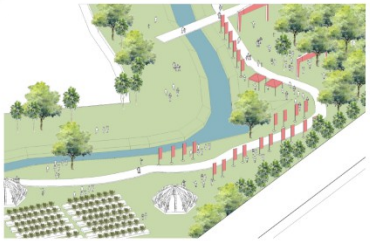


**Gardening Workshop January**
Besides only focus on public exposure and skills into planting preparation, this initiative encourage visitors to start a new year resolution with a new tree to be planted

**Public Art Sculpture/ Art Class**
With various types of handcraft sculpture made from existing sources by the community can instill sense of belonging

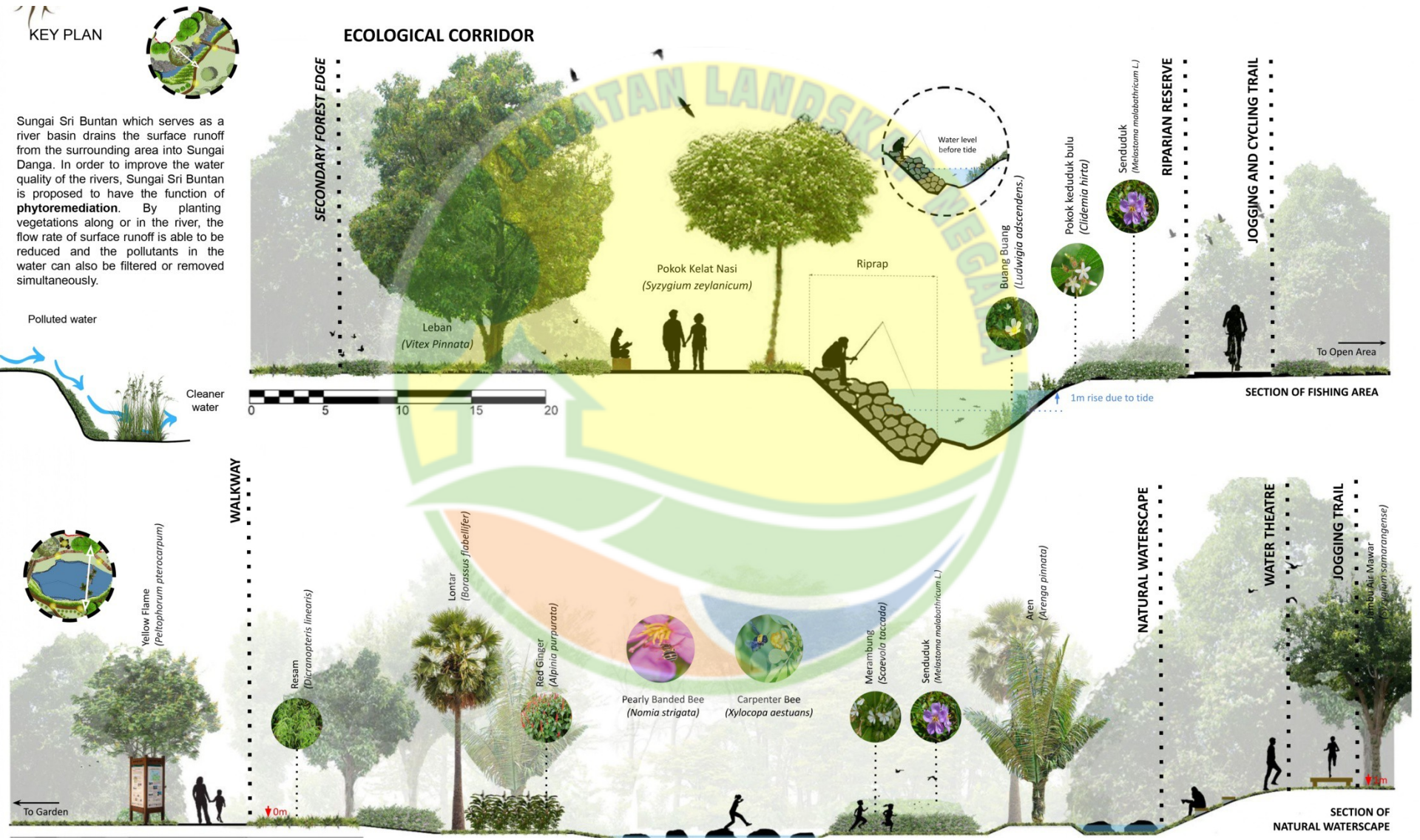
**Green Gym (Yoga/Taichi) Every Saturday Morning**
Participating in yoga classes can provide an environment for group healing and support

**Open Kitchen/ Picnic**
Picnic by the river with fresh foods from the Urban Farm straight into their table



**Family Day/ Traditional Games Fair December (School Holiday)**
event that is intended to allow loved ones to take a respite from their daily lives and enhance social engagement between communities

# Planting design



# Detailed area design

## 01 DETAILED AREA: ENTRANCE GARDEN

GREEN CORRIDOR AT SUNGAI SRI BUNTAN JOHOR BAHRU, JOHOR

UTM UNIVERSITI TEKNOLOGI MALAYSIA

ERXES

### Going back to our ROOTS

**Design Aim**

To enhance Sg Sri Buntan as a cultural ecosystem service through providing sense of place and belonging among the community.

**Design Objective**

1. To achieve social cohesion through sense of place and shared heritage/culture
2. To increase biodiversity through introduction of native species that attract wildlife

### Conceptual Development

Synthesis Plan

The area has potential views to retention pond and can be a focus point to draw users to the site.

Concept

Going back to our **roots**:
To address social cohesion, there must be a basis, or 'root' that can be shared among the community.

Functional diagram

All circulation will be directed towards the 'root' which symbolize the '**journey**' of returning to our roots.

Softscape concept

The 'journey' of going back to the 'root' is enhanced by various **activities** that build relationships among community.

Aerial View

Selection of vegetation is intended to remind of the value plants in the past and to create remnants of 'landscape of the past'.

In summary, all elements work together to foster connections with nature, and with people or the community.

**Softscape:** Bringing the value of plants as an ecological asset to restore soil health in the site. Trees from Leguminosae family are mainly chosen.

- Pokok Saga *Adenanthera pavonina*
- Yellow Flame *Peltophorum pterocarpum*
- Petai Belalang *Senna siamea*
- Asam Jawa *Tamarindus indica*
- Yellow Saraca *Saraca Thaipingensis*
- Tembusu *Cyrtophyllum fragrans*

**Detailed Plan** Scale 1:200


**Section of Bamboo Pavilion** Scale 1:50

# Detailed area design

## 02 DETAILED AREA: ENTRANCE GARDEN

GREEN CORRIDOR AT SUNGAI SRI BUNTAN JOHOR BAHRU, JOHOR

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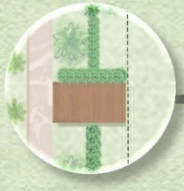
### Going back to our ROOTS



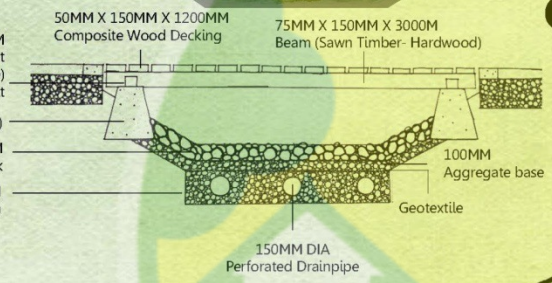
Yellow Saraca
*Saraca thaipingensis*

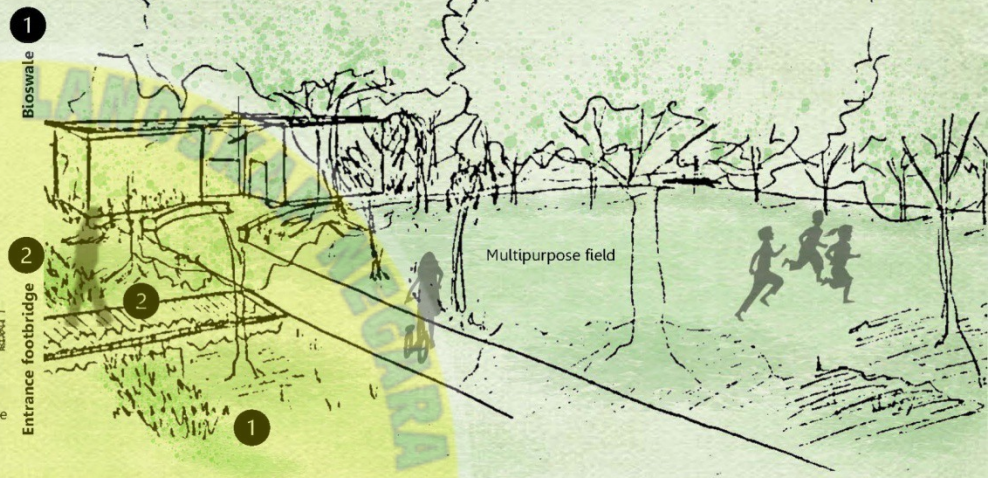
Senduduk
*Melastoma malabathricum*

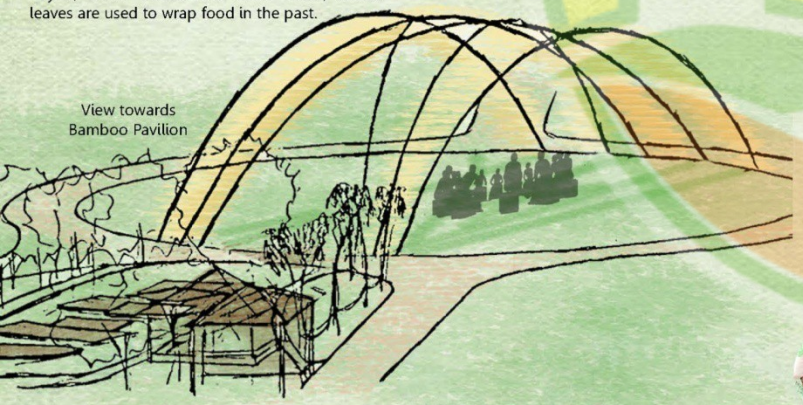
Daun Kadok
*Piper sarmentosum*

- Senduduk *Melastoma malabathricum*
- Lengkuas *Alpinia galanga*
- Kepala Puyuh *Molineria latifolia*
- Kunyit *Curcuma longa L.*
- Eleocharis dulcis *Water chesnut*
- Daun Kadok *Piper sarmentosum*
- Daun Lerek *Phrynium maximum*

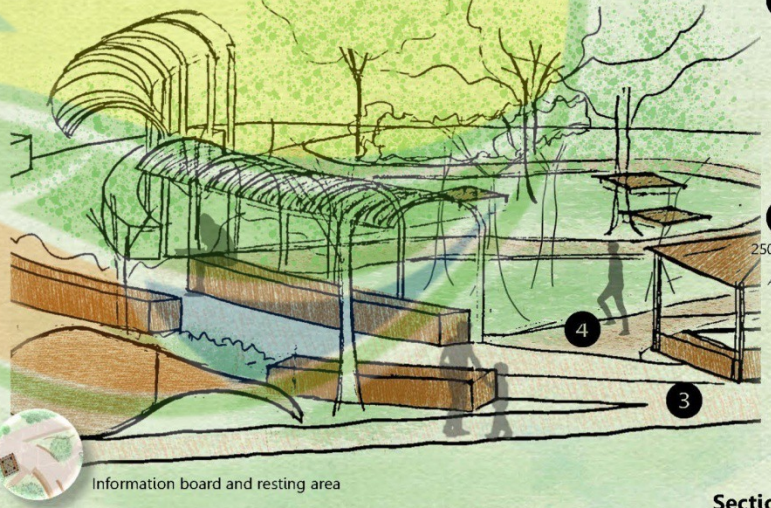
**Softscape:** Shrubs which bring value to people in a practical manner are chosen such as Kepala Puyuh, Daun Kadok and Daun Lerek, which leaves are used to wrap food in the past.



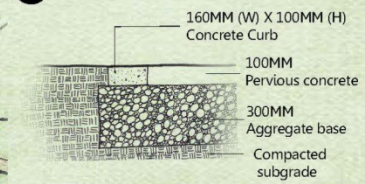



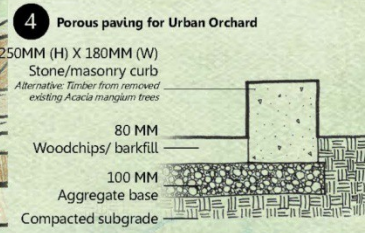
View towards Bamboo Pavilion






Information board and resting area



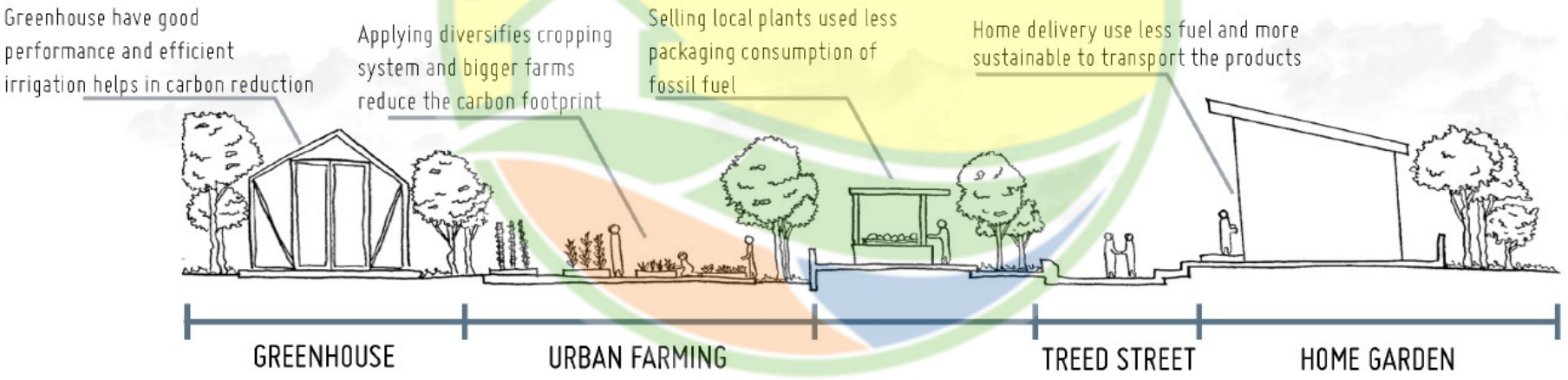




**Section of Entrance Area** Scale 1:100

# Conclusion

•The initiated learning process for **SDG indicators, targets, and design implementation** contributed to sustainable development in the locality.

•Therefore **SDG 11 integrating into Landscape Architecture Design Studio** as an inspiration and supporting United Nations sustainable development Goals. Moreover, undergraduate design output urges local communities' positive actions to create **sustainable urban farming** and **ensure a healthy living lifestyle.**




Urban farming and Community park benefits for food security, social cohesion and park connector.

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Goal 11 indicators
https://sdg-tracker.org/cities

Malaysia SDG report rating :
https://dashboards.sdgindex.org/static/countries/profiles/Malaysia.pdf

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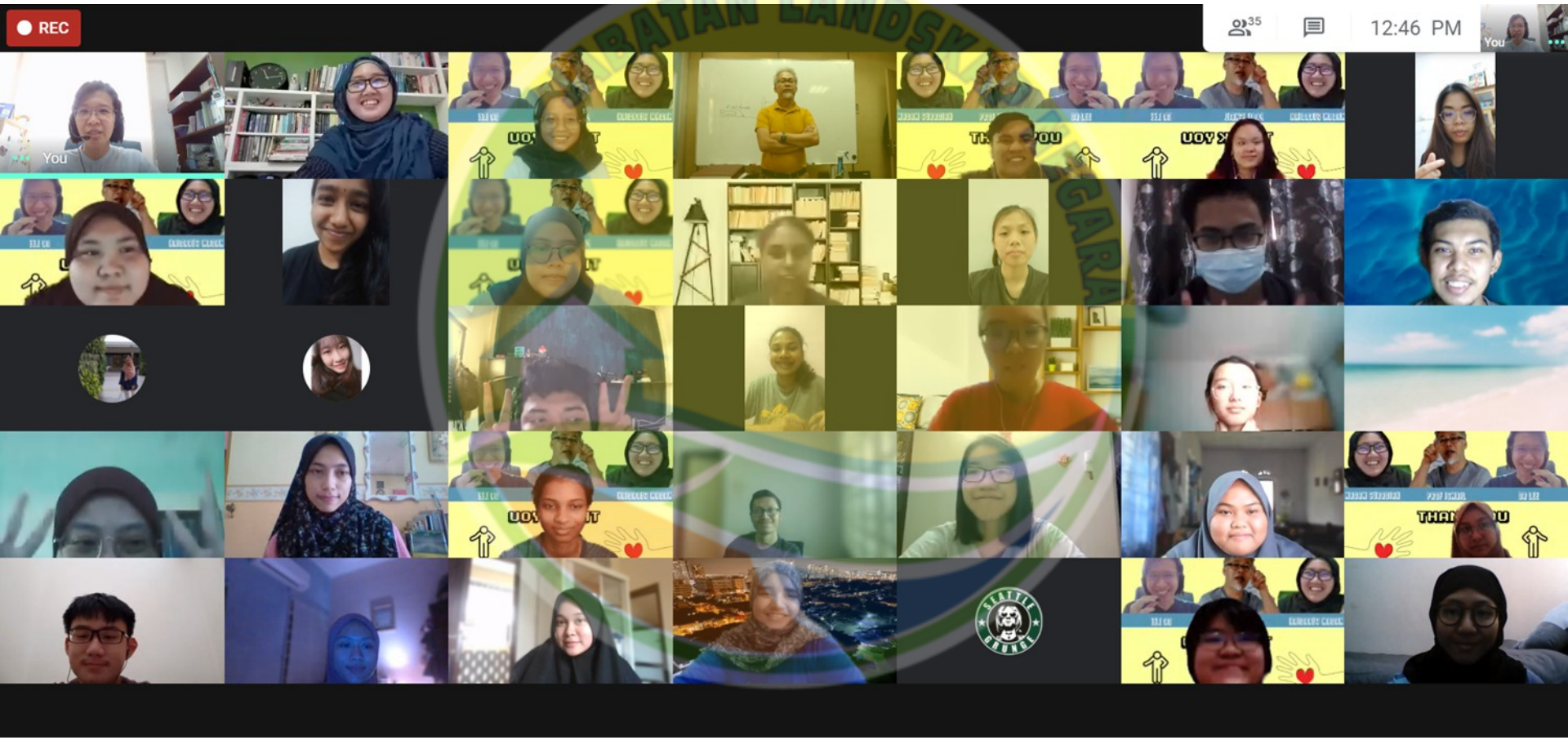


Xerxes.Studio (Semester 1: 2020/2021)