

REDISCOVER  
RECONNECT



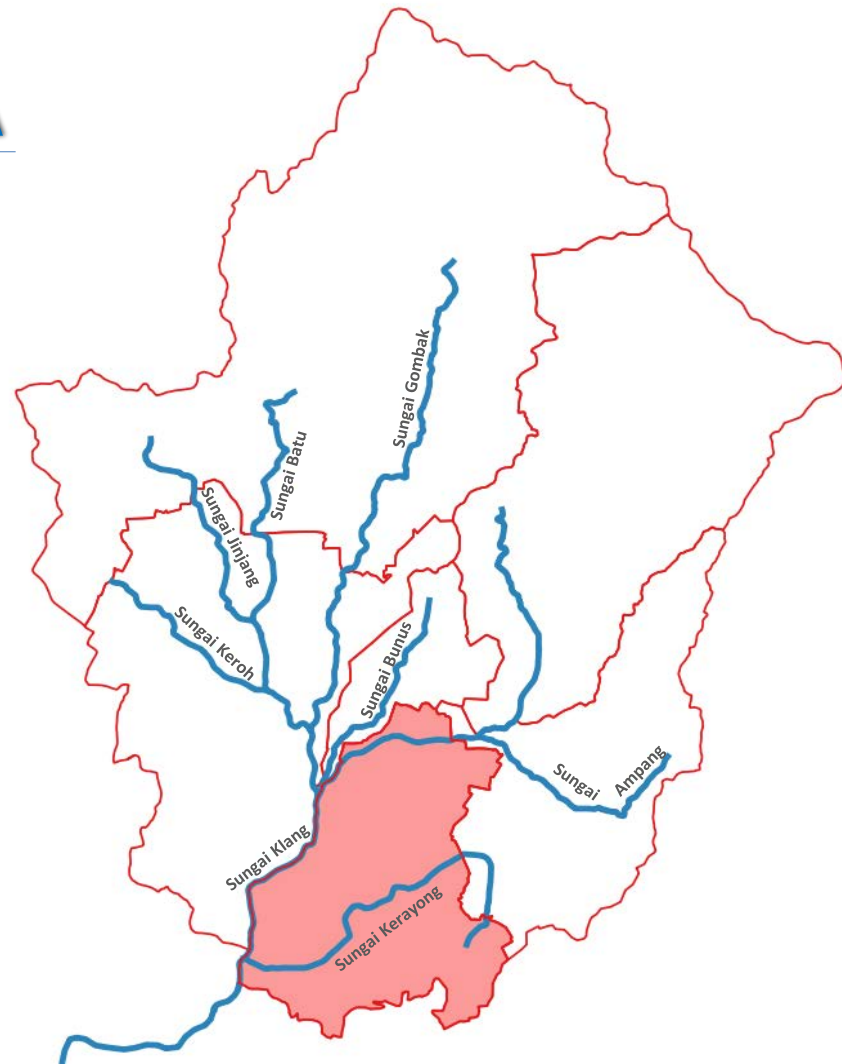


**10**  
**Years  
Programme**

**Transform**

**8**  
**Rivers**

# ROL AREA



# 3 MAJOR COMPONENTS TO THE RIVER OF LIFE PROJECT

## RIVER CLEANING

Improve River Water Quality along

**110km**

covering

**8 rivers**

by 2020

**86%**

Completed  
(as of Sep  
2018)

## RIVER BEAUTIFICATION

Beautify

**10.7km**

stretch along the Klang and Gombak  
river corridors,

**11** Precincts and **9** Packages

to be completed by 2019

**67%**

Completed  
(as of Oct  
2018)

## COMMERCIALISATION & TOURISM

Maximise the

**social and economic  
potential**

of the Klang and Gombak Riverfronts

**2020**

and  
beyond

# Achievement So Far

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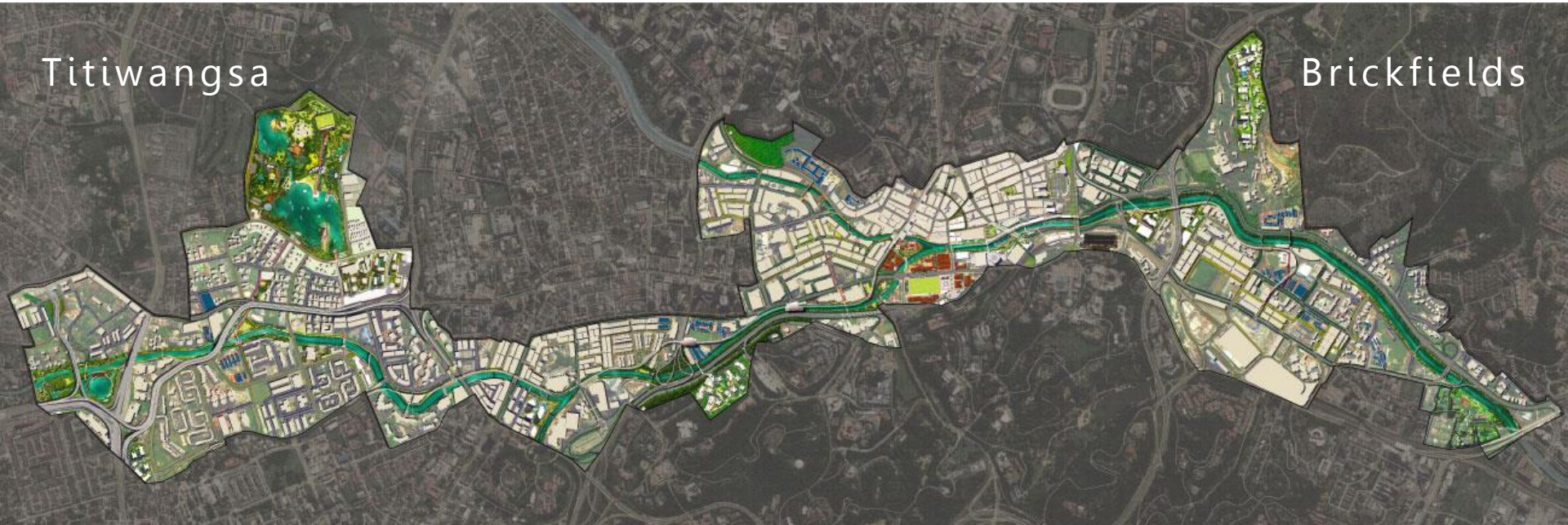
- 1** Flood retention pond built in Puah (Sentul)
- 5** Wastewater treatment plants built
- 8** Sewerage treatment plants upgraded
- 8** Water treatment plants built
- 13** km of riverbanks repaired
- 69.8** km of connections to sewerage pipe network
- 231** Communal grease traps installed at public food courts
- 504** Gross pollutant traps, trash rakes and log booms installed



## RIVER BEAUTIFICATION

Titiwangsa

Brickfields



## RIVER BEAUTIFICATION

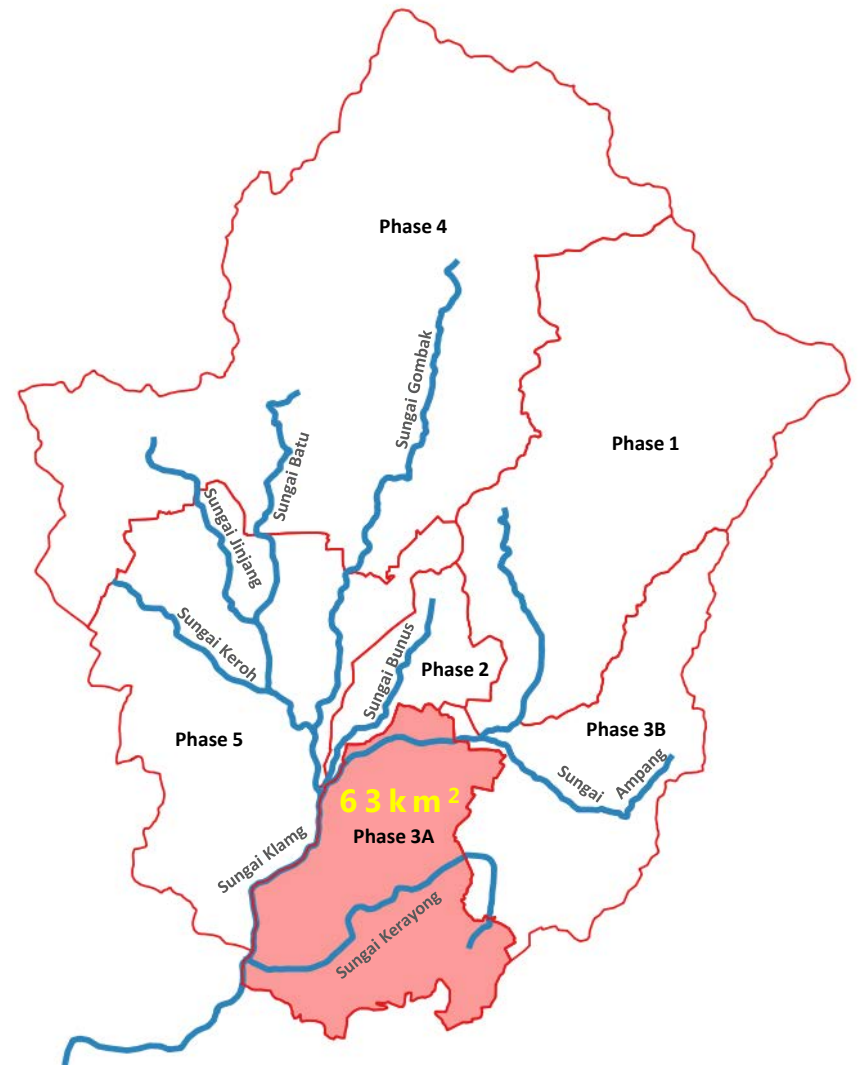




Phase 3A

# Public Outreach Programme

# PHASE 3A



# OBJECTIVES

“ To generate evidential improvement in attitudes and behaviors of target groups within the Project Area towards river care and preservation in order to improve water quality and reduce pollution within project area. ”



**General  
Public**



**Local  
Communities**



**Educational  
Institutions**



**Food  
Establishments**



**Industries**



**REDISCOVER  
RECONNECT**



## ROL'S CITIZEN EYE APP

**REPORT to us** if you saw someone polluting a river.

**SHARE with us** if you saw someone doing a good job in protecting a river.

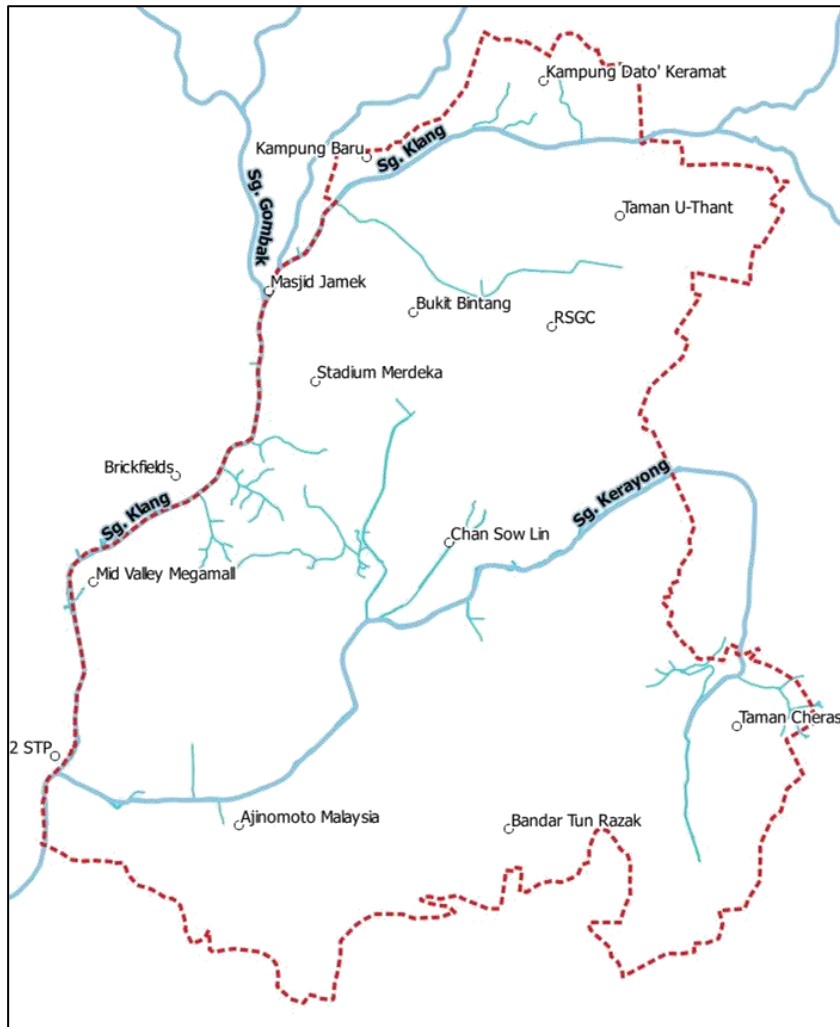
Available at





# Sungai Kerayong

# RIVER SYSTEM



- Sg. Kerayong – 12.5 km
- Substantial proportion of streams have been canalised/covered



# LAND USE



Residential  
**33.6%**



Public  
Institution  
**22.5%**



Commercial  
**10.8%**



Vacant Land  
**10.9%**



Industrial  
**4.2%**



Squatters  
**1.5%**



Cemetery  
**4.6%**



Other  
Institution  
**0.3%**



Open Space  
**11.5%**



**Total population: 456,737**



**Total household: 122,493**



**Total educational institution: 223**



**Restaurants: 3,572**

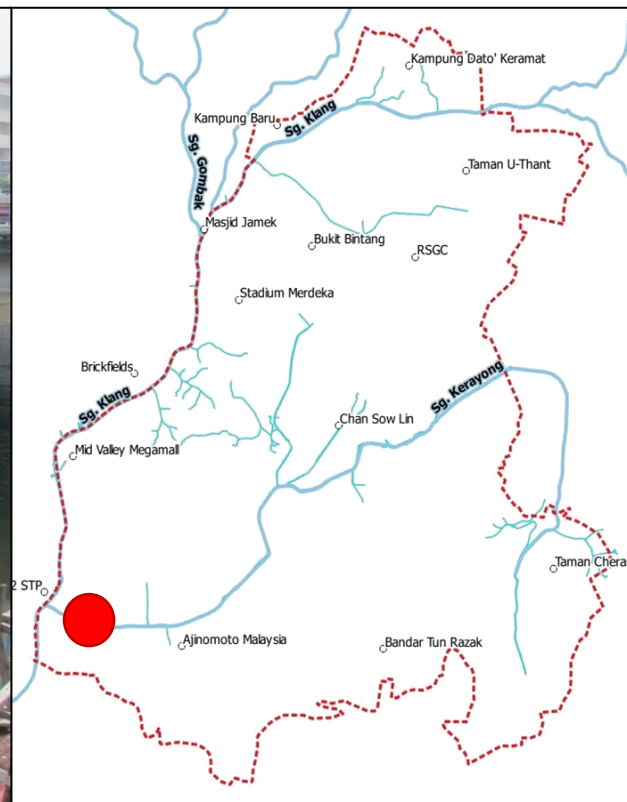


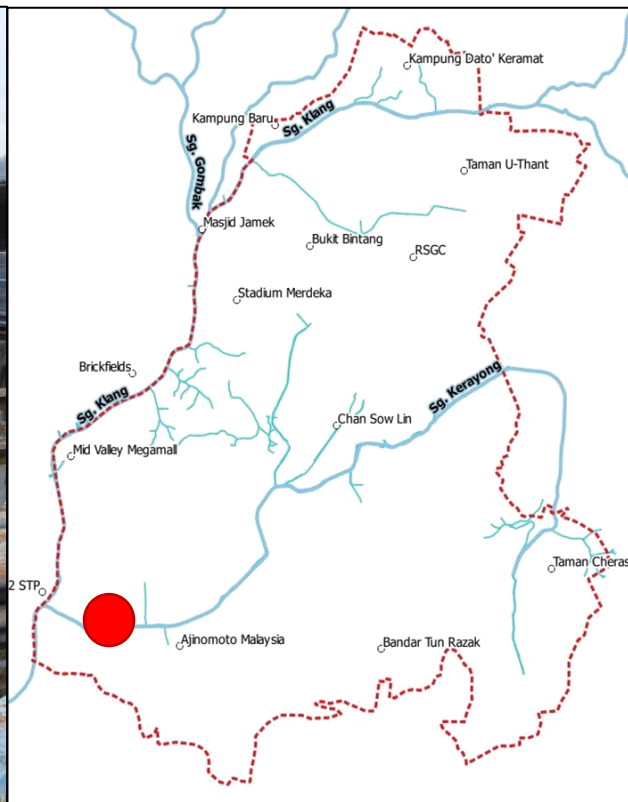
**Registered industry: 56**

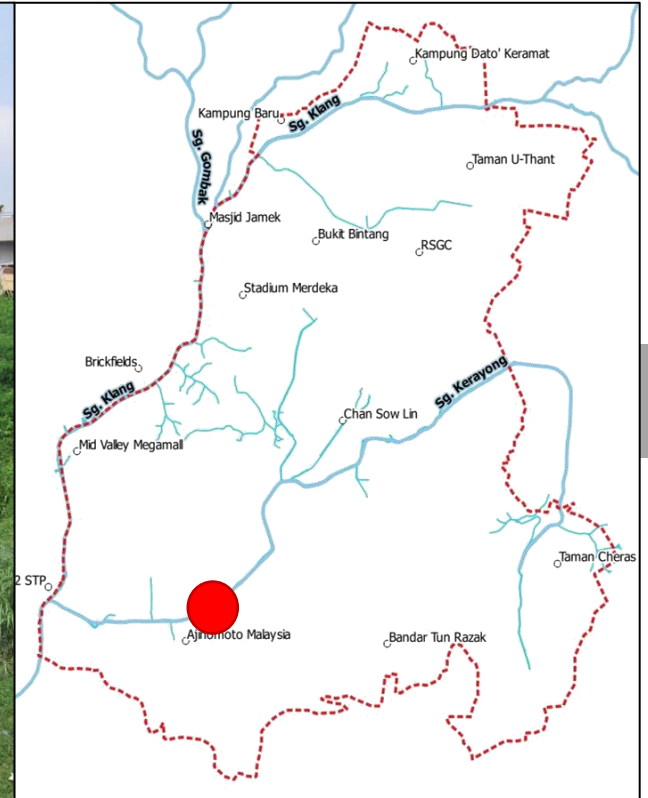


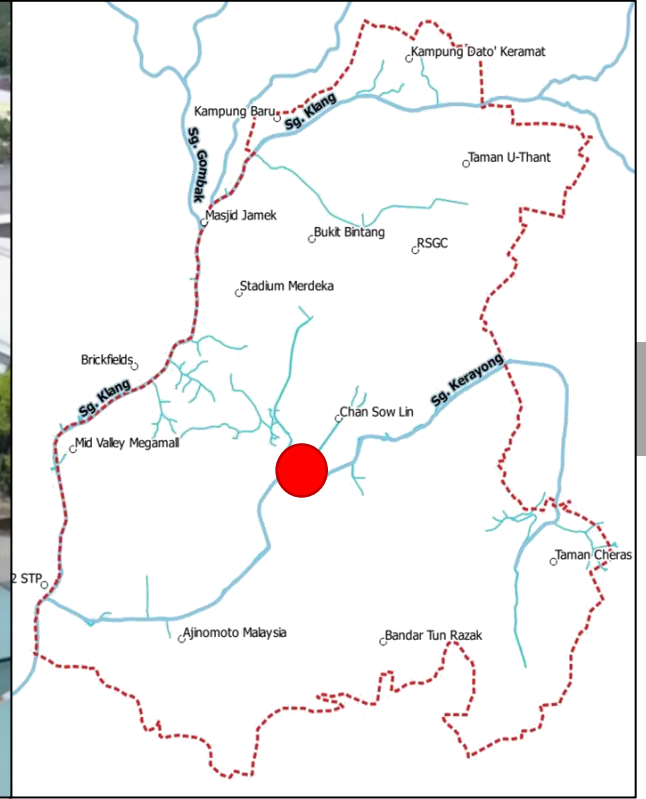
**Car service centre: 103**

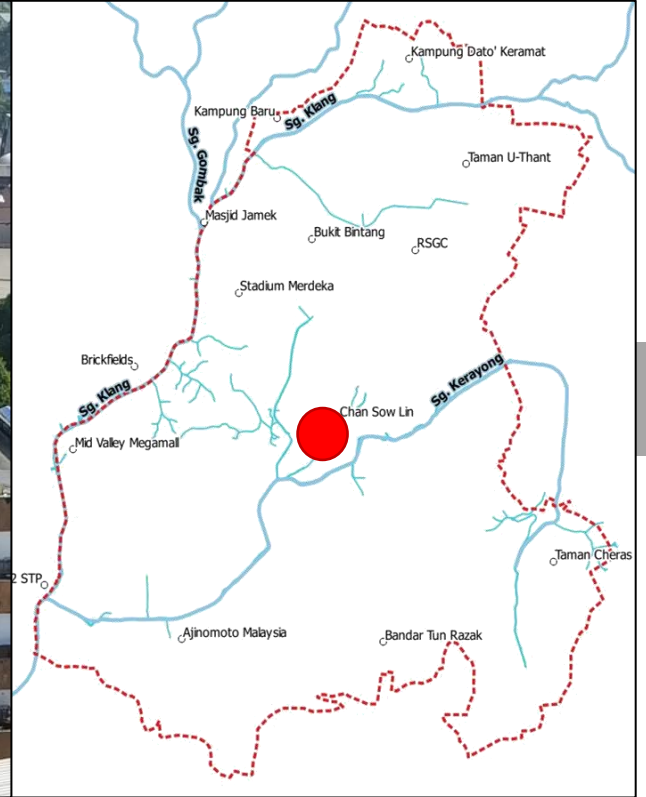


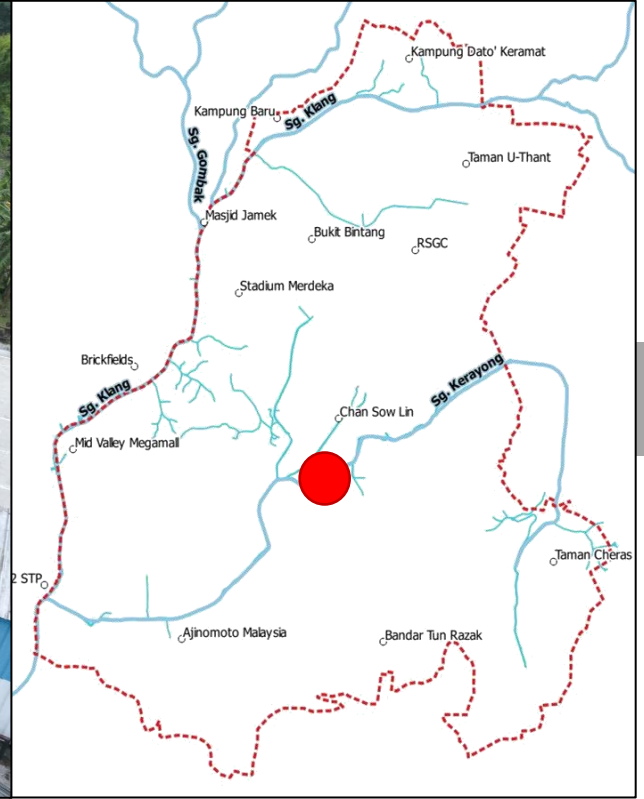












# PEOPLE OF KERAYONG



# Issues in Sungai Kerayong

# DOE WATER QUALITY INDEX

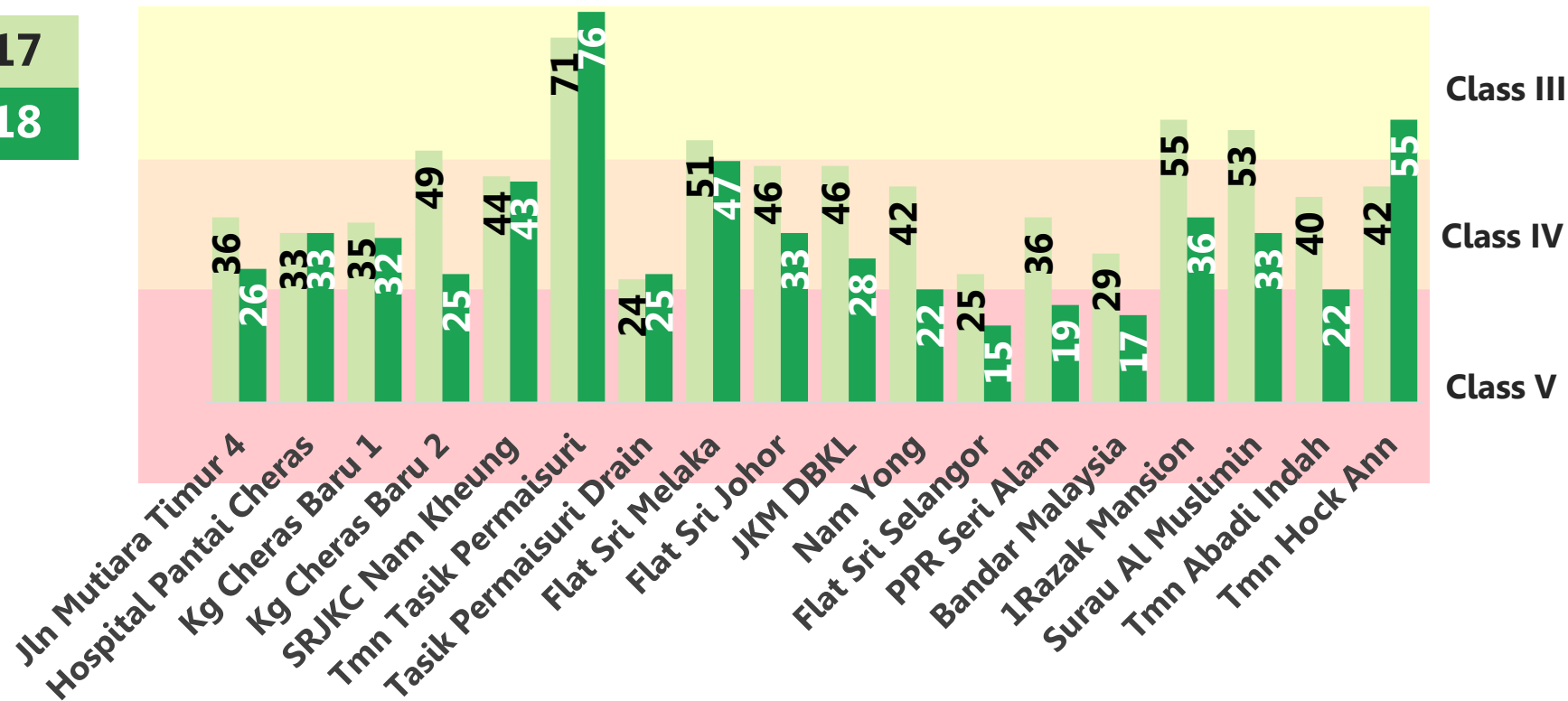
| PARAMETER                 | UNIT | CLASS  |             |             |             |        |
|---------------------------|------|--------|-------------|-------------|-------------|--------|
|                           |      | I      | II          | III         | IV          | V      |
| Ammoniacal Nitrogen       | mg/l | < 0.1  | 0.1 – 0.3   | 0.3 – 0.9   | 0.9 – 2.7   | > 2.7  |
| Biochemical Oxygen Demand | mg/l | < 1    | 1 – 3       | 3 – 6       | 6 – 12      | > 12   |
| Chemical Oxygen Demand    | mg/l | < 10   | 10 – 25     | 25 – 50     | 50 – 100    | > 100  |
| Dissolved Oxygen          | mg/l | > 7    | 5 – 7       | 3 – 5       | 1 – 3       | < 1    |
| pH                        | -    | > 7.0  | 6.0 – 7.0   | 5.0 – 6.0   | < 5.0       | > 5.0  |
| Total Suspended Solid     | mg/l | < 25   | 25 – 50     | 50 – 150    | 150 – 300   | > 300  |
| Water Quality Index (WQI) |      | > 92.7 | 76.5 – 92.7 | 51.9 – 76.5 | 31.0 – 51.9 | < 31.0 |

# WATER CLASSES AND USES

| CLASS     | USES                                                                                                                                        |
|-----------|---------------------------------------------------------------------------------------------------------------------------------------------|
| Class I   | Conservation of natural environment.<br>Water Supply I – Practically no treatment necessary.<br>Fishery I – Very sensitive aquatic species. |
| Class IIA | Water Supply II – Conventional treatment required.<br>Fishery II – Sensitive aquatic species.                                               |
| Class IIB | Recreational use with body contact.                                                                                                         |
| Class III | Water Supply III – Extensive treatment required.<br>Fishery III – Common, of economic value and tolerant species; livestock drinking.       |
| Class IV  | Irrigation                                                                                                                                  |
| Class V   | None of the above.                                                                                                                          |

# WATER QUALITY

2017  
2018

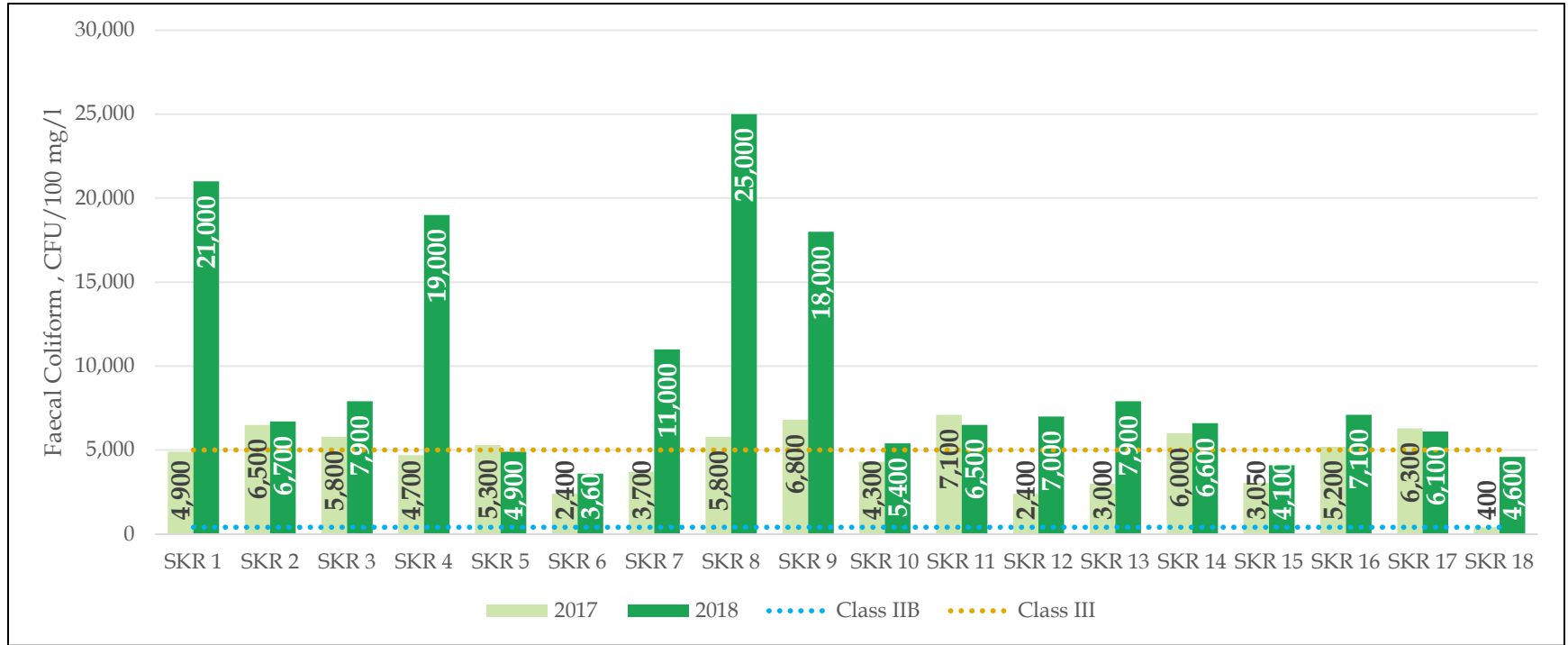




# FEACAL COLIFORM

- National Water Quality Standards for Malaysia is 400 count/100ml
- Feacal coliform in Sg. Kerayong ranges from 3,600 to 25,000 count/100ml

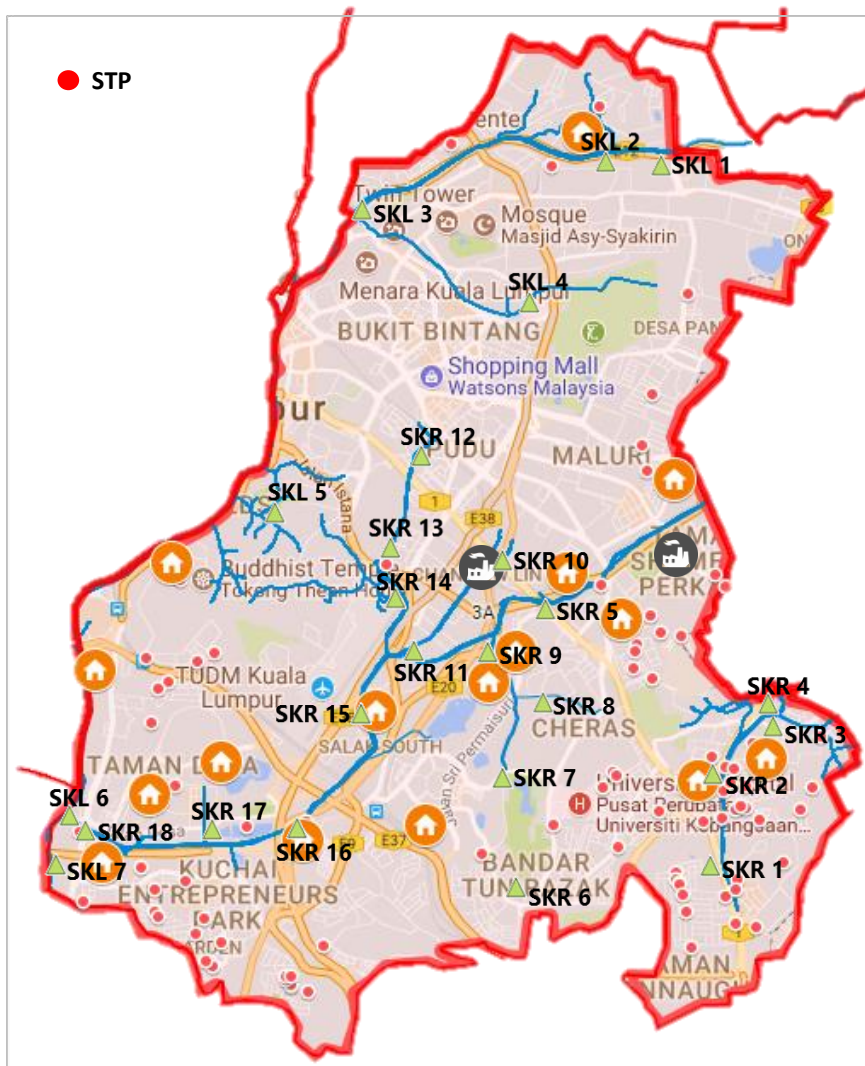
# Comparison of Faecal Coliform at Sungai Kerayong for 2017-2018





## FEACAL COLIFORM

- Stations SKR 8 Flat Seri Melaka at 25,000 CFU/100ml
- SKR 1 Jalan Mutiara Timur 4 at 21,000 CFU/100ml.
- Faecal coliform bacteria can enter rivers through direct discharge of waste from mammals and birds, from agricultural and storm runoff, and from human sewage
- Sewage source possibly from STP.





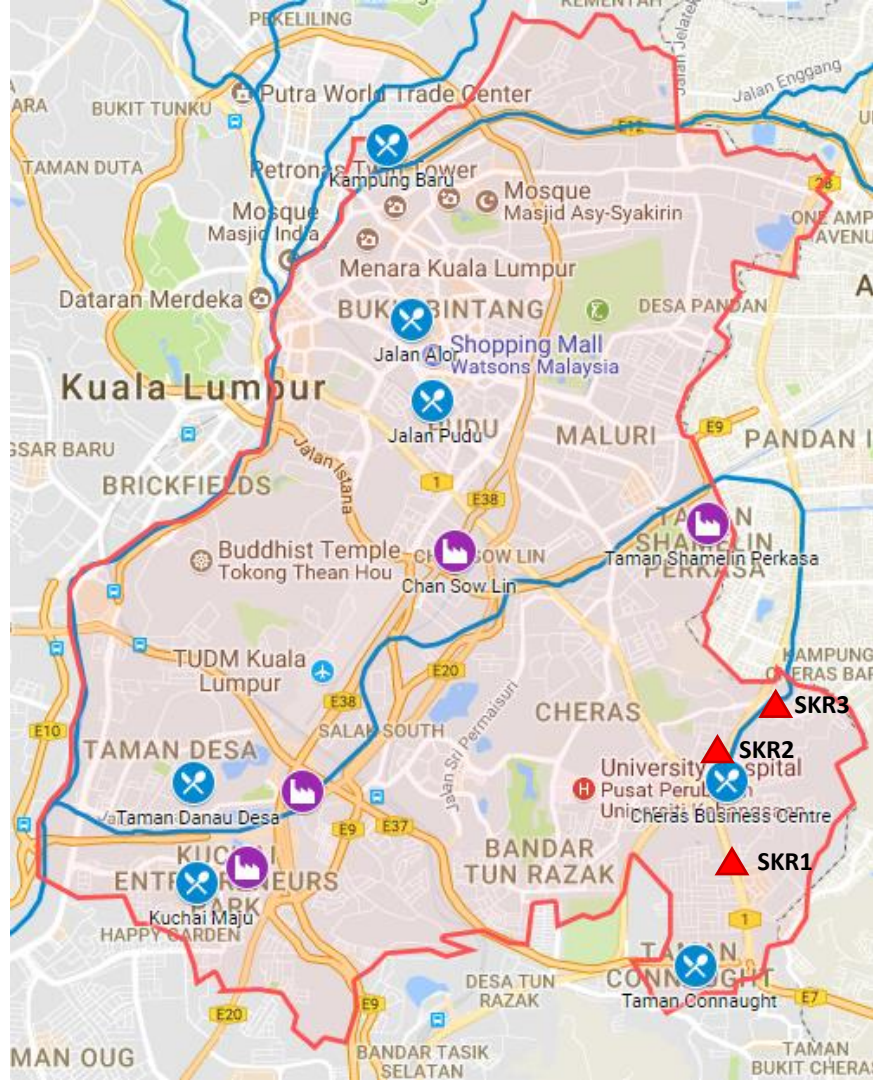
# SOLID WASTES

- Average **1229kg/month** collected at log boom (2017)
- Average **1107kg/month** collected at GPT
- About **RM500,000/month** for maintenance



## Oil & Grease

- Oil and Grease reading at stations SKR 1 Jalan Mutiara Timur 4, SKR 2 Hospital Pantai Cheras, and SKR 3 Jalan 23 Kampung Cheras Baru showed an increase in reading while station SKR 4 Jalan 29 Kampung Cheras Baru remains the same; the rest of the sampling stations showed decreasing oil and grease content.
- Sources of oil and grease are typically from fugitive runoff from car workshops as well as poor use of oil and grease traps.



# ENCROACHMENT OF RIVER BANK



# TAKE HOME POINTERS



**Authorities**



**Maintenance**



**Inclusive**