



River 3/ACE

Public participation in river rehabilitation

Malaysia National Stakeholder Consultation on Marine Litter – Solving Plastic Pollution at Source



Nationwide Project To Strengthen Multi-Stakeholder Partnerships by Applying a People Centric Approach in Managing the Plastic Value Chain in Malaysia

Klana Beach Resort, Port Dickson, Negeri Sembilan

5~6 November 2019

Presented by Mansor Ghani

Deputy President
Friends of Rivers, Malaysia (FoRM)

Jawatankuasa Pelaksana Pemuliharaan Sungai-Sungai di Negeri Selangor



- 1st state in Malaysia institutionalising river rehabilitation program.
- Inaugural meeting **10 April 2019**.
- Chairman: YB Ir. Izham Hashim, EXCO JK Tetap Infrastruktur.
- Members: UPEN, JAS, JPS, J.Hutan, P.Daerah, PBT, GLC Senggara Sungai, IWK, NGOs.
- THE IMMEDIATE PLAN
 - Terms of Reference
 - Proposals

Water Pollution



Around 8 million tons of plastic bottles, bags, toys and other plastic rubbish ends up in the world's oceans each year.

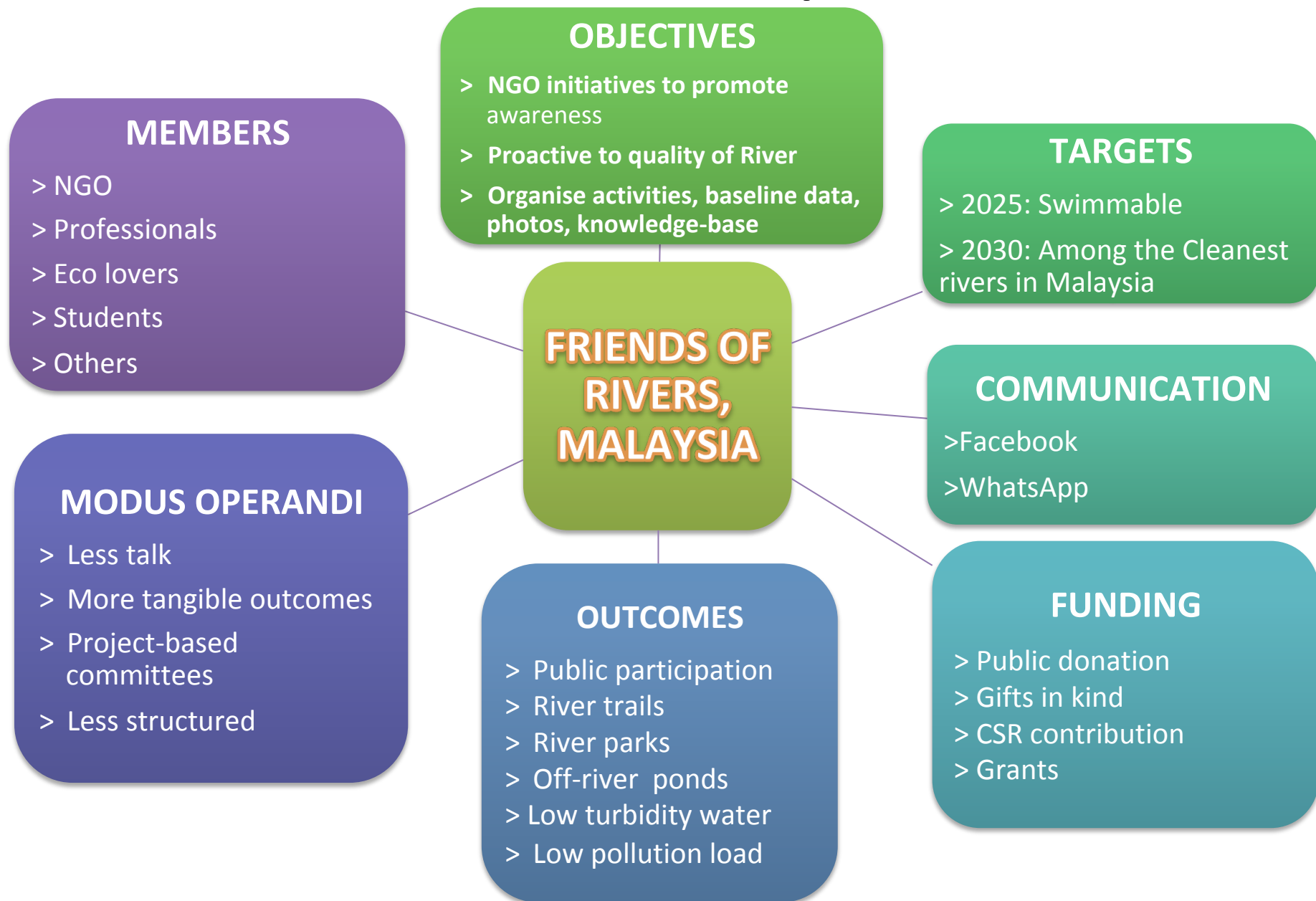
State of Our Rivers



What We Want Our Rivers To Be



Mind map



River 3/ACE

- **River Amenities**

- ✓ River trail – cycling, jogging, walking
- ✓ River park – picnic, socialising
- ✓ River garden – community building, health, education
- ✓ No-pollution Café

- **River Community**

- ✓ NGO, CSO, CBO, Local Communities
- ✓ Government servants
- ✓ Professionals
- ✓ Eco lovers
- ✓ Students, others

- **River Economy**

- ✓ Water security – water supply, irrigation
- ✓ Tourism – recreational
- ✓ Property value appreciation
- ✓ Circular economic activities – e.g. non-food bio-starch products, food waste composting
- ✓ Nature-based activities – e.g. bird watching, wild life photography

by **GReduAction**

GR> gotong royong
eduAction> education thru' action

- **Clean water quality**

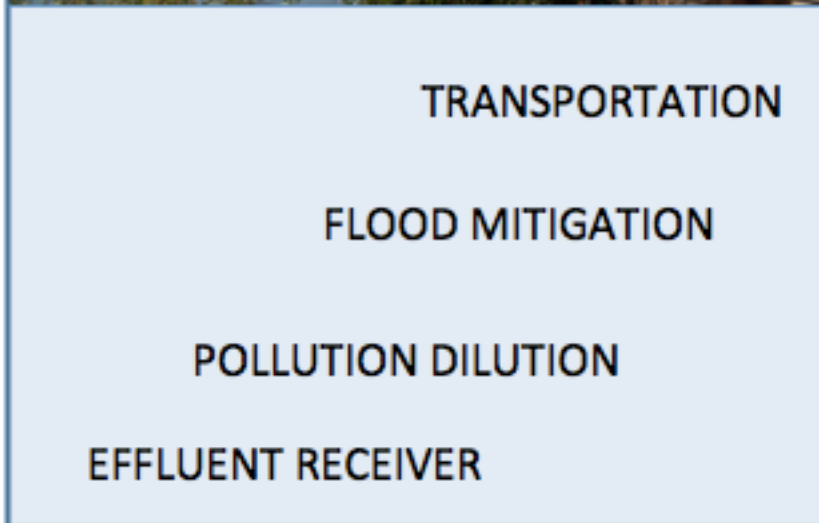
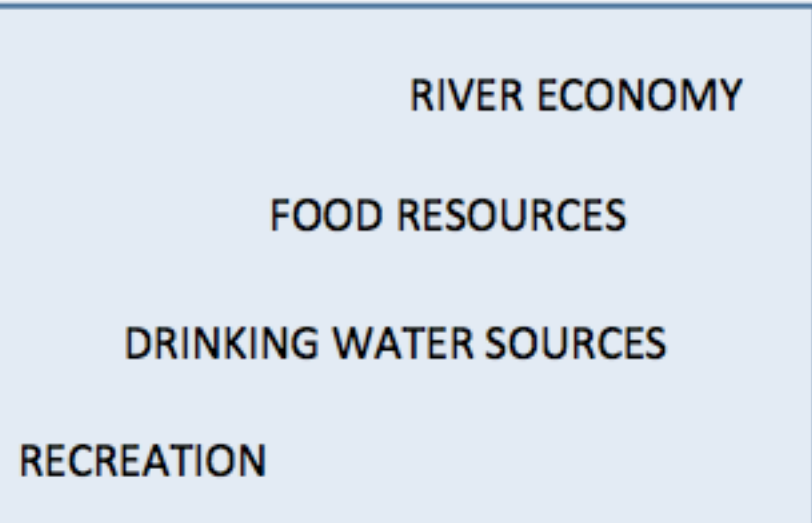
- **Less gross pollutants (plastics, other rubbish/trash)**

- **Low cost, high engagement, high impact**

River Economy Framework

By Zaini Ujang (2018) pp.181

VALUE CREATION



UTILISATION

Activities

Plogging

Weeding

Grass-cutting

Trail maintenance

Trail construction

Tree planting

Urban gardening

Picnic

Socialising



Recommendations

	Items	Recommendations
1	Clean water quality	Non-connected & Sullage using Interceptor to be connected to public sewer network
2	Less gross pollutants (GP)	Proper solid waste management, GP traps
3	River trails	Public participation , grants for materials
4	River parks	Public participation , grants for materials
5	Public waste facilities	Local authorities. Proper waste and sewerage systems
6	Governance	UK and USA: Trusts e.g. Natural Trust in UK Malaysia: Friends of Rivers, BKSAN, PBT, SPAN, JAS
7	Public participation	Friends of Rivers, Water Partnerships, Resident Associations

Water Governance

			Enforcement Agencies			
	Agency	Activities	LUAS	PBT	JAS	SPAN
1.	PBT	Land development (MASMA, ESCP)	<50 Ha		=>50 Ha	
		Solid waste/gross pollutant				
		Sullage		Trade sullage		✓
2.	STP operators	Plant effluent			No limit	
3.	WWTP operators	Plant effluent			>50 m3/day	
4.	IWK	Septage			✓	✓
5.	Jab. Hutan	Logging	?			
6.	Jab. Pertanian	Land clearing, replanting	?			
7.	MPOB	Oil palm planting	?			
8.	RISDA	Rubber planting	?			
9.	Jab. Veterinar Enakmen unggas & babi	Animal rearing	Animals =>250 Birds =>20,000 Pig =>1			
10.	Jab. Perikanan	Aquaculture	Fish =>50 Ha Prawn =>10 Ha			
11.	JPS/Pej. Tanah	Sand mining	✓			

LUAS: Enakmen LUAS 1999 Seksyen 41; Peraturan-Peraturan Kemasukan atau Pelepasan Bahan Pencemar (Negeri Selangor) 2012

PBT: Street, Drainage and Building Act 1974, Section 55

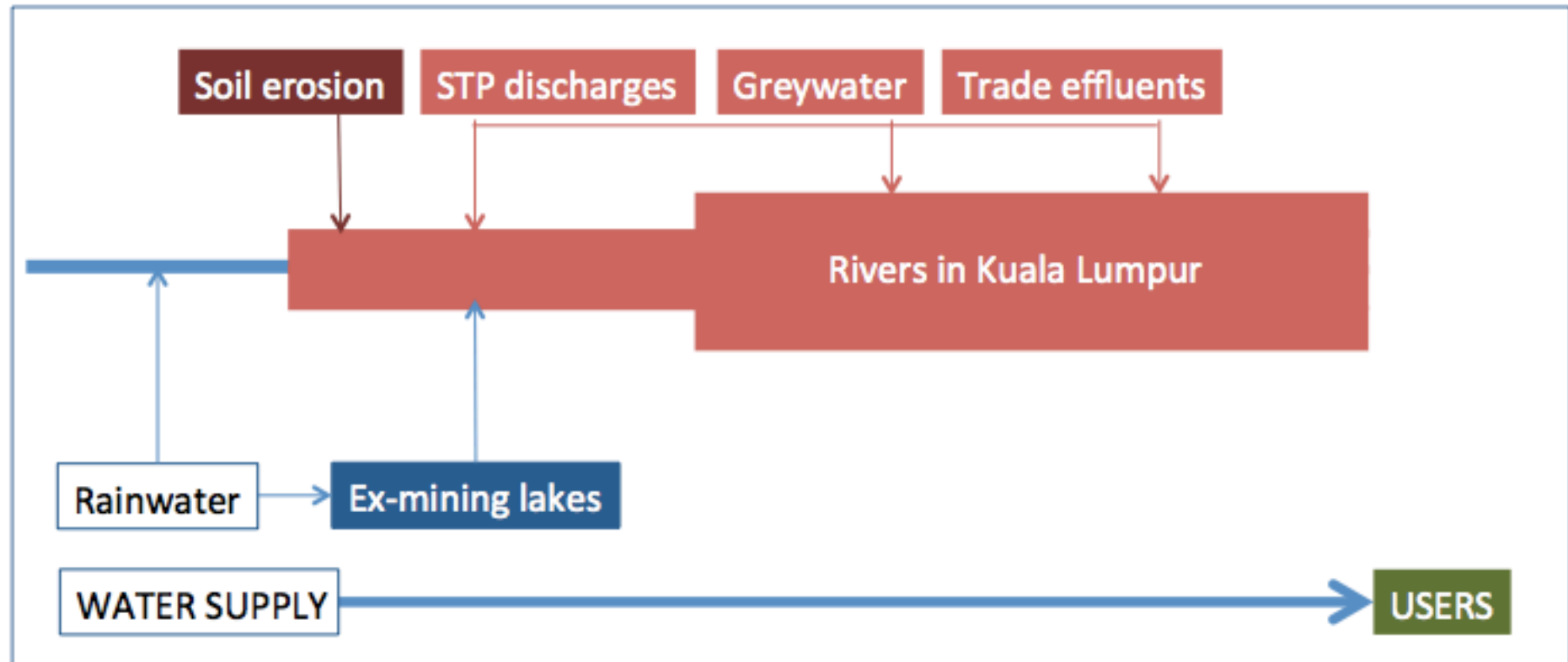
JAS: Akta Kualiti Alam Sekeliling 1974, Seksyen 25

SPAN: Water Services Industry Act 2006 , Section 43, 44, 45

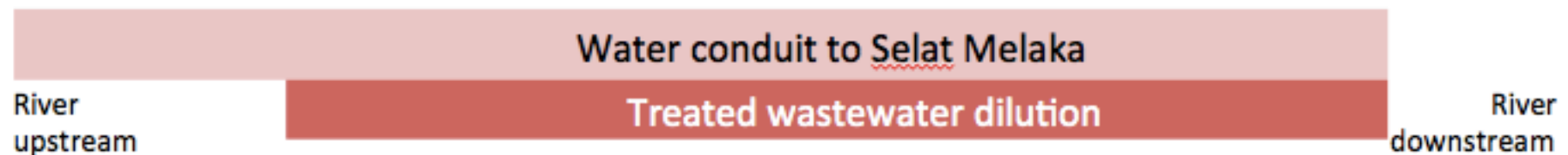
Water cycle in Klang Valley, Malaysia, 2015

By Zaini Ujang (2018) pp.183

CURRENT STATUS



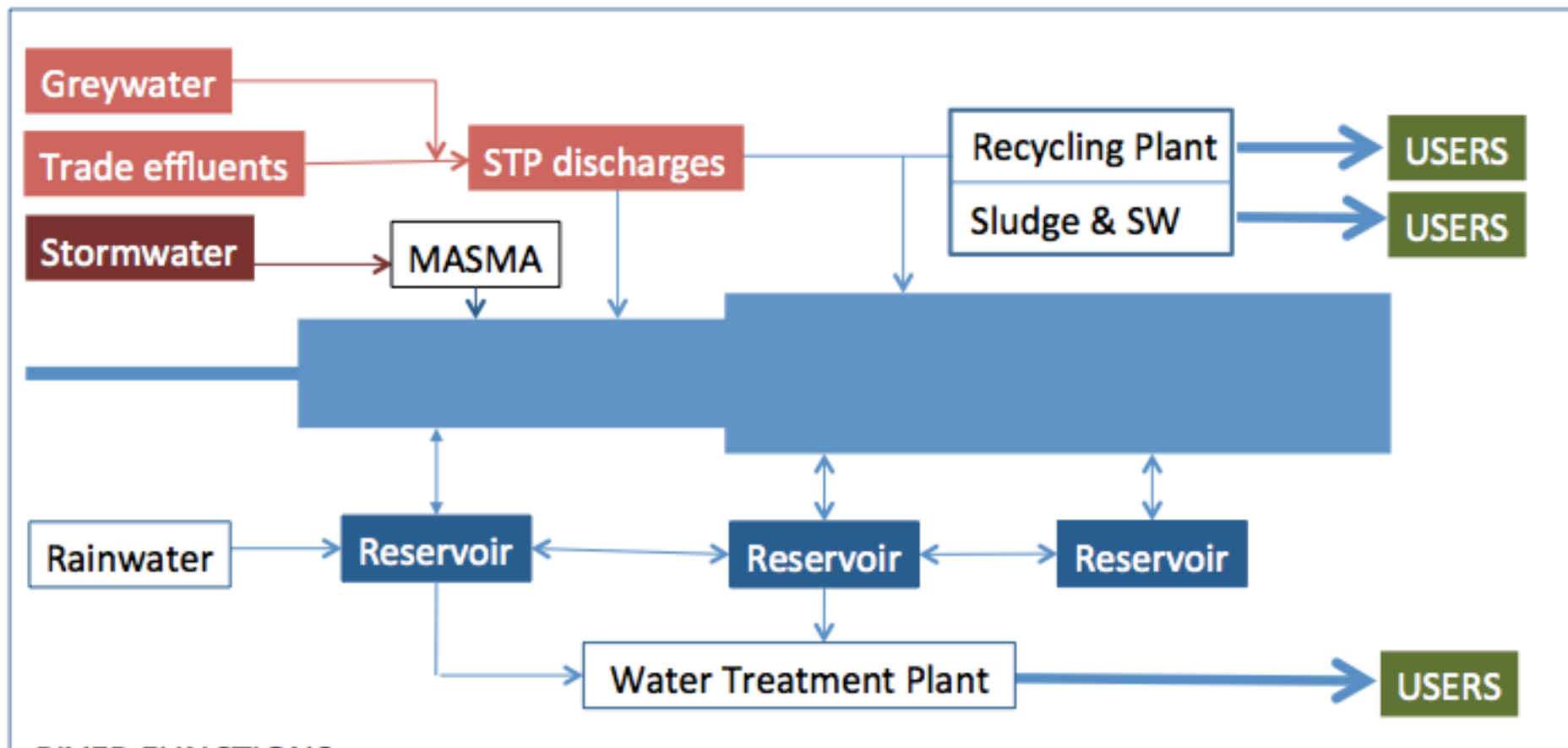
RIVER FUNCTIONS



Water cycle in Klang Valley, Malaysia, 2025

By Zaini Ujang (2018) pp.184

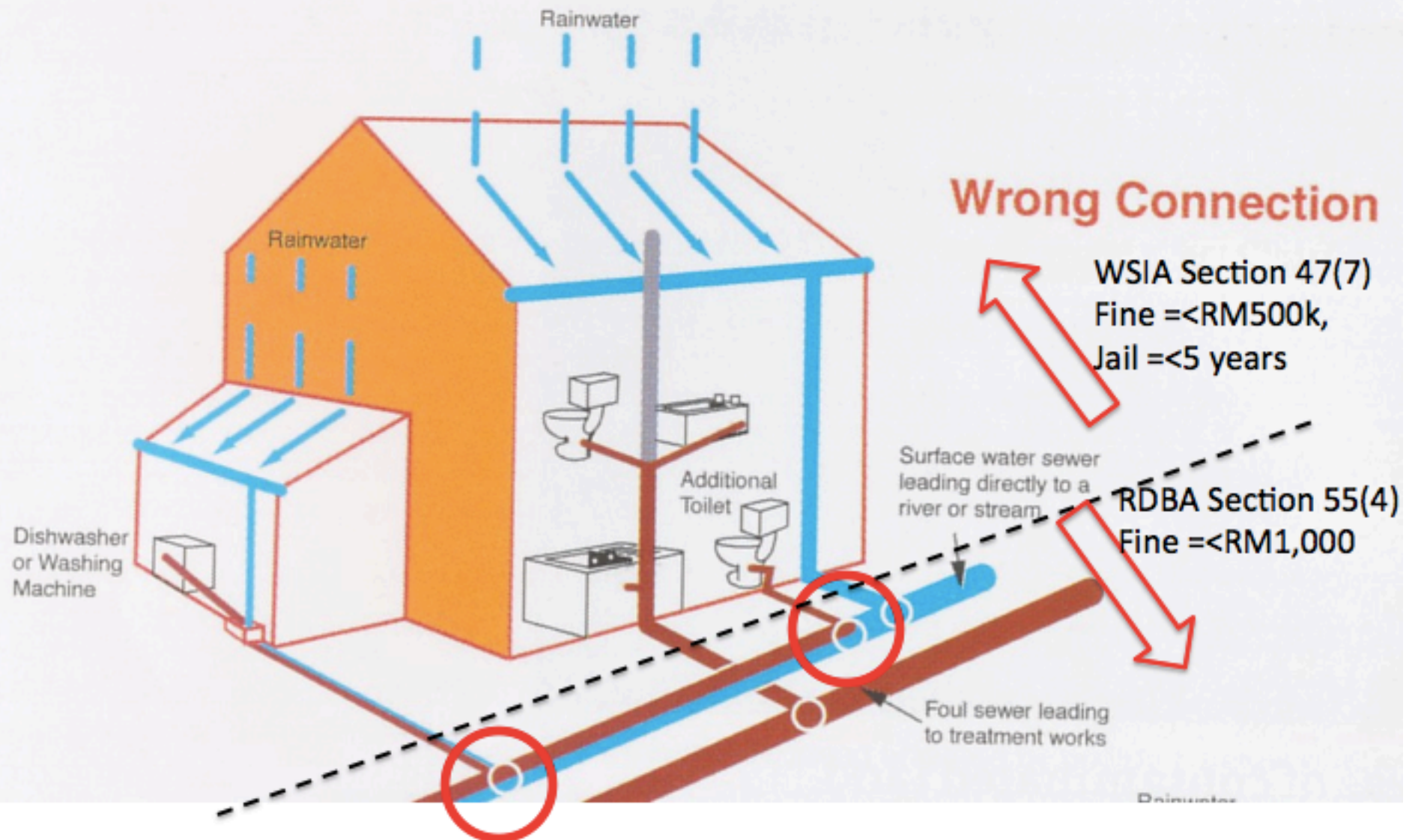
TRANSFORMATION



Sullage issue



Two Separate Systems Two Separate Tasks



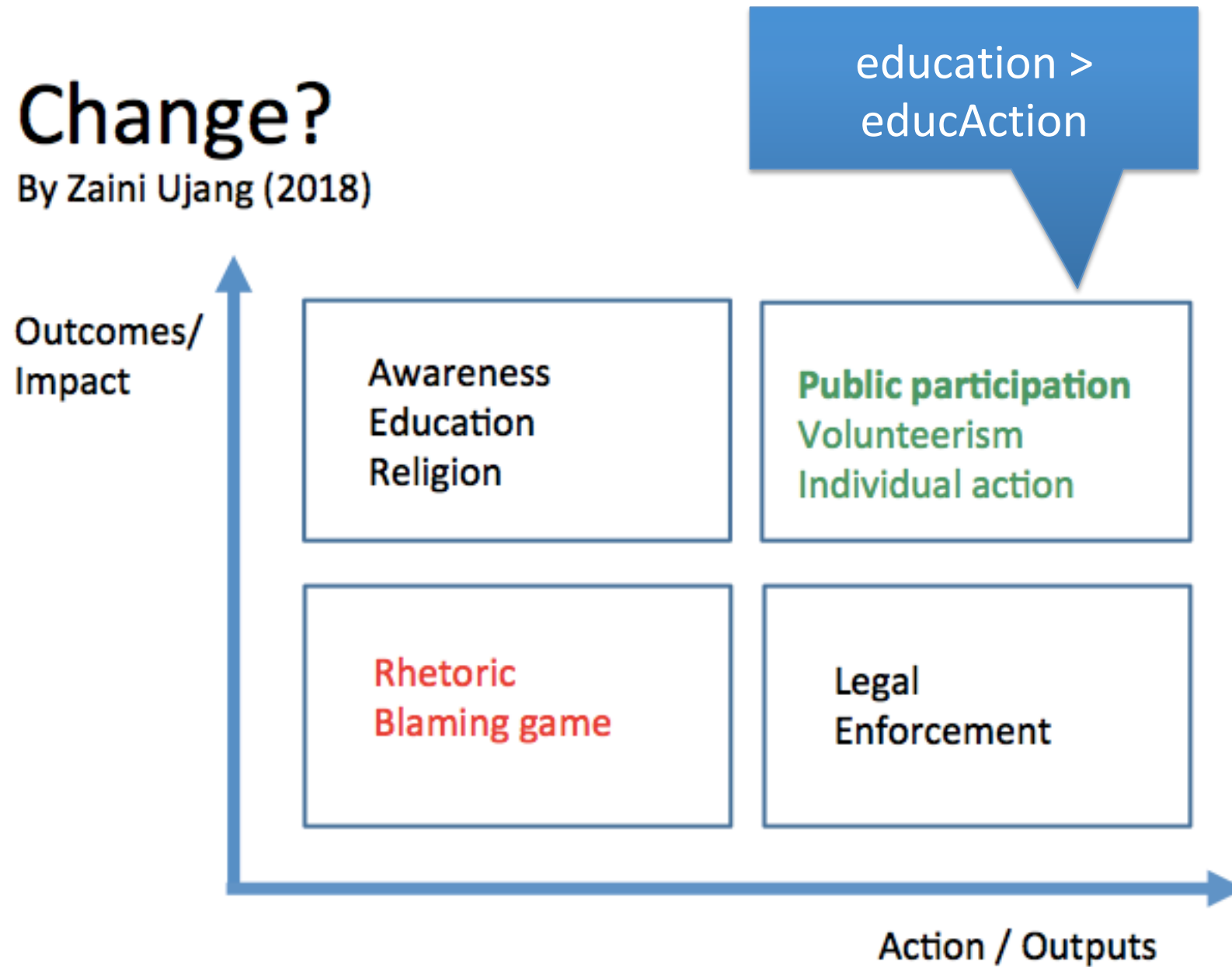
Total Maximum Daily Load (TMDL) Sg Langat

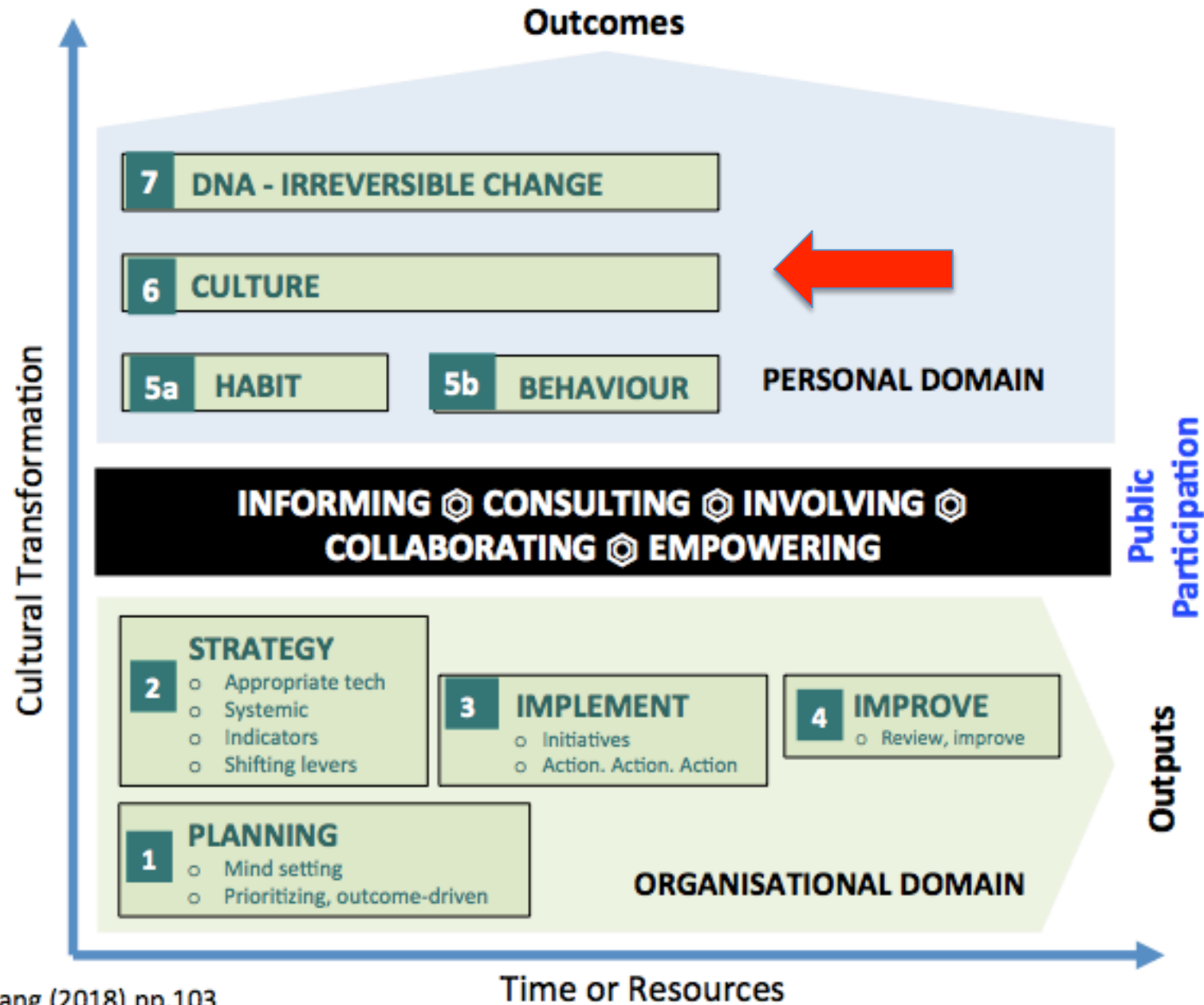
SG. LANGAT								
YEAR	SEWAGE CATEGORY	LOADING, KG/DAY			PERCENTAGE %			
		BOD	AMM	TSS	BOD	AMM	TSS	
2005	DRY YEAR	PUBLIC STP	3450	2349	5730	9.03	7.74	13.13
		PUBLIC CST	170	49	161	0.45	0.16	0.37
		POUR FLUSH	2189	350	1926	5.73	1.15	4.42
		IST	6856	2057	10283	17.95	6.78	23.57
		SULLAGE	25523	25523	25523	66.84	84.16	58.51
2006	WET YEAR	PUBLIC STP	3835	3302	6129	28.40	40.85	33.79
		PUBLIC CST	155	48	184	1.15	0.59	1.01
		POUR FLUSH	1527	244	1343	11.31	3.02	7.41
		IST	4994	1498	7492	36.99	18.53	41.30
		SULLAGE	2992	2992	2992	22.16	37.01	16.49

- Based on Sg.Langat study for 2005 & 2006, **sullage** contributed the highest BOD, Ammonia, TSS in a dry year.
- For a wet year, **IST** produced highest BOD & TSS; **STP** produced highest ammonia.

Change?

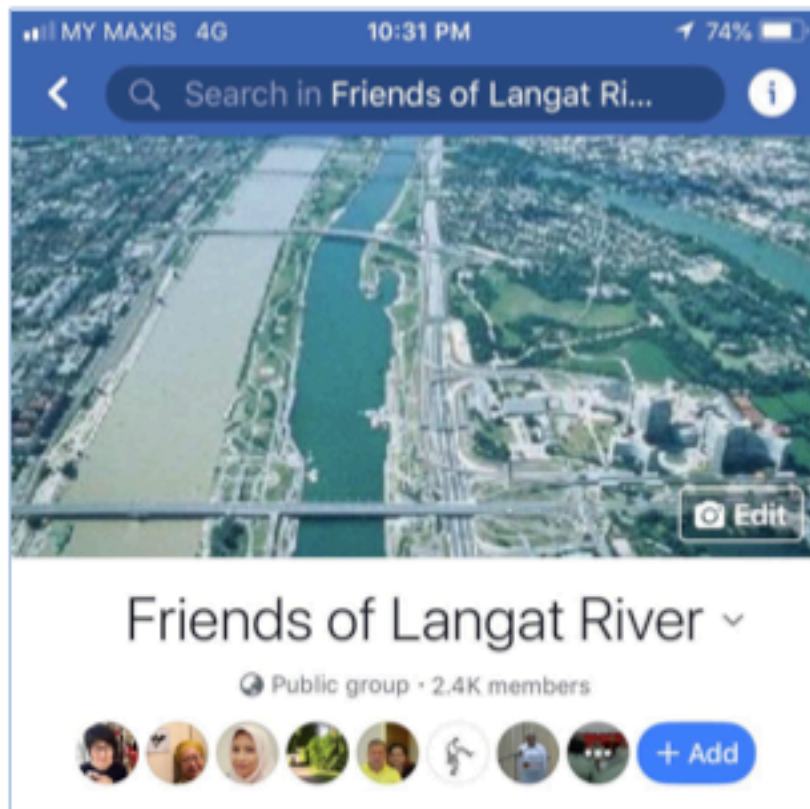
By Zaini Ujang (2018)





Public participation

- Volunteerism
- Create value on water infrastructures
- Recreational: Hiking and cycling trails, swim ponds, fishing, sight-seeing



Friends of Langat River

Started Feb 2017

BUSINESS SCHOOL
EXECUTIVE EDUCATION

PHASE 1A

1 meeting/approval from DID & MPKJ/LWAS.

2 Concept & drawing

3 Volunteerism → One day event

4 Donation/Funding for Phase 1A.

UKM Nursey -
3 April Mesjuaat
8 April Gopengrayong
x April Gopengrayong.

Swim Pond

Sungai Langat

UKM KETAWA.
LUAS
DID/MNRE
MPKJ
MWA.

To do - RM-

1 Trails	5000
2 clearing	free
3 Small bridge	2000
4 gravel	2000

batu

FRIENDS OF RIVERS, M&A
(FORM)

OBJECTIVES

- 1 Increase awareness on river ecosystem, sustainability, recreation education.
- 2 loose virtual umbrella N&O
- 3 Develop template/guides
- 4 modules for uni/college/schools - water quality, ecology etc.

HOW TO START?

Friends of river (local pers)

- 1 Core group 10 people/volunteers
- 2 Find a tributary (ideal 3m width, 1m depth)
- 3 Develop a plan (50m) on (a) water quality improvement (b) rubbish collection (c) recreational facilities - crowdouring
- 4 Activity continuously

RIVER REHABILITATION - THURSDAY

Physical - degree dip

- rubbish clearing
- put boulders
- aeration
- gabions
- Retention ponds

Biochemical improvement

- sewage treatment plants
- Grease traps
- Jabo

Recreational facilities

- TRAIL, ORS, etc.

Economical

- Societal - public participation

Template Activity

- Volunteerism - human resources
- crowd funding - Trail, ORS, etc.
- Technical advice - Jabo, ORS
- Awareness Education Module
- Get others to join (Social media)
- Action-oriented

Attendees

- Zaini
- Asari
- MAROR
- Zundli
- Sukimom
- Faisal Luk
- Haniffa Wae
- Adam
- Davvri



Friends of Langat River



Families come to enjoy Langat Trail



Prof Othman Karim UKM



First meeting at Zaini Ujang's house

Weekly call for community work



GOTONG-ROYONG
Friends of Langat River (FoLR)

Tarikh: 5 Ogos (Ahad)

Acara:

1. Bina trail sepanjang 500 m
2. Pembersihan kawasan
3. Tanam pokok/bunga

Tempat: Sungai Langat, Luar Kampus UKM

Mula: 8-10 pg

Sila bawa peralatan yang sesuai.

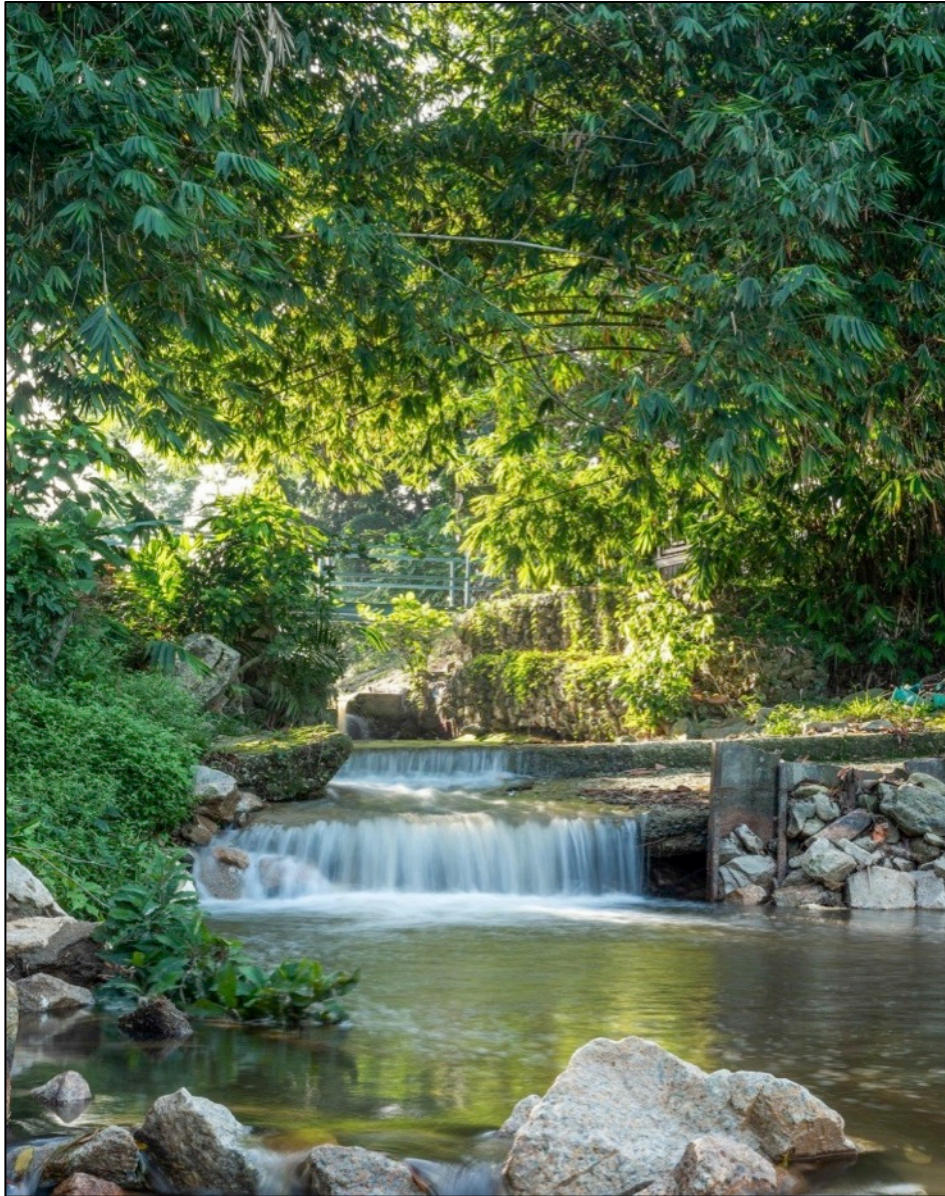
Sila bawa juadah yang rendah karbon.

Sumbangan banguku batu RM300/pax

Othman A Karim Mohmad Asari Daud Mansor
Ghani Elfithri Rahmah Sukiman Sarmani
Zuriati Zakaria Ahmad Hadiddin Bin Hashim
AhmadRizal Khalit Ngaini Yusof



Friends of Langkat River



Friends of Sungai Klang

DATE : 9 FEBRUARY 2019
TIME : 8.00 AM SATURDAY

VENUE : MELAWATI RIVER CARE AND ENVIRONMENT CENTRE

GOOGLE MAPS/WAZE: **RCEC**

PLOGGING

WEEDING

TRAIL CLEARING

TREE PLANTING



Friends of Sg Klang
Started 28 July 2018

67 weeks done



Friends of Sungai Klang



Friends of Sungai Klang – River Park@Melawati



Friends of Klang River Basin – Urban Garden@Kerinci



Friends of Sungai Batu – Launching by YAB MB Selangor

23 Mac 2019



Friends of Sungai Klang @Melawati

THE IMMEDIATE PLAN (2019)

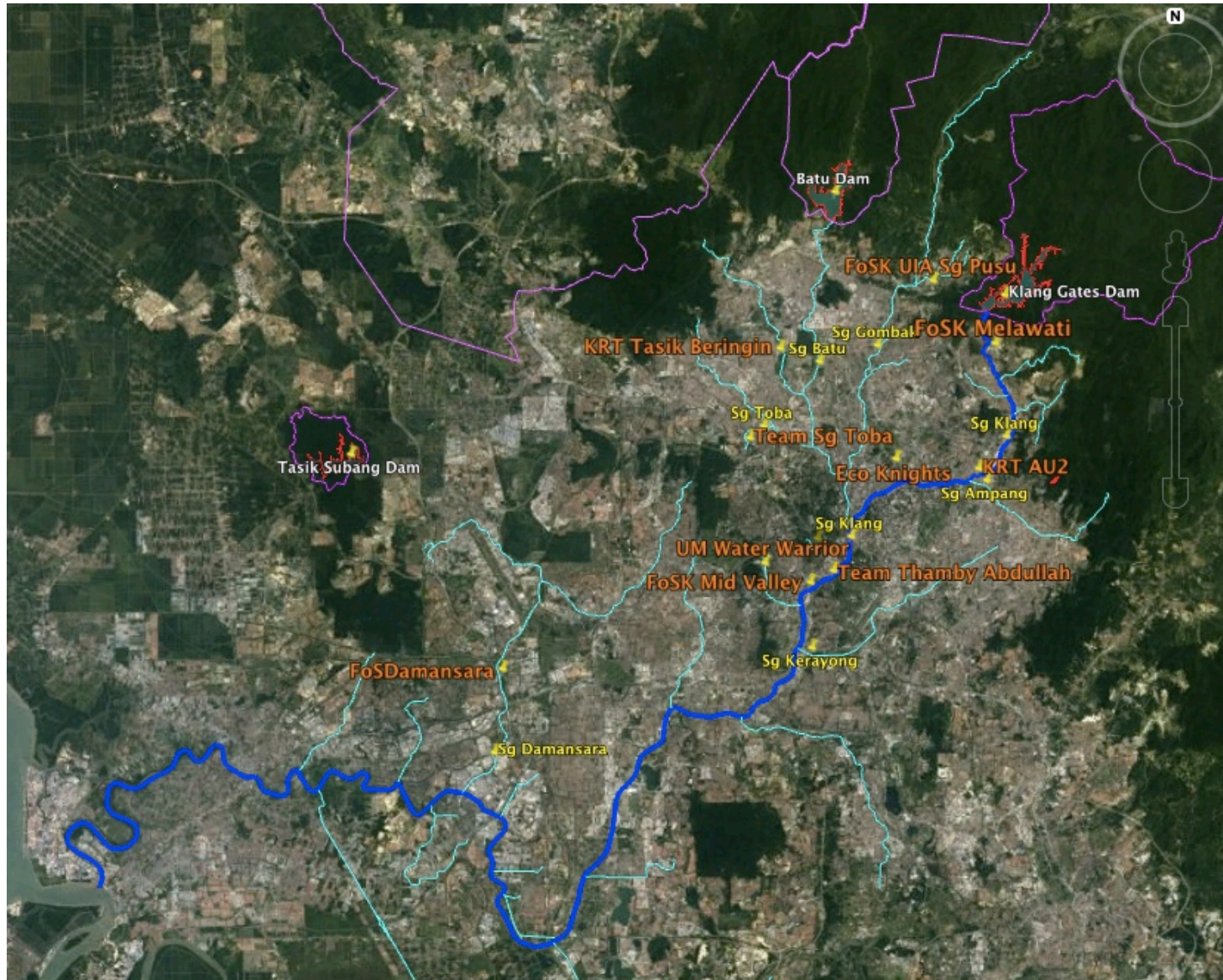
- Existing trail 1.08 km
- Proposed trail 2.6 km



Friends of Sungai Klang

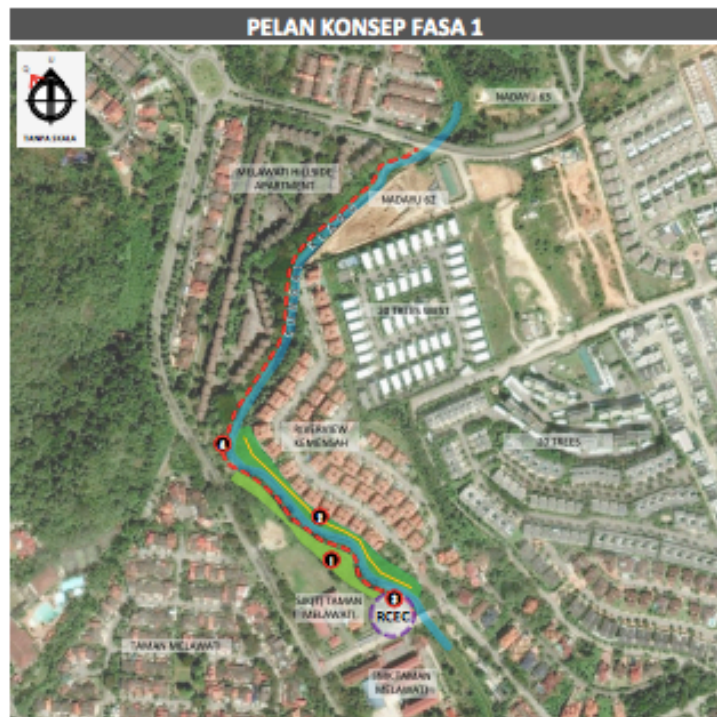
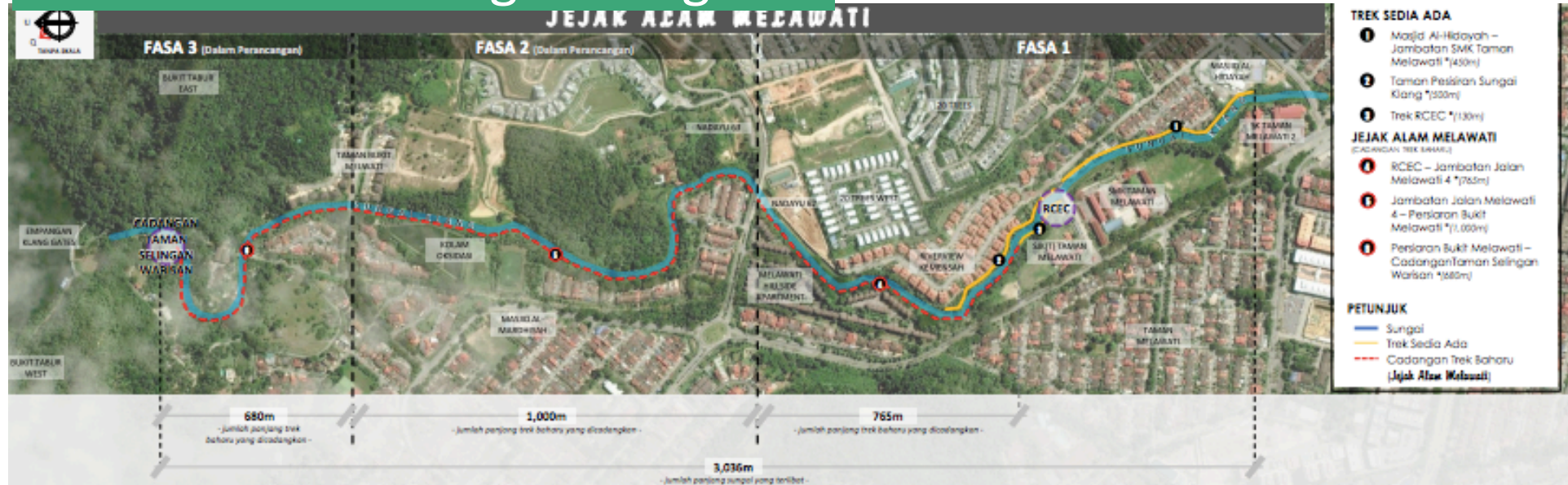
THE LONG TERM PLAN

Proposed trail 88 km along Sg. Klang



	Fo Group
1	FoSK@Melawati/SEEDEM
2	FoSPusu @UIA
3	FoSToba
4	KRT AU2
5	Eco Knights
6	FoSK@Thamby Abdullah
7	FoSK Mid Valley
8	FoSgBras Bras
9	FoSPantai/UM WaterWarriors
10	Komuniti Sg Way
11	Team Sg Toba
12	FoTasikWahyu/KRT Beringin
13	FoTasikWahyu/KRT T.Wahyu
14	FoTasikBaiduri/KRT I.Baiduri
15	FoSBatu/KRT Kasipillay
16	FoSgombak – KRT S.Tgganu
17	Ranger SgKlang/Kg Sg Udang
18	FoRivers IWK
19	FoSDamansara
20	FoSBatu (7 groups)
26	

Friends of Sungai Klang



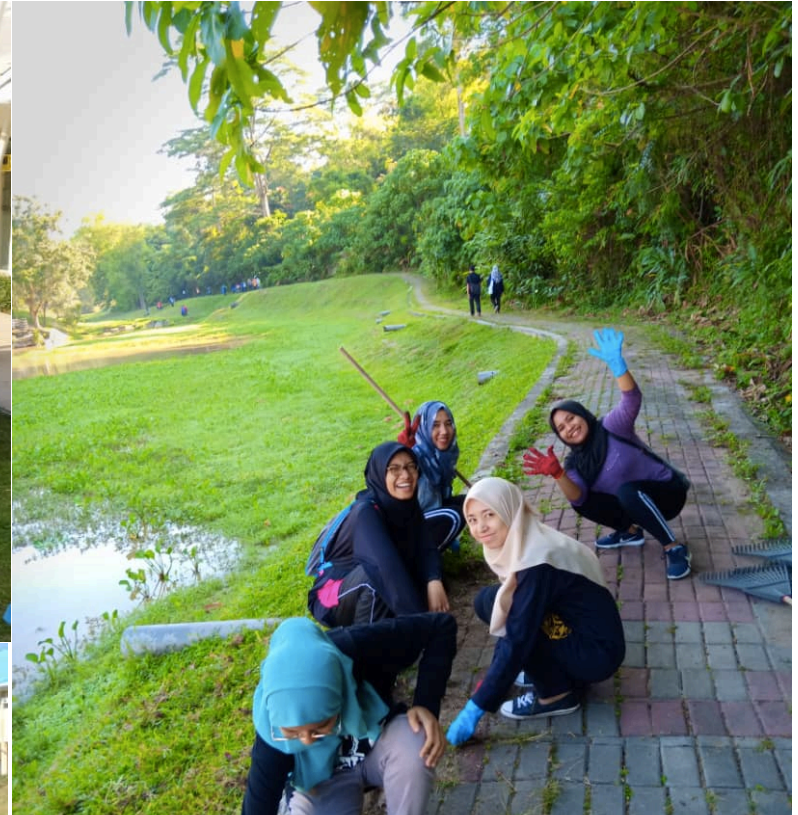
Friends of Sungai Klang

Launching River 3/ACE by YB Zuraida Kamaruddin Menteri Perumahan dan Kerajaan Tempatan, 3 Ogos 2019



Friends of Sungai Pusu@UIA Gombak

Inaugural GReduAction , 16 Mar 2019



Friends of Sungai Klang@MidValley KL

Inaugural GReduAction , 31 Mar 2019



Friends of Sungai Rangkap@Setia Eco Templer

Inaugural GReduAction , 16 Sept 2019



Friends of Sungai Selaru@Desa Anggerik, Serendah

Inaugural GR eduAction , 29 Sept 2019

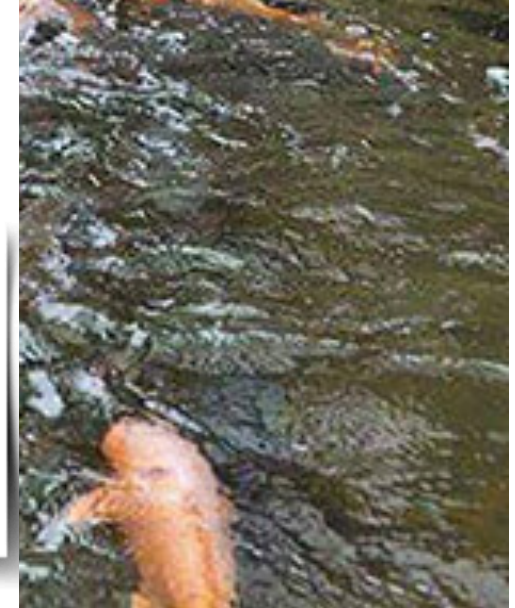
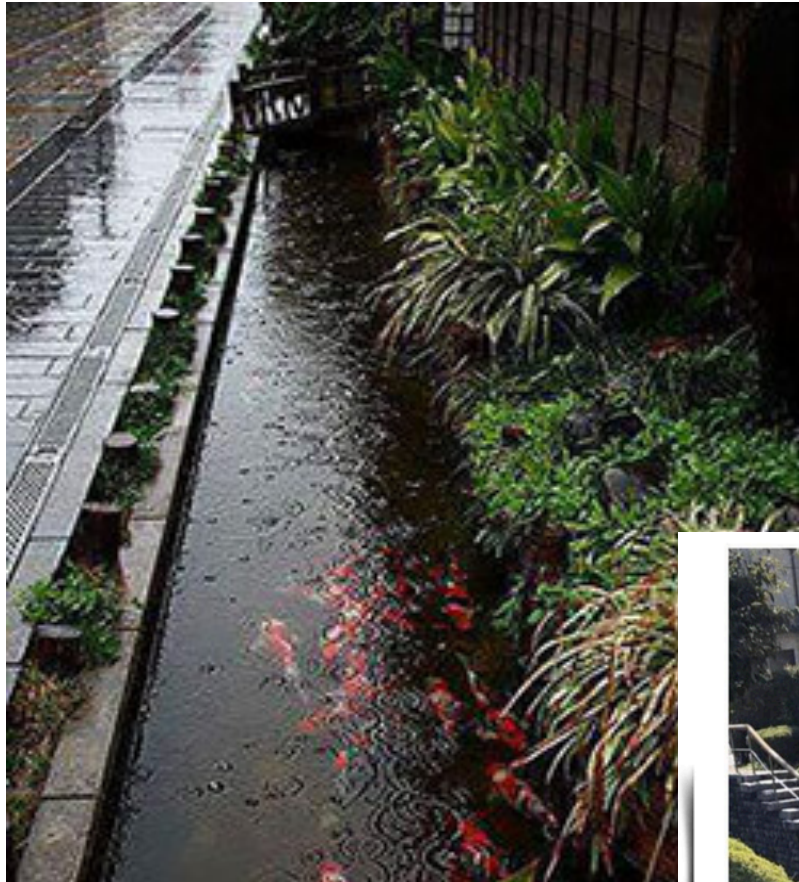


Outcomes



- Sustainable development
- Clean ecosystem
- Green growth
- HAPPINESSS

Outcomes



- Sustainable development
- Clean ecosystem
- Green growth
- HAPPINESSS

A small stream in Tokyo where community can enjoy the ecosystem.

Public Awareness Implementation Methodology

- ✓ Choose location – urbanised and ruralised rivers
- ✓ Create committed core team
- ✓ Create Whatsapp core team and public group
- ✓ Invite CSR for river rehabilitation program
- ✓ Continuous program, minimum weekly
- ✓ Visit established sites
- ✓ Replicate RIVER 3/ACE program for activities
- ✓ Provide store (cabin)
- ✓ Provide tools
- ✓ Invite schools to have environment or PE lessons utilising river trails

Proposal to Government

- ✓ River Frontage policy
- ✓ Riverside development policy to create River Park
- ✓ Government staff involvement policy at least once a year
- ✓ Coordinated enforcement on sullage – LUAS/BKSA, SPAN, IWK, PBT
- ✓ PBT to enforce illegal *trade* sullage
- ✓ SPAN to enforce illegal sanitary piping alteration – kitchen & washing machine
- ✓ Financial support?