SEPANG

Global Environment Centre

SER SOCIETY FOR ECOLOGICAL RESTORATION

DISOKONG OLEH:

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CYBERJAYA EDUCATIONAL

Cyberjaya Lake Gardens Ecological Restoration Project

Cyberjaya Lake Gardens Ecological Restoration Project

Cyberjaya Lake Gardens is a 400-acre urban park that acts as the main green space for Cyberjaya. The area includes a visitor information centre, boardwalks, a lookout tower, a children's playground, a 15-acre main lake, and 29 acres of natural wetlands. The lake gardens are commonly used by local residents and students from nearby universities for recreational activities such as jogging and picnicking. However, the previous land use of the area included oil palm plantations, secondary forest, scrubland, and mining land. These activities caused damage to natural habitats, lowering the water quality and led to a decline in biodiversity.

To address these issues, the Community based Ecological Enhancement of Cyberjaya Lake Gardens project was introduced to support lake and wetland protection and restoration. One of the main goals of the project is to improve biodiversity. Therefore, a rapid environmental assessment was carried out, including surveys of plants and animals, water quality studies, and drone assessments to support conservation planning and long-term environmental sustainability. The project aksi gas established Cyberjaya Educational Trail as part of Environmental Education programme.

Name:

Contact Number:

Email:

School/Organisation:

Number of People:

Date/Time: *(data collection)*

State:

Location (site area):

Lake's Name:

River's Name:

River Basin's Name:

Weather: *(Cloudy, sunny, etc.)*

Has it rained in the past 24 hours? Was it heavy?

STATION 1:
ANIMAL SPOTTING

An ideal spot for observing animals around

This area supports animals spotting and nature interpretation. You can observe wild animals and natural processes in a calm setting. Watch how species interact with their environment. Listen to sounds and notice changes around you.

What animals can you discover today?

Plantain squirrel
Callosciurus notatus

This beautiful squirrel, with an orange belly and a fluffy tail, is an amazing tree-dweller.

It can often be found climbing and jumping from one tree to another.

Long-tailed macaque
Macaca fascicularis

Do you know that these monkeys have a diverse diet. They eat everything that's available so, don't leave your food waste and/or belongings unattended.

Monitor Lizard
Varanus salvator

They are generally shy but an excellent swimmer, using their flattened tails like rudders, and can stay submerged for up to 30 minutes.

ACTIVITY: IDENTIFY THE BIRDS

PLEASE MARK AND TAKE PHOTOS (IF NECESSARY) OF THE BIRDS FOUND.

Bil.

Helang Hindek
Nisaetus cirrhatus

Bil.

Cencala Hitam Putih
Rhipidura javanica

Bil.

Pekaka Belukar
Halcyon smyrnensis

Bil.

Source: birdsoftheworld

Beberek Leher Hijau
Merops viridis

Bil.

Source: Wikipedia

Kelicap Bukit
Cinnyris jugularis

Bil.

Source: Wikipedia

Belatuk Kecil Sunda
Yungipicus moluccensis

Bil.

Source: Wikipedia

Merbah Kapur
Pycnonotus goiavier

Bil.

Source: ebird.org

Sepah Bunga Pelangi
Prionochilus percussus

Bil.

Source: birdsoftheworld

Bangau Kecil
Egretta garzetta

: Invasive species

Bil.

Source: birdguide.club

Pucung Kerbau
Bubulcus ibis

Bil.

Source: Russia.birds.watch

Pucung Kuak
Nycticorax nycticorax

Bil.

Pucong Kecil
Butorides striata

Bil.

Ciak Pokok
Passer montanus

Bil.

Source: Wikipedia

Pipit Pinang
Lonchura punctulata

Bil.

Gagak Paruh Lampai
Corvus enca

Bil.

Source: Wikipedia

Gagak Rumah
Corvus splendens

Bil.

Source: ebird.org

Gagak Paruh Besar
Corvus macrorhynchos

Bil.

Source: birdsoftheworld

Murai Kampong
Copsychus saularis

Bil.

Perling Mata Merah
Aplonis panayensis

Bil.

Source: birdsoftheworld

Merbuk
Geopelia striata

Bil.

Source: birdsoftheworld

Tekukur
Streptopelia chinensis

Source: ebird.org

Punai Gading
Treron vernans

Source: birdsoftheworld

Punai Daun
Treron olax

Source: ebird.org

Burung Layang-Layang Pasifik
Hirundo tahitica

Source: birdsoftheworld

Layang-Layang Rumah
Apus nipalensis

Source: birdsoftheworld

Tirjup Ekor Panjang
Lanius schach

Source: birdsoftheworld

Tiong Jawa
Acridotheres javanicus

Source: Wikipedia

Tiong Gembala Kerbau
Acridotheres tristis

Source: birdsoftheworld

Kelicap Kunyit
Aegithina tiphia

Source: birdsoftheworld

Burung Kunyit Besar
Oriolus chinensis

Source: Wikipedia

Perenjak Ekor Panjang
Orthotomus sutorius

Source: birdsoftheworld

Rolla Paruh-Merah
Eurystomus orientalis

Source: ebird.org

Merbah Belukar
Pycnonotus plumosus

ACTIVITY: IDENTIFY THE REPTILES

PLEASE MARK AND TAKE PHOTOS (IF NECESSARY) OF THE REPTILES FOUND.

1. TORTOISE

Bil.

Source: Greg Hume

Kura-kura telinga merah
Trachemys scripta elegans

Bil.

CR

Source: onlinelibrary.wiley.com

Tuntung Sungai
Batagur affinis

Bil.

CR

Source: www.zoothailand.org

Baning Perang
Manouria emys

Bil.

Black Marsh Turtle
Siebenrockiella crassicollis

Bil.

Source: ecologyasia.com

Malayan Box Terrapin
Cuora amboinensis

Note: *(List or draw the characteristics of the species found if they are not included in the guidelines.)*

2. SNAKE

Bil.

Ular Sawa Burung
Chrysopelea paradisi

Bil.

Source: flickr

Ular Tikus Biasa
Ptyas mucosa

Note: *(List or draw the characteristics of the species found if they are not included in the guidelines.)*

3. LIZARD

Bil.

Cicak Hijau
Bronchocela cristatella

Bil.

Sesumpah Kuning
Calotes versicolor

Bil.

Biawak Air
Varanus salvator

Bil.

Source: pinterest

Cicak Rumah Ekor Duri
Hemidactylus frenatus

Note: *(List or draw the characteristics of the species found if they are not included in the guidelines.)*

ACTIVITY: IDENTIFY THE AMPHIBIANS

PLEASE MARK AND TAKE PHOTOS (IF NECESSARY) OF THE AMPHIBIANS FOUND.

1. FROG

Bil.

Source: www.majalahsains.com

Katak Rumput Asia
Fejervarya limnocharis

Bil.

Source: Wikipedia

Katak Pokok Jalur Biasa
Polypedates leucomystax

Bil.

Source: Wikipedia

Katak Anak Sungai Kesat
Chalcorana raniceps

Bil.

Source: Ecology Asia

Katak Hijau
Hylarana erythraea

Bil.

Source: calphotos.berkeley.edu

Katak Mulut Sempit
Microhyla heymonsi

Bil.

Source: Ecology Asia

Katak Pokok Malaya
Polypedates discantus

Bil.

Source: www.researchgate.net

Katak Bentong/ Katak Kembong
Kaloula pulchra

Note: *(List or draw the characteristics of the species found if they are not included in the guidelines.)*

ACTIVITY: IDENTIFY MAMMALS

PLEASE MARK AND TAKE PHOTOS (IF NECESSARY) OF THE MAMMALS FOUND.

1. SQUIRREL

Bil.

Kenchong
Tupaia gfis

Bil.

Tupai Ekor Pendek
Sundasciurus lowii

Bil.

Tupai Merah
Callosciurus notatus

Bil.

Tupai Asia Tiga Warna
Callosciurus prevostii

Bil.

Tupai Dada Kelabu
Callosciurus caniceps

Bil.

Source: vil.sandi @ flickr

Tupai Terbang Merah
Petaurista petaurista

Note: *(List or draw the characteristics of the species found if they are not included in the guidelines.)*

2. MOUSE

Bil.

Tikus Belukar
Rattus tiomanicus

Bil.

Tikus Lembah
Sundamys muelleri

Bil.

Source: Wikipedia

Tikus Mondok Ekor Panjang
Leopoldamys sabanus

Bil.

Source: Wikipedia

Tikus Bangkung
Maxomys whiteheadi

Note: *(List or draw the characteristics of the species found if they are not included in the guidelines.)*

3. BAT

Bil.

Cecadu Pisang
Cynopterus brachyotis

Bil.

Cecadu Sayap Bertitik
Balionycteris maculata

Bil.

Source: Wikipedia

Commerson's Leaf-nosed Bat
Hipposideros commersoni

Bil.

Source: Wikipedia

Little Red Flying Foxes
Pteropus scapulatus

Note: *(List or draw the characteristics of the species found if they are not included in the guidelines.)*

4. OTTER

Memerang Hidung Berbulu
Lutra sumatrana

Memerang Licin
Lutrogale perspicillata

Note: *(List or draw the characteristics of the species found if they are not included in the guidelines.)*

5. MONKEY

Lutong Ceneka
Presbytis siamensis

Lotong Cengkung
Trachypithecus obscurus

Kera
Macaca fascicularis

Lotong Kelabu
Trachypithecus cristatus

Beruk
Macaca nemestrina

Note: *(List or draw the characteristics of the species found if they are not included in the guidelines.)*

STATION 2:
NATURAL BIOTIC

A natural wetland with a variety of native flora

Step into this natural wetland, where water from the main lake flows into this area and nourishes the thriving mixed of native vegetation. Along the boardwalk, you can found tangling pitcher plants, lush ferns and some water bird around the area of freshwater ecosystems.

What can be spotted in the area?

Slender pitcher plant
Nepenthes gracilis

The plants can vary greatly in colour, from plain green to red, maroon, dark purple, or speckled, sometimes even on the same plant.

Shrubby Dillenia
Dillenia suffruticosa

Its large, broad leaves are traditionally used across Southeast Asia as a biodegradable, natural alternative to plastic bags for wrapping food items like tempeh or rojak.

Climbing Swamp Fern
Stenochlaena palustris

This fern has better nutritional content than many common vegetables. It is a rich source of antioxidants, iron, fiber, potassium, phosphorus, and essential omega-3 and omega-6 fatty acids.

Malabar Melastome
Melastoma malabathricum

The vibrant flowers are highly attractive to bees and butterflies (especially for pollen), while the fruits are used to produce a black dye, while the roots can yield a pink dye.

STATION 3:
PEATLAND

A unique and significant guardian against climate change

Terrestrialisation forms peat by filling shallow water bodies, while paludification forms peat when land becomes permanently waterlogged by rain and groundwater, producing dark tea-coloured peat water.

What is the difference between both water?

Feature	Terrestrialisation	Paludification
Starts in	Open / shallow water	Dry or mineral soil
Main water source	Surface water (lake, pond)	Rainwater & groundwater
Water movement	Standing / slow	Poor drainage, trapped
Water colour	Brown / tea-coloured	Dark brown to black
Water type	Freshwater (sometimes stained)	Freshwater, highly acidic
Reason for dark colour	Plant decay in water	High tannins from peat
How peat forms	Water body fills up	Soil becomes flooded

Fighting Fish
Betta livida

A beautiful freshwater fish endemic to the peat swamps of Selangor.

Bufo kumquat
Ingerophrynus kumquat

This species of toad is a peat swamp specialist and is endemic to the state of Selangor.

ACTIVITY: IDENTIFY PLANTS

PLEASE MARK AND TAKE PHOTOS (IF NECESSARY) OF THE PLANTS FOUND.

1. RIVERINE PLANTS

Pokok Pinang
Areca catechu

Pokok Nipah
Nypa fruticans

Pokok Kundoh
Macaranga tanarius

Pokok Buah Salak
Salacca zalacca

Pokok Buluh
Gigantochloa ligulata

Pokok Akasia Lebar
Acacia mangrum

Pokok Ara
Ficus microcarpa

Source: birdsoftheworld

Kasai
Pometia pinnata

Source: birdsoftheworld

Akar Rarak
Anaxagorea javanica Blume

: Invasive species

Source: birdsoftheworld

Bemban
Donax canniformis

Source: mybis.gov.my

Nipis Kulit/ Bangas Putih
Memecylon dichotomum

Berunai
Antidesma salicinum

Source: birdsoftheworld

Halban
Vitex pinnata

Source: birdsoftheworld

Senduduk Gajah/ Senduduk Hutan
Oxyspora bullata

Source: birdsoftheworld

Setawar Hutan
Amischotolype griffithii

Source: birdsoftheworld

Senduduk Bulu
Clidemia hirta

Source: birdsoftheworld

Gapis/ Gapis Merah/ Gapis Daun Kecil
Saraca declinata

Source: birdsoftheworld

Burubah Rimbah/ Mempunai Bukit
Antidesma velutinosum

Source: birdsoftheworld

Sebasah
Aporosa arborea

Source: birdsoftheworld

Memali/ Mali-mali
Leea indica

Source: birdsoftheworld

Beras-beras / Mata Ketam / Pengugur
Chassalia chartacea

: Invasive species

Bil.

Source: birdsoftheworld

Pelir Pelandok
Aglaia yzermannii

Bil.

Source: birdsoftheworld

Kabung / Enau
Arenga pinnata

Bil.

Source: birdsoftheworld

Keruing Neram
Dipterocarpus oblongifolius

Note: *(List or draw the characteristics of the species found if they are not included in the guidelines.)*

2. FERNS

Bil.

Paku Tertutup
Davallia denticulata

Bil.

Daun Semun
Asplenium nidus

Bil.

Paku Halberd
Tectaria sp.

Bil.

Paku Pedang Gergasi
Nephrolepis biserrata

Note: *(List or draw the characteristics of the species found if they are not included in the guidelines.)*

■ : Invasive species

3. SHRUBS / HERBACEOUS PLANTS

Kanching Baju
Corchorus capsularis

Rumput Siam
Chromolaena odorata

Bias-bias
Commelina benghalensis

Pokok Ara Tanah
Euphorbia hirta

Monkey's Potato
Plectranthus monostachyus

Rumput Israel
Asystasia gangetica

Keladi Murai
Tacca integrifolia

Note: *(List or draw the characteristics of the species found if they are not included in the guidelines.)*

■ : Invasive species

STATION 4:
FLOAT AND FLOW

A constructed wetland connecting the man-made lake and natural wetland areas

A small stream planted with native wetland plants that filters water from the lake before it enters the natural wetland. The submerged plant roots absorb excess pollutants. Floating wetland cells act like natural wetlands by supporting aquatic plants that help clean the water and provide habitat.

What plants can be used on the floating cells?

Malay Name	English Name	Scientific Name
Orkid Buluh	Bamboo Orchid	*Arundina graminifolia*
Purun Danau	Grey Sedge	*Lepironia articulata*
Pegaga	Indian Pennywort	*Centella asiatica*
Telipuk	Day Waterlily	*Nymphaea nouchali*
Jerangau	Eurasian Sweet-Flag	*Acorus calamus*
Telipok Tasik	Water Snowflake	*Nymphoides indica*
Lengkuas Ranting	Greater Galangal	*Alpinia conchigera*
Keladi Pari	Giant Taro	*Alocasia macrorrhizos*
Pandan	Screwpine	*Pandanus amaryllifolius*
Bemban	Canna-leaf Donax	*Donax canniformis*

Day Waterlily
Nymphaea nouchali

Found in ponds, lakes, and rivers across Asia and Africa. It is a day-blooming species and frequently cultivated for its fragrant, star-shaped blue, pink or white flowers.

STATION 5:
LAKE RANGER

A constructed wetland connecting the man-made lake and natural wetland areas

Here is where GEC's LAKE Ranger programme is conducted. A community-driven initiative to restore and safeguard lake ecosystems. Volunteers are trained to take an active role in conservation efforts.

DATASHEET*

**Lake citizen science health monitoring was developed based on the principles of Integrated Lake Basin Management (ILBM) and GEC's 20 years of experience in community-based monitoring of water body health, particularly water quality. The LAKE Ranger monitoring approach is also applicable to other static (lentic) water bodies, such as ponds and similar ecosystems.*

Name:

Contact Number:

Email:

Monitoring by: (e.g. community A)

Number of People:

Date and Time: *(data collection)* DD/MM/YYYY @ 00:00 AM/PM

State:

Location (site area):

Name of Static Water Body:

GPS Coordinate (if possible):

River Basin's Name:

Weather: Cloudy / sunny, etc.

Has it rained in the past 24 hours? ☐ Yes ☐ No

If yes, was it heavy? ☐ Yes ☐ No

Carry out task A, B and C when undertaking the lake assessment for the FIRST TIME ONLY. *(updates not needed unless land use/significant alterations or changes made)*

For any follow-up assessments, go straight to Task D.

A. Lake Address

If the first assessment is completed, tick ☐

1. Where does your lake gets it water from?

Knowing the source of lake water will help you to understand any possible pollution sources and steps that can be undertaken to mitigate identified issue.

ANSWER

2. Where does your lake water discharges into?

Knowing the lake water discharge will help you to understand the impact of lake health deterioration especially on water quality of the receiving waterbody, mainly river and steps that can be undertaken to mitigate identified issue.

ANSWER

3. What is your River Basin (Lake-River Connectivity)?

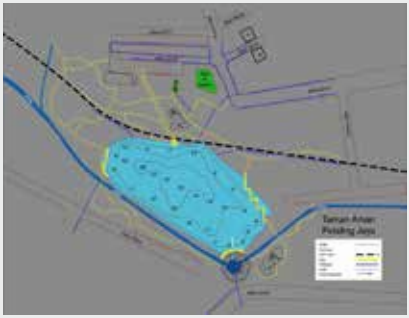
Using a map, locate the lake to river nearby. Identify the flow of the lake water (direct or indirect) into the nearest drain/monsoon drain/river to finally the sea.

ANSWER

4. List down lake's key stakeholders/beneficiaries

E.g. people staying nearby, lake users, those involved in lake rehabilitation activities etc.

ANSWER



B. Lake Map

If the first assessment is completed, tick ☐

Draw your lake map here. Highlight inlets, outlets, drains, monsoon drain, rivers, immediate surrounding building/schools/ housing area/flora and key landmarks.

C. Lake Beneficial Usage* *If the first assessment is completed, tick* ☐

Determine the intended lake beneficial usage*. Please check government management plan/directive of lake usage before finalise. Designated beneficial usage is important to determine associated monitoring parameters and the target as well as to plan appreciate lake rehabilitation measures (if needed).

CATEGORY	DESCRIPTION	TICK (√)* ONE BOX ONLY *(CHOOSE THE BEST)*
A	Lakes that are managed in which the water to be used for recreational purposes — primary body contact such as swimming, diving and kayaking.	
B	Lakes used for recreational purposes — secondary body contact such as boating and cruising. *Swimming is not allowed in this category of lakes*	
C	The lakes are meant for the preservation of aquatic life and biodiversity.	
D	Lakes managed for the minimum preservation of good aquatic life in the lakes. It applies good management practices of lakes**.	

Source: National Lake Water Quality Criteria and Standards (NLWQCS), NAHRIM, 2015)

** Always cross check with related agencies like Local Authorities (LA), Department of Irrigation and Drainage (DID) and State Water Resource Authority etc.*

***Multiple uses such as flood retention pond, hydroelectric, fishing etc.*

D. Lake Health Monitoring
(Lake Health Report Card)

Overall, there are three main components in Lake Health Report Card: Physical monitoring, Chemical and Biological Monitoring.

A) Physical Monitoring

Use your four senses ONLY (sight, hear, smell, touch) for this exercise.

Category 1: Status of beneficial usage

C1 SCORE

Public Perception: Is the lake water suitable for intended lake beneficial usage? Refer to lake beneficial usage as mentioned in (C).

0-2 Not yet or no near yet

3-5 Yes, but need major rehabilitation work to achieve

6-8 Yes, but need minor rehabilitation work to achieve

9-10 Nearly/fully meet the beneficial usage

Category 2: Land use

C2 SCORE

Land Use: Are there any land use (residential,construction, commercial, industrial, agricultural, etc.) contributing to the lake pollution.

0-2 Extensive land use activities (construction, commercial, industrial discharge, agriculture) and direct discharge to lake with major impact to lake health

3-5 Scalable activities (small industry, food court) that directly discharge to pollute the lake

6-8 Small scale land use (small scale farming, residential) with occasional potential runoff/ surface runoff into the lake

9-10 Minimum or no human activities

Category 3: Rubbish

C3 SCORE

Observe and record types of waste present in the water and surrounding area (both human-made waste and natural waste).

0-2 Lake significantly covered with floatable rubbish (plastics, bottles, cans, food package etc.) (More than 50%)

3-5 Noticeable rubbish on both lake and lake bank

6-8 More of natural waste (leaves, twigs and branches) compared to human made rubbish on both lake and lake bank

9-10 No visible waste, pristine area

Category 4: Inlets

C4 SCORE

Inspect the waterflow for any inlets (pipes, drains, monsoon drain or trenches) discharging directly into lake. Describe the discharge (clear, oily, sewage, etc).

0-2 Inlets coming from nearby industries/sewage treatment/ urban storm water discharge (dark colour)

3-5 Some inlets discharge (murky, oily)

6-8 Only visible urban storm water drainage or surface runoff discharge

9-10 Only rainwater/ground water

Category 5: Smell

C5 SCORE

Take a water sample via pail and record the smell.

0-2 Very strong pungent, unnatural smell (sewage, chemical etc.)

3-5 Bad smell

6-8 Unpleasant/unnatural smell

9-10 No smell, natural condition smell

Category 6: Water Colour

C6 SCORE

Record the colour of the lake water (mainly green colour). Observe and estimate the algae coverage on the lake water surface.

0-2 Severely high algae level or / with foam on the surface & water surface covered by plants (>70%)

3-5 Noticeable green/yellow/patches on water surface due to algae (>20%)

6-8 Slightly clear with some noticeable light green colour & small patches of algae on water surface

9-10 Relatively clear water

Category 7: Vegetation

C7 SCORE

Are there any vegetation/wetland plants within lake (except water hyacinth)/ along the banks (10 m)?

0-2 No wetland plants within lake/ vegetation on banks, bare ground, fully concrete

3-5 Slight wetland plants within lake and/or vegetation on banks

6-8 A lot of wetland plants within lake and/or vegetation on banks (minimum 3 different types)

9-10 More than 5 different types of wetland plants within lake and/or vegetation on banks

Category 8: Animal life

C8 SCORE

Record any animal life naturally within sampling location in lake (10m).

0-2 No animal life visible at all

3-5 At least two types of animals found

6-8 At least three types of animal found

9-10 More than three types of animal found

Category 9: Community Participation

C9 SCORE

Please record status of community participation for lake care* in this site. (*Lake care means positive as well as proactive approach such as clean up, monitoring, having local lake care group etc.)

0-2 No community participation for lake care

3-5 Minimum community participation for lake care

6-8 Significant community participation for lake care (having community group or actively monitoring lake)

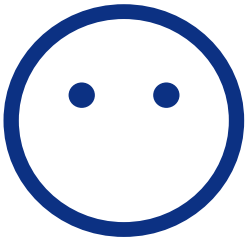
9-10 Excellent community participation for lake care (having LAKE Ranger/ Friends of Lake and actively monitoring lake)

Physical Monitoring Overall Rating

What do you think of this site?
(Draw a mouth for the face according to the total score)

SCORES	WATER QUALITY	MOUTH GUIDE
81-90	Excellent	
61-80	Good	
41-60	Average	
21-40	Poor	
0-20	Very poor	

TOTAL SCORE



B) Chemical monitoring

Record your results from the Water Quality Test Kit.

	SAMPLING SPOT*			AVERAGE READING
Parameter	**1**	**2**	**3**	
pH				
Dissolved Oxygen (ppm)				
Phosphate (ppm)				
Nitrate (ppm)				
Turbidity (JTU)				
Temperature (˚C)				
Blue Green Algae (Yes or No)**				

**Every sampling must be carried out at three (3) agreed sampling spots.*

***The test is to be carried out at one agreed spot only, once a year.*

C) Biological monitoring*

Observe the flora around you (within this lake boundary). Take picture, record the first five (5) species of flora and indicate nativeness. Flora here refers to plants in both lake and lake bank (10 m). You can use Inaturalist app and MyBIS for this exercise. (*Note: Fauna will be included in near future)

NO (X)	SPECIES	TICK (√) WHERE APPLICABLE	
		NATIVE	NON NATIVE/INVASIVE/ INTRODUCED
1			
2			
3			
4			
5			

Total number of species (X): _____

Total number of native species (Y): _____

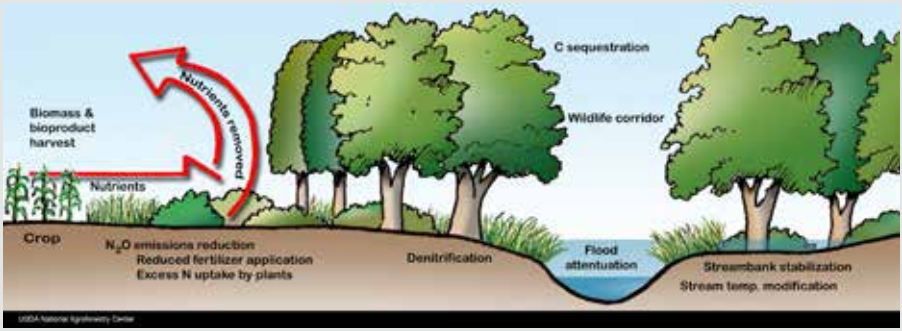
Total percentage of native species: (Y/X) x 100% = _____ %

STATION 6:
RIVERINE TREE

A green space with trees that safeguard wetlands

The large roots of these riverine trees help stabilise riverbanks by preventing soil from being washed away. It also provides shelter to aquatic animals that seek refuge from predators, or are just looking for a safe place to rest.

How riverine tree works? Which plants used?



Yellow Saraca
Saraca thaipingensis

Found naturally in forests near streams and rivers, indicating a preference for moist environments.

Fijian Longan
Pometia pinnata

It thrives in humid tropical conditions, particularly in riverine zones. Its extensive root system helps stabilise the soil and prevent erosion along riverbanks and in riparian areas.

STATION 7:
BIOFILTER & WETLAND

A pilot site for nature's water filters

Plants with biofiltration capabilities line the drain here, naturally filtering surface runoff before it reaches the main lake. By letting nature do the work, we reduce impacts on surrounding areas, keeping ecosystems in balance and habitats thriving.

What plants can be found at this site?

Malay Name	English Name	Scientific Name
Mensiang	Giant Bulrush	*Actinoscirpus grossus*
Purun	Grey Sedge	*Lepironia articulata*
Rumput Gedabong	Tall Reed	*Phragmites karka*
Keladi Kemoyang	Melur Garden	*Homalomena sagittifolia*
Sesayang Gajah	Nutrush	*Scleria sumatrensis*

Grey Sedge
Lepironia articulata

A tall, perennial, rhizomatous, and emergent aquatic sedge found in swamps and wetlands across Madagascar, Asia and Australia. Ideal for water gardens and phytoremediation as well as traditional uses in weaving mats and baskets.

Giant Bulrush
Actinoscirpus grossus

A large, perennial wetland sedge found throughout tropical and subtropical Asia and Australia that has high ecological resilience, and significant use in traditional medicine, handicrafts, and wastewater treatment.

ACTIVITY: IDENTIFY AQUATIC PLANTS

PLEASE MARK AND TAKE PHOTOS (IF NECESSARY) OF THE PLANTS FOUND.

1. AQUARIC PLANTS / ALGAE

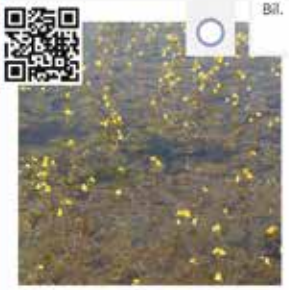
Coontail
Ceratophyllum demersum

Rumpai Air
Hydrilla verticillata

Rumput Kercut
Lepironia articulata

Rasau
Pandanus helicopus

Keladi Bunting
Eichhornia crassipes



Rumpai Ekor Kucing
Utricularia aurea

Note: *(List or draw the characteristics of the species found if they are not included in the guidelines.)*

: Invasive species

2. WETLAND PLANTS

Bil.

Source: planetayurveda.com

Selada air
Nasturtium officinale

Bil.

Kiambang
Pistia stratiotes

Bil.

Rumput Ganda
Kyllinga polyphylla

Bil.

Keladi Mawar
Colocasia esculenta

Bil.

Teratai
Nelumbo nucifera

Bil.

Ekor Kucing
Typha latifolia

Note: *(List or draw the characteristics of the species found if they are not included in the guidelines.)*

: Invasive species

STATION 8:
RIVER RANGER

A site to reconnect with Earth's lifelines

This site is located at a small stream that flows into the flood retention pond next to Cyberjaya Lake Gardens. Two GEC programmes are conducted here – River Open Classroom and River Ranger 2.0. Here, one can learn to listen to the stream's voice and discover the journey a river takes.

River Station 1:
Source of the River

The rivers that you observe, whether they are vast or small bodies of water, long or short in length starts from sources such as lake, marsh, spring, glacier or hills. In Malaysia, our ample rainfall plays a main role starting trickles of water from the mountains/hills and slowly flowing down steep areas, bit by bit, forming stream/ rivulet and larger flowing bodies of water we call rivers. At Station 1, try your best to uncover the trickle of water that forms the stream, which is the source of river that eventually flows into the sea!

Interesting Facts:

- **The source of the River Thames is spring.**
- **The source of River Nile is lake.**

River Station 2:
Voice of the Stream

Rivers and streams in natural settings have soothing sounds from the flowing water which people find it to be relaxing and one of the good aesthetic values. This natural 'sound' from the flowing water is called the "voice of the stream" signifying the rivers being a living entity and having their own 'voices'. Are the 'voices' produced from the water itself? Does water have sound?

Interesting Facts:

- **Rocks and stones act as vocal cords to create the voice of the stream as well as to oxygenate the stream.**
- **Voice of the stream can be used to indicate the health of river.**

River Station 3:
Meandering

Although this is a feature seen throughout the Open Classroom, Station 3 particularly highlights the importance of meanders. Meanders are the bends or curves in the shape of a river. Meanders are formed when flowing water is obstructed by land where it erodes the outer banks and form a wider path or new path. Meanders are an important feature in river ecosystems in relation to its water retention.

Interesting Facts:

- **Living river should have meanders.**
- **Channelisation is opposite to natural meandering.**

River Station 4:
Water Quality Monitoring

Can be conducted through RIVER Ranger 2.0 programme.

Physical monitoring (using 9 categories to evaluate the river using physical senses)

Chemical monitoring (the most accurate and reliable testing method which involves physicochemical parameters to evaluate river water quality) and

Biological monitoring (a traditional yet interesting way of evaluating river health based on the diversity of benthic macroinvertebrates).

Interesting Facts:

- **Physical monitoring will vary depending on viewers' observation.**
- **Benthic macroinvertebrates used to assess short term environmental variations.**

RR 2.0 DATASHEET*

**Developed based on GEC's 15 years' experience on community based water quality monitoring.*

Name:

Contact Number:

Email:

School/Organisation:

Number of People:

Date/Time: *(data collection)*

State:

Location (site area):

River's Name:

Section: Upstream Midstream Downstream

River Basin's Name:

Weather: *(Cloudy, sunny, etc.)*

Has it rained in the past 24 hours? Was it heavy?

River Address

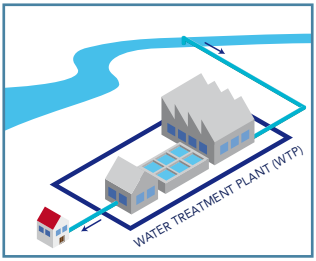
Do you know your River Basin?

Using a map, locate the drain or river nearby. Identify the flow of the water into the nearest river to the sea.

ANSWER

Do you know where your drinking /tap water comes from?

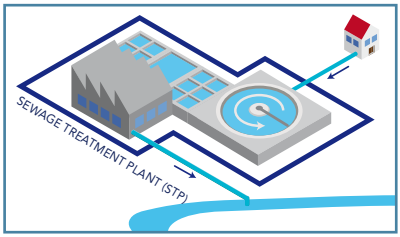
Knowing where your local water supplies will help you to know any possible threats water supplies face and steps that you could undertake to protect your water supplies. Also know what your community is doing to protect your water supply. Help others to be aware on the importance of clean water in your community.



ANSWER

Find out where your wastewater goes to

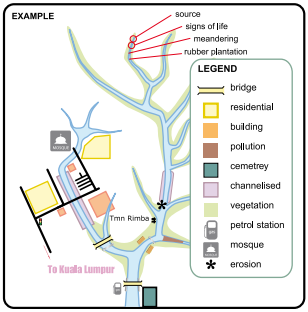
Wastewater treatment removes the suspended solid from the wastewater before it can be discharged to the river safely. Identify your wastewater treatment plant nearby your area and get to know which river the discharge goes to.



ANSWER

River Map

Draw your area map here and record the land use. Create a legend to identify the different types of land use and other points of interest.



River Hydrology

DISTANCE (A):			
T1	T2	T3	AVERAGE TIME (B)
AVERAGE VELOCITY (C) = A ÷ B =			

W 1	W 2	W 3	AVERAGE RIVER WIDTH (D)

D1	D2	D3	AVERAGE RIVER DEPTH (E)

DISCHARGE RATE
= (*RIVER WIDTH*
x AVERAGE DEPTH)
x AVERAGE VELOCITY

= (D x E) x C

= DISCHARGE RATE

Physical Monitoring* (PM)

**Developed based on GEC's 15 years' experience on community based water quality monitoring.*

Observe, identify and score based on the 9 categories below:

Category 1: Voice of the stream

0-2 No natural voice , Stagnant water

3-5 Some sound of nature (including animals), Slow moving water

6-8 Sound of nature especially water, Good flowing water

9-10 Sound of water (bubbling etc.), Natural flow

C1 SCORE	WITHIN BEST SCORE (Y/N)

Best score: 8-10

Category 2: Land use

0-2 Urbanised city centre, fully developed

3-5 Industrial, agriculture, wetmarket, workshop, food court area, commercial

6-8 Residential, recreational area and minimal commercial

9-10 Very minimal human activities, forest reserve, protected catchment

C2 SCORE	WITHIN BEST SCORE (Y/N)

Best score: 9-10

Category 3: Rubbish

0-2 Fully covered with floatable rubbish (plastics, bottles, cans, food packaging)

3-5 Significant amount of human made rubbish,

6-8 Mixture of man made waste and organic waste (leaves, twigs and branches)

9-10 Natural leaves and twigs, insignificant floatables

C3 SCORE	WITHIN BEST SCORE (Y/N)

Best score: 9-10

Category 4: Pipes & drains

0-2 Direct effluent disharge pipes from the industries, wetmarket, foodcourts, sewage treatment plant and other form of pollution

3-5 Discharge from treated pipes into the stream, sullage water

discharge

6-8 Urban storm water, drainage system

9-10 No pipes or drains

C4 SCORE	WITHIN BEST SCORE (Y/N)

Best score: 9-10

Category 5: Structures/modifications

0-2 More than 3 structures/ modifications that have negative impact on water flow or quality.

3-5 1 or 2 structures/modifications that have negative impact on water flow or quality.

6-8 Structures/modifications that have good impact on water flow or quality.

9-10 No structure/modifications (natural flow conditions)

C5 SCORE	WITHIN BEST SCORE (Y/N)

Best score: 9-10

Category 6: Smell

0-2 Very strong unnatural smell (Sewage, Chemical etc.)

3-5 Strong unnatural smell (Sewage, Chemical etc.)

6-8 Slight unnatural smell (Sewage, Chemical etc.)

9-10 No smell, Natural Smell.

C6 SCORE	WITHIN BEST SCORE (Y/N)

Best score: 9-10

Category 7: Water conditions

Please take note the discharge points (point source & non-point source) to the river that causes the change in conditions

0-2 Turbid, muddy or silted which is brownish in colour, greenish or milky (indicate the colour is due to pollution)

3-5 Greenish/blackish colour with scum and floatable particles, oily sheen, foamy

6-8 Green floatable vegetation,algae

9-10 Colourless

C7 SCORE	WITHIN BEST SCORE (Y/N)

Best score: 9-10

Category 8: Vegetation

Look at the river and banks and check if the wetland plants are introduced or natural. Check whether erosion occurs or not.

0-2 Erosion or land clearing,

3-5 Modified river bank landscape with introduced species.

6-8 Modified river bank landscape with local species and some wetland plants within river.

9-10 Mainly natural vegetation on river bank and wetland plants within river.

C8 SCORE	WITHIN BEST SCORE (Y/N)

Best score: 9-10

Category 9: Vertebrate animal life

(birds*, reptiles, fish, amphibians & mammals)

** Using bird books, learn the names of the birds found around the site and compile a list.*

0-2 NO animal life visible at all.

3-5 At least 2 types of animal life.

6-8 At least 3 types of animal life.

9-10 More than 3 types of animal life found.

C9 SCORE	WITHIN BEST SCORE (Y/N)

Best score: 9-10

NO. OF YES (BEST SCORE)

Calculating Physical Monitoring Index

NO. OF YES (BEST SCORE)	PM INDEX	WATER QUALITY	MOUTH GUIDE SCORE
9	5	Excellent	
7 to 8	4	Good	
4 to 6	3	Average	
2 to 3	2	Poor	
0 to 1	1	Very poor	

PM INDEX

Chemical Monitoring (CM)

Record your results from the Water Quality Test Kit here.

PARAMETER	SITE 1	BEST SCORE	WITHIN BEST SCORE (Y/N)	NO. OF YES (BEST SCORE)
pH		*6-8*		
Dissolved Oxygen (ppm)		4/8		
Phosphate (ppm)		*1*		
Nitrate (ppm)		*5*		
Turbidity (JTU)		0		
Temperature (°C)		*N/A**	*N/A**	

**Not applicable as its optimal temperature varies.*

Calculating Chemical Monitoring Index

NO. OF YES (BEST SCORE)	CM INDEX	WATER QUALITY	MOUTH GUIDE SCORE
5	5	Excellent	
4	4	Good	
3	3	Average	
2	2	Poor	
0 to 1	1	Very poor	

CM INDEX

Biological Monitoring (BM): BWQI

Identify and record the organisms found here. Refer **page 25** for the score.

	SPECIES (A)	SCORE	TOTAL SCORE (B)	BWQI (B ÷ A)
SITE 1				

Calculating Biological Monitoring Index (BWQI)

BWQI RANGE	BM INDEX	WATER QUALITY	MOUTH GUIDE SCORE
7.6-10	5	Very clean water	
5.1-7.5	4	Clean water	
2.6-5.0	3	Average	
1.0-2.5	2	Dirty water	
0-0.9	1	Very dirty water	

BM INDEX

River Ranger Index* (RRI)

**Developed based on GEC's 15 years' experience on community based water quality monitoring.*

Calculate the river's health by using River Ranger Index

CATEGORY	INDEX (A)	WEIGHT (B)	SUB-CATEGORICAL INDEX ((A/5) X B)
PHYSICAL (C)		1.75	
CHEMICAL (D)		1.25	
BIOLOGICAL (E)		2	
RIVER RANGER INDEX (C + D + E)			

RIVER RANGER INDEX (RRI)	CLASS*	RIVER STATUS	MOUTH GUIDE SCORE
4.55 - 5.00	A	Very good	
3.55 - 4.54	B	Good	
2.55 - 3.54	C	Moderate	
1.55 - 2.54	D	Poor	
1.00 - 1.54	E	Critical	

**this is different from DOE Malaysia river classes*

Your River Health is

RIVER RANGER INDEX (RRI)	CLASS	RIVER STATUS	MOUTH GUIDE SCORE
			

STATION 9:
POLLINATION GARDEN

Where nature's little gardeners work

This garden is a world of colours designed to welcome pollinators, such as bees, butterflies, and moths. It is filled with native flowers that bloom all year long. With a constant supply of nectar and pollen, the pollinators are always hard at work to restore the park with native plants.

Which has the most colourful flowers?

Malay Name	English Name	Scientific Name
Kemunting	Rose Myrtle	*Rhodomyrtus tomentosa*
Senduduk	Malabar Melastome	*Melastoma malabathricum*
Ati-ati	Coleus	*Coleus scutellarioides*
Melur	Jasmine	*Jasminum sambac*
Orkid Buluh	Bamboo Orchid	*Arundina graminifolia*
Lengkuas	Greater Galangal	*Alpinia galanga*
Ekor Kucing	Chenille Plant	*Acalypha hispida*
Siantan	Jungle Flame	*Ixora javanica*
Cempaka Kuning	Yellow Champaca	*Magnolia champaca*
Putat	Red Putat	*Barringtonia macrostachya*
Selasih	Basil	*Ocimum basilicum*

ACTIVITY: IDENTIFY THE BUTTERFLIES & MOTHS

PLEASE MARK AND TAKE PHOTOS (IF NECESSARY) OF THE BUTTERFLIES AND MOTHS FOUND.

Bil.

Common Grass Yellow
Eurema hecabe

Bil.

Common Mormon
Papilio polytes

Bil.

Common Palmfly
Elymnias hypermnestra

Bil.

Common Sailor
Neptis hylas

Bil.

Lesser Grass Blue
Zizina otis

Bil.

Magpie Crow
Euploea radamanthus

Bil.

Five-Bar Swordtail
Graphium antiphates

Bil.

Chocolate Pansy
Junonia hedonia

Bil.

Peacock Pansy
Junonia almana

Bil.

Little Maplet
Chersonesia peraka

Bil.

Common Birdwing
Troides helena

Bil.

Black and White Helen
Papilio nephelus

ACTIVITY: IDENTIFY THE BEES

PLEASE MARK AND TAKE PHOTOS (IF NECESSARY) OF THE BEES FOUND.

Bil.

Source: entnemdept.ufl.edu

Lebah Tualang
Apis dorsata

Bil.

Source: keys.lucidcentral.org

Lebah Madu
Apis mellifera

Bil.

Source: www.natureloveyou.sg

Lebah Kampung
Apis cerana

Bil.

Source: insecta.pro

Lebah Lalat
Apis Florea

Bil.

Source: www.natureloveyou.sg

Lebah lalat
Apis andreniformis

Bil.

Source: Fauziah Shariff @ flickr

Kelulut hitam
Heterotrigona itama

Bil.

Source: terraincognita96 @ flickr

Kelulut sawo
Geniotrigona thoracica

Bil.

Source: terraincognita96 @ flickr

Kelulut kuning
Lepidotrigona terminata

Note: *(List or draw the characteristics of the species found if they are not included in the guidelines.)*

STATION 10:
AQUATIC LIFE

The main lake of Cyberjaya Lake Gardens

Here, one can explore the vibrant life thriving with the lake ecosystem. Birds flutter between the large lotus leaves, fishes dart through the glistening waters, and dragonflies dance amongst the flowers. You may even see tortoises basking on the rocks!

What kind aquatic life can be found?

Common Parasol dragonfly
Neurothemis fluctuans

The presence and health of common parasol dragonflies can indicate the surrounding environmental quality. Their aquatic nymphs thrive in clean, well-oxygenated water, and adults are found in areas with good air quality.

Giant Snakehead Fish
Channa micropeltes

A fascinating and formidable freshwater species that ferociously guards its school of fry. This strong parental defence significantly increases the survival rate of its young.

Black Marsh Terrapin
Siebenrockiella crassicollis

A secretive, largely aquatic turtle. Its jawline curves upwards, giving it a perpetually cheerful expression which why its also called the Smiling Terrapin.

ACTIVITY: DRAGONFLY & DAMSELFLY

PLEASE MARK AND TAKE PHOTOS (IF NECESSARY) OF THE DRAGONFLIES AND DAMSELFLIES FOUND.

Bil.

Pepatung Mulut Gelap
Brachydiplax farinosa

Bil.

Pepatung Permata Parit
Brachythemis contaminata

Bil.

Scarlet Chaser
Crocothemis erythraea

Bil.

Common Flangetail
Ictinogomphus decoratus

Bil.

Longwinged Skimmer
Lathrecista asiatica

Bil.

Coppertone Velvetwing
Neurothemis fluctuans

Bil.

Common Blue Skimmer
Orthetrum glaucum

Bil.

Orange Skimmer
Orthetrum testaceum

Bil.

Asian Pintail
Acisoma panorpoides

Bil.

Pepatung Merah Jambu
Trithemis aurora

Bil.

Indigo Dropwing
Trithemis festiva

Bil.

Shaded Basker
Tyriobapta torrida

Bil.

Source: agrilife.org

Aeshnidae

Bil.

Source: Inaturalist.org

Calopterygidae

Bil.

Source: odonata.tacc.utexas.edu

Common Blue Jewel
Heliocypha perforata

Bil.

Source: Wikipedia

Chlorogomphidae

Bil.

Source: Nhptv.org

Archibasis sp.

Bil.

Source: odonata.tacc.utexas.edu

Corduliidae

Bil.

Source: entnemdept.ufl.edu

Libellulidae

Bil.

Source: Obeservation.org

Macromiidae

Bil.

Source: alchetron.com

Black-kneed Featherleg
Pseudocopera ciliata

Note: *(List or draw the characteristics of the species found if they are not included in the guidelines.)*

ACTIVITY: IDENTIFY THE FISH

PLEASE MARK AND TAKE PHOTOS (IF NECESSARY) OF THE FISHES FOUND.

LOCAL SPECIES

Bil.

Source: www.petesaquariums.com

Lampam Sungai
Barbonymus schwanenfeldii

Bil.

NT

Source: en.wikipedia.org

Belida
Chitala lopis

Bil.

Source: alchetron.com

Kelah
Tor tambroides

Bil.

Source: gdetail.image-gmkt.com

Ketutu
Oxyeleotris marmorata

Bil.

Source: cdn.umpan.com.my

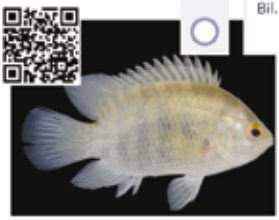
Puyu
Anabas testudineus

Bil.

Source: upload.wikimedia.org

Sebarau
Hampala macrolepidota

Bil.



Source: alchetron.com

Patong
Pristolepis fasciata

Note: *(List or draw the characteristics of the species found if they are not included in the guidelines.)*

INVASIVE SPECIES

Bil.

Source: upload.wikimedia.org

Peacock Bass
Cichla ocellaris

Bil.

Source: www.nobanis.org

Lee Koh / Common Carp
Cyprinus carpio

Bil.

Source: i.ytimg.com

Flowerhorn
Vieja synspila

Bil.

Source: www.fao.org

Tilapia
Oreochromis niloticus

Bil.

Source: upload.wikimedia.org

Pacu
Colossoma macropomum

Bil.

Source: upload.wikimedia.org

Keli Afrika
Clarias gariepinus

Bil.

Source: www.floridamuseum.ufl.edu

Mayan Cichlid
Cichlasoma urophthalmus

Bil.

Source: seriouslyfish.com

Piranha
Pygocentrus

Bil.

Source: fishroom.co.uk

Ikan Bandar Raya
Hypostomus plecostomus

Note: *(List or draw the characteristics of the species found if they are not included in the guidelines.)*

■ : Invasive species

OVERALL RECORD SHEET

DATE/TIME: **WEATHER:**

LOCATION (COORDINATES):

NO.	CATEGORY	TYPES	QUANTITY
1	PLANTS	RIVERINE	
		FERNS	
		SHRUBS / HERBACEOUS	
		WETLANDS	
		AQUATIC / ALGAE	
2	BIRDS	EAGLE	
		FANTAIL	
		KINGFISHER	
		EGRET	
		SPARROW	
		WOODPECKER	
		CROW	
		STARLING	
		PIGEON	
3	REPTILES	TORTOISE	
		SNAKE	
4	AMPHIBIAN	LIZARD	
		FROG	
		TOAD	
5	INSECT	DRAGONFLY & DAMSELFLY	
		BUTTERFLY & MOTH	
		BEE	
6	ANIMAL	SQUIRREL	
		MOUSE	
		OTTER	
		BAT	
		MONKEY	
7	FISH	LOCAL	
		INVASIVE	
8	OTHERS		

KUPU-KUPU DI TAMAN TASIK CYBERJAYA

COMMON BUTTERFLY IN CYBERJAYA LAKE GARDENS

Imbas untuk Maklumat Lanjut

Bulatan Lima
Common Five Ring
Ypthima baldus

Imbas untuk Maklumat Lanjut

Biru-rumput Kecil
Lesser Grass Blue
Zizina otis

Imbas untuk Maklumat Lanjut

Rimau Kacau Gelap
Dark Glassy Tiger
Parantica agleoides

Imbas untuk Maklumat Lanjut

Biru-bulu
Common Ciliate Blue
Anthene emolus

Imbas untuk Maklumat Lanjut

Terkam Rumput Evans
Spotted Grass Dart
Taractrocera ardonia

Imbas untuk Maklumat Lanjut

Pesolek Biru
Blue Pansy
Junonia orithya

Imbas untuk Maklumat Lanjut

Sarjan Kuning
Colonel
Pandita sinope

Imbas untuk Maklumat Lanjut

Perang-belukar Tanda Gelap
Dark-branded Bushbrown
Mycalesis mineus

Imbas untuk Maklumat Lanjut

Pesolek Merak
Peacock Pansy
Junonia almana

PEPATUNG DI TAMAN TASIK CYBERJAYA

COMMON DRAGONFLY IN CYBERJAYA LAKE GARDENS

Imbas untuk Maklumat Lanjut

Penyiring Tengek Asia
Grizzled Pintail
Acisoma panorpoides

Imbas untuk Maklumat Lanjut

Penyiring Kenit Kirmizi
Scarlet Pygmy
Nannophya pygmaea

Imbas untuk Maklumat Lanjut

Ekor-belantan Tepian Biasa
Common Flangetail
Ictinogomphus decoratus

Imbas untuk Maklumat Lanjut

Penyiring Cedok Biru
Blue Marsh Hawk
Orthetrum glaucum

Imbas untuk Maklumat Lanjut

Penyiring Cedok Ramping
Slender Skimmer
Orthetrum sabina

Imbas untuk Maklumat Lanjut

Penyiring Gedip Kuning
Yellow-stripe Flutterer
Rhyothemis phyllis

Imbas untuk Maklumat Lanjut

Penyiring Tenggek Biru
Oriental Blue Dasher
Brachydiplax chalybea

Imbas untuk Maklumat Lanjut

Penyiring Sayap-ambar Senja
Ditch Jewel
Brachythemis contaminata

Imbas untuk Maklumat Lanjut

Penyiring Payung Rimba
Russet Percher
Neurothemis fulvia

POKOK TEBING SUNGAI DI TAMAN TASIK CYBERJAYA

RIVERINE TREES IN CYBERJAYA LAKE GARDENS

Imbas untuk Maklumat Lanjut

Mahang putih
Elephant's Ear
Macaranga tanarius

Imbas untuk Maklumat Lanjut

Ara jejawi
Chinese Banyan
Ficus microcarpa

Imbas untuk Maklumat Lanjut

Kasai
Fijian Longan
Pometia pinnata

Imbas untuk Maklumat Lanjut

Nipis kulit
Ironweed tree
Memecylon dichotomum

Imbas untuk Maklumat Lanjut

Leban
Malayan Teak
Vitex pinnata

Imbas untuk Maklumat Lanjut

Gapis
Yellow saraca
Saraca thaipingensis

Imbas untuk Maklumat Lanjut

Angsana
Burmese-Rosewood
Pterocarpus indicus

Imbas untuk Maklumat Lanjut

Bemban
Cool mat
Schumannianthus dichotomus

Imbas untuk Maklumat Lanjut

Reriang
Cicada tree
Ploiarium alternifolium

TUMBUHAN TANAH LEMBAP DI TAMAN TASIK CYBERJAYA

WETLAND PLANTS IN CYBERJAYA LAKE GARDENS

Imbas untuk Maklumat Lanjut

Bakong ayer
Common Susum
Hanguana malayana

Imbas untuk Maklumat Lanjut

Keladi pari
Stingray Taro
Cyrtosperma merkusii

Imbas untuk Maklumat Lanjut

Kemoyang
Water Alocasia
Homalomena expedita

Imbas untuk Maklumat Lanjut

Sesayang
Nutrush
Scleria sumatrensis

Imbas untuk Maklumat Lanjut

Purun
Grey Sedge
Lepironia articulata

Imbas untuk Maklumat Lanjut

Chinnambal
Water Snowflake
Nymphoides indica

Imbas untuk Maklumat Lanjut

Simpoh air
Dillenia suffruticosa

Imbas untuk Maklumat Lanjut

Jeruju
Sea holly
Acanthus ebracteatus

Imbas untuk Maklumat Lanjut

Teratai
Lotus
Nelumbo nucifera

MAMALIA, REPTILIA & AMFIBIA DI TAMAN TASIK CYBERJAYA

MAMMALS, REPTILES & AMPHIBIANS IN CYBERJAYA LAKE GARDENS

Imbas untuk Maklumat Lanjut

Memerang licin
Smooth-coated Otter
Lutra perspicillata

Imbas untuk Maklumat Lanjut

Tupai pinang
Plantain Squirrel
Callosciurus notatus

Imbas untuk Maklumat Lanjut

Kera
Long-tailed Macaque
Macaca fascicularis

Imbas untuk Maklumat Lanjut

Biawak Air
Asian Water Monitor
Varanus salvator

Imbas untuk Maklumat Lanjut

Sesumpah Kuning
Oriental Garden Lizard
Calotes versicolor

Imbas untuk Maklumat Lanjut

Kura-kura Kolam
Black Marsh Turtle
Siebenrockiella crassicollis

Imbas untuk Maklumat Lanjut

Katak Padi Butler
Butler's Ricefrog
Microhyla butleri

Imbas untuk Maklumat Lanjut

Katak Sawah Hijau
Common Green Frog
Hylarana erythraea

Imbas untuk Maklumat Lanjut

Katak Puru Biasa
Asian Common Toad
Duttaphrynus melanostictus

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