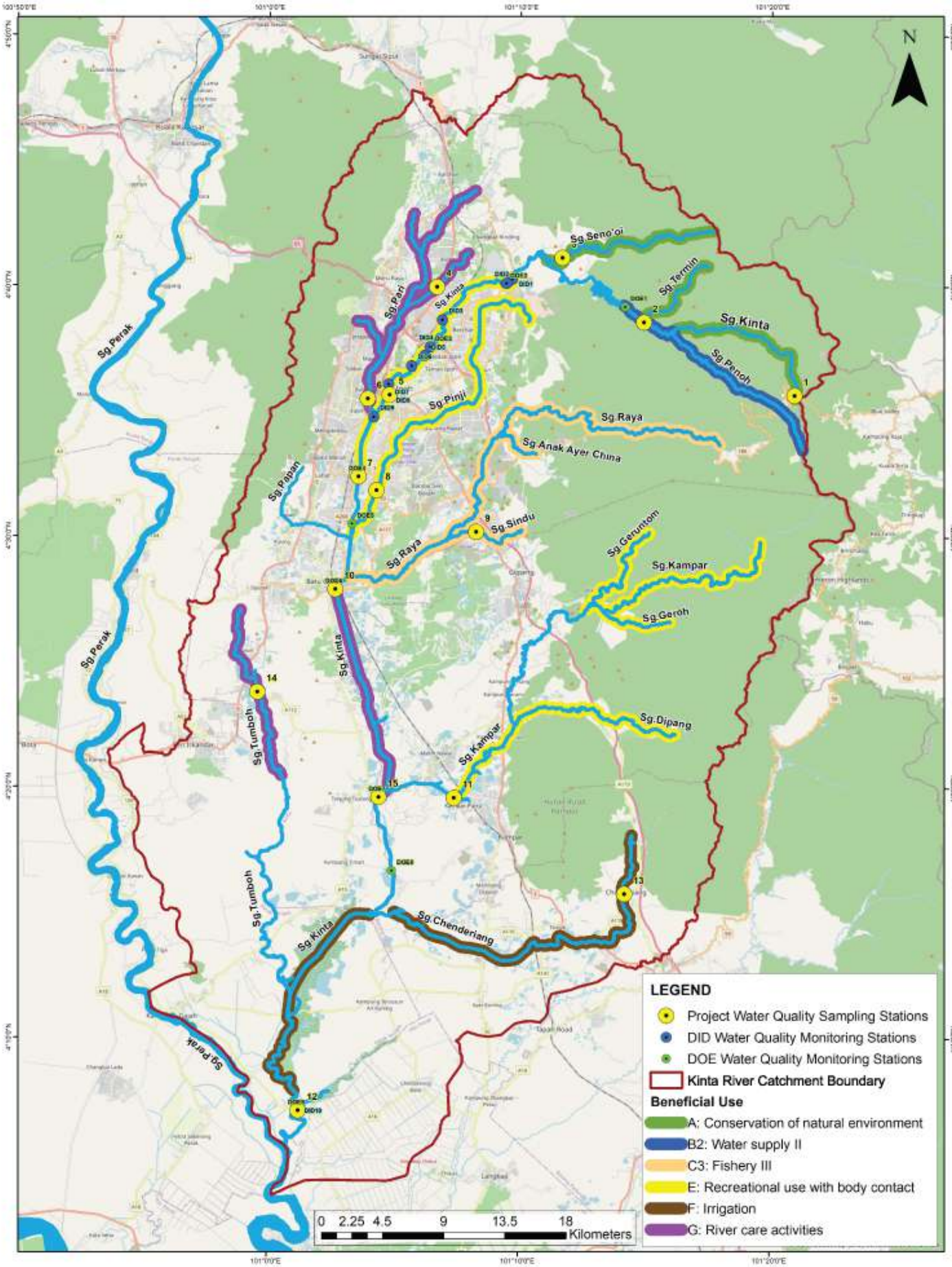
# TADAHAN SUNGAI KINTA : SASARAN KEGUNAAN BERFAEDAH

## *Kinta River Catchment : Targeted Beneficial Use*

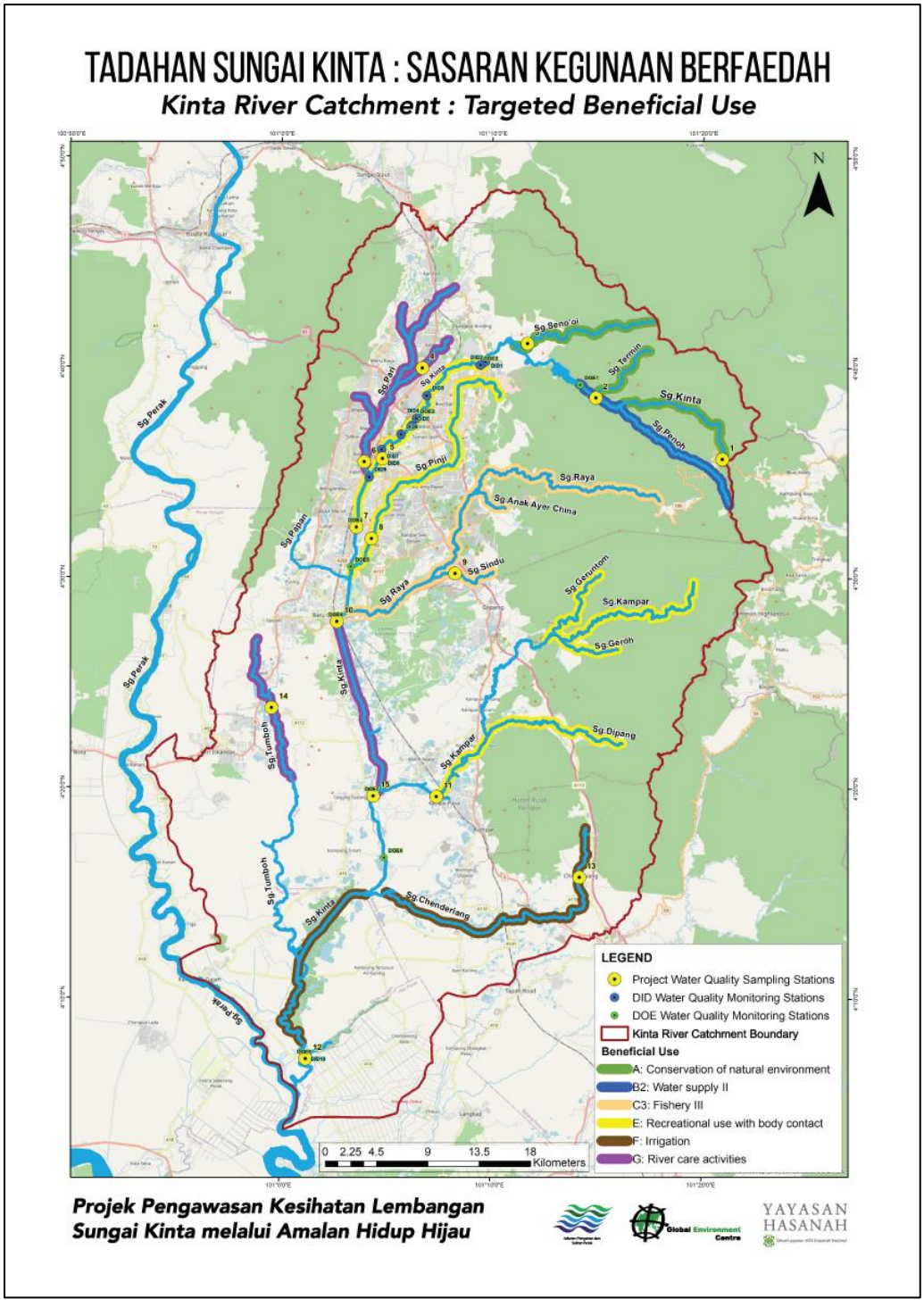



***Projek Pengawasan Kesihatan Lembangan Sungai Kinta melalui Amalan Hidup Hijau***

Global Environment Centre

YAYASAN HASANAH

# NOTES ON KINTA RIVER HEALTH TARGETS



- Targeted beneficial use for the Kinta River Catchment is a pioneer initiative for the State of Perak and the country.
- Targeted beneficial use map was developed and enhanced based on existing beneficial uses set by Malaysian Department of Environment (refer to Environmental Quality Report 2022) for rivers. The beneficial uses and map was developed through two (2) series of workshops involving stakeholders including government agencies as well as universities.
- For Kinta River Catchment, beneficial uses divided into two categories which are direct as well as indirect use. Direct use refers to river water use while indirect use refers to usage of river reserve as well as river riparian including river bank. Indirect beneficial use introduced within this project as River Health Index (RHI) developed through this project have new component, citizen participation component, where the river reserve used by communities for river care activities. Hence, use of river reserve also very much important and emphasized in development of targeted beneficial use for Kinta River catchment. A total of 7 beneficial uses set for Kinta River Catchment. Refer to Table 1 for details.
- With targeted beneficial use in place, river health targets are easier to set and monitored.
- For instance, the river/river stretch used for agriculture not need to have Class 1 chemical river water quality status but Class III will do as minimum. River/river stretch that need to be conserved in natural state must be ensured Class 1 chemical water quality.
- By having these river health targets, agencies can plan their resources as well as future developments to ensure intended river health targets based on beneficial use met all times.

## Table 1: Beneficial Uses Category and Relevant Indicators for Kinta River Catchment

| No | Beneficial Uses | Physical | Chemical | | Biological | Citizen participation |
|---|---|---|---|---|---|---|
| | | | Primary parameters (NWQS) | Secondary parameters (MOH) | | |
| River (Direct usage) (Based on DOE's Water Classes) | | | | | | |
| 1 | Conservation of natural environment | A | I | | 5 | 1 |
| 2 | Water Supply (I, II, III) | | | • Min *7 Heavy metals<br>• Nitrate nitrogen | | |
| 2a | Water supply I – practically no treatment necessary (except by disinfection or boiling only) | A | I | | 5 | 1 |
| 2b | Water supply II-conventional treatment required | B | II A/MOH | | 4-5 | 2 |
| 2c | Water Supply III – advanced treatment required | C | III/MOH | | 3-5 | 3 |
| 3 | Fishery (I, II, III) | | | | | |
| 3a | Fishery I – very sensitive aquatic species | A | I | | 4-5 | 1 |

| | | | | | | |
|---|---|---|---|---|---|---|
| 3b | Fishery II – sensitive aquatic species | B | II A | | 4-5 | 3 |
| 3c | Fishery III – common (economic value) and moderately tolerant species | C | III | | 3-5 | 4 |
| 4 | Livestock drinking | C | III | | 3-5 | 3 |
| 5 | Recreational use with body contact | B | IIB | • Faecal coliform<br>• Nitrate nitrogen | 4-5 | 4 |
| 6 | Irrigation | C | III | | 2-5 | 4 |
| River (Indirect Usage) – Uses of River reserve, river riparian | | | | | | |
| 7 | River care activities: River clean up, tree planting, landscape activities, recreational activities, community garden, river trail, temporary cabin, and others | B | IIB (Odour: NOO) | Nitrate nitrogen | 2-5 | 5 |

*7 Heavy metals (Arsenic, Cadmium, Lead, Zinc, Copper, Nickel, Chromium)