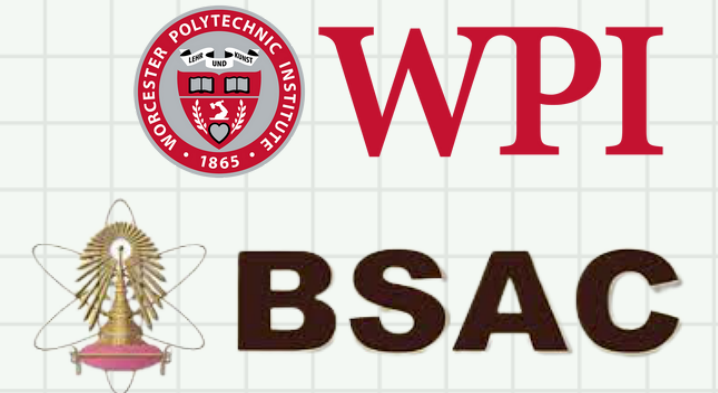
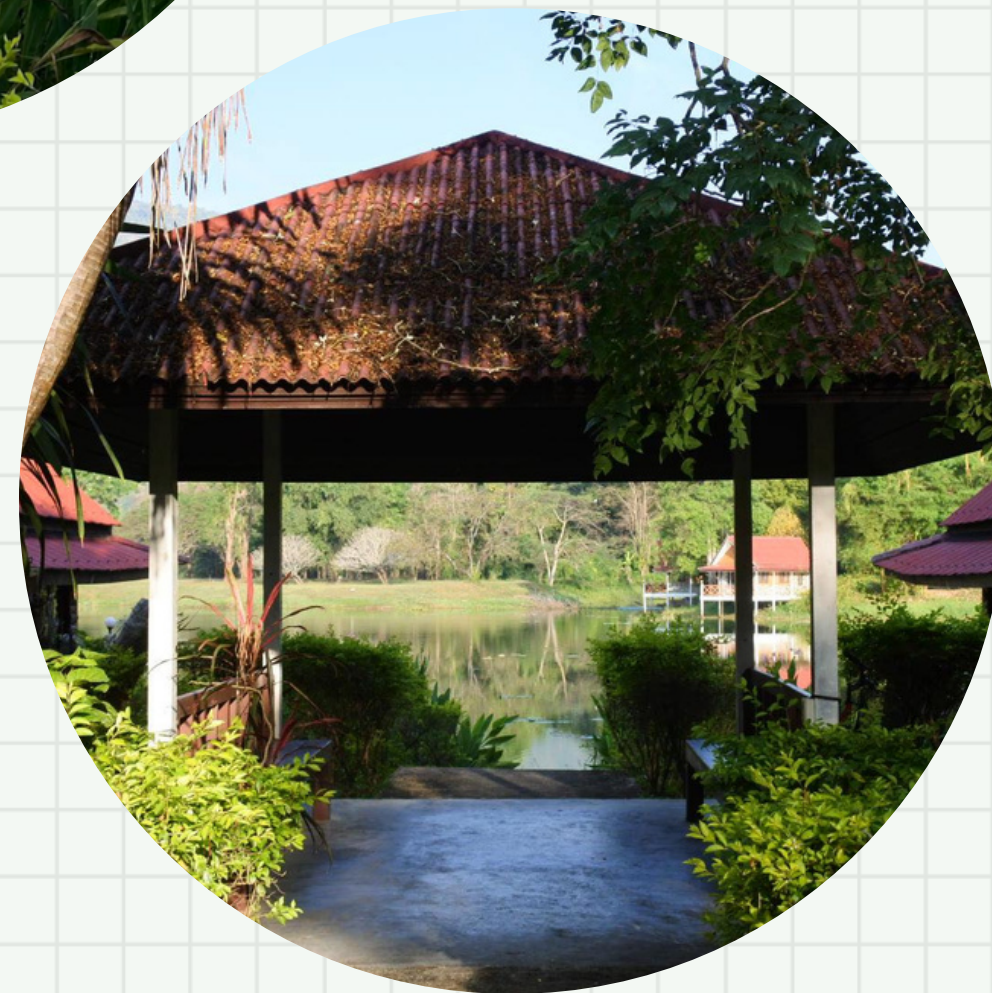
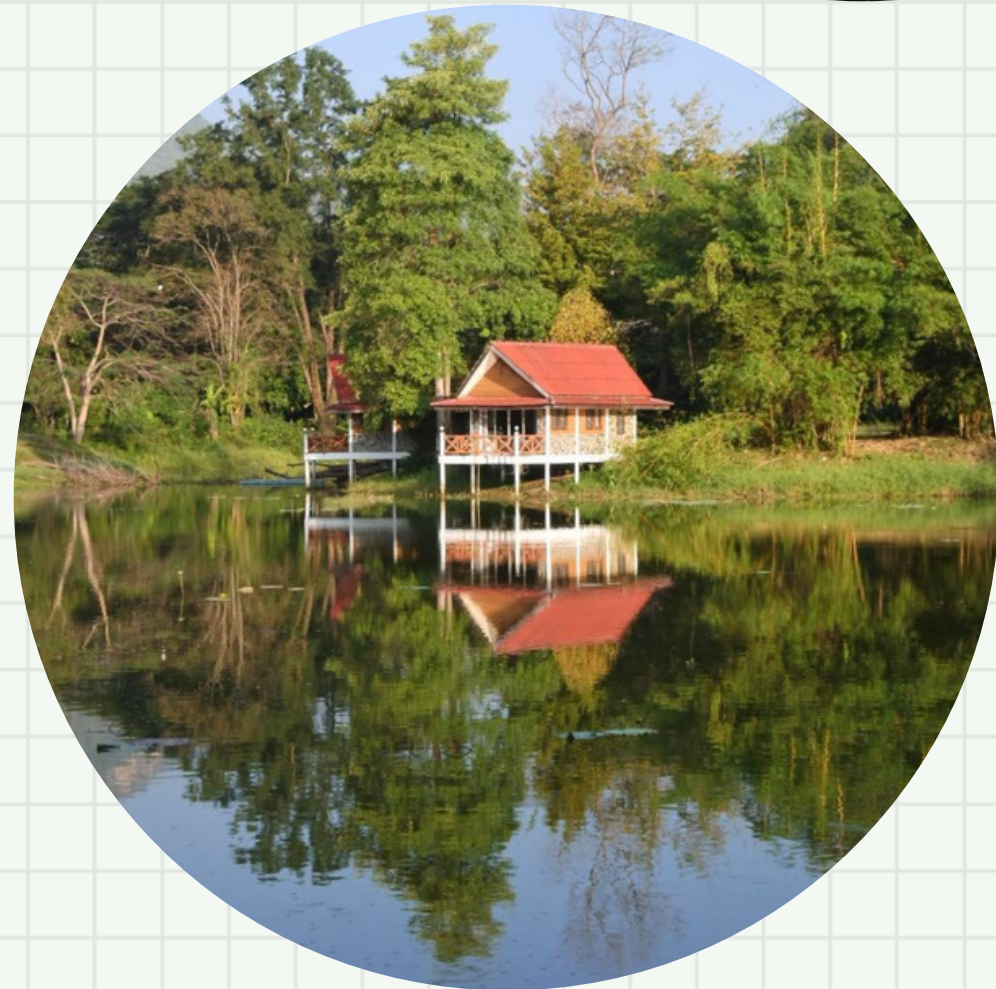




IQPISSP5

**Minimizing the Ecological
Footprint
of a Nature Resort**



Meet our Team!



Tonhom

Bunnasorn
Kaenrattana



Pao

Poomipat
Laorsatiankul



Une

Woranuntha
Varavarn



Tata

Vipakkapond
Sakyapinan



Elise

Elise Nerden



Evan

Evan Rios



Jane

Jane Spear

Presentation Contents

Sponsor's
Desires

Goal &
Objectives

Review of
Methods

Project
Results

Deliverables

River Kwai Park & Resort

- Located in **Chongsadao, Kanchanaburi**
- A subsidiary of the KSL Group

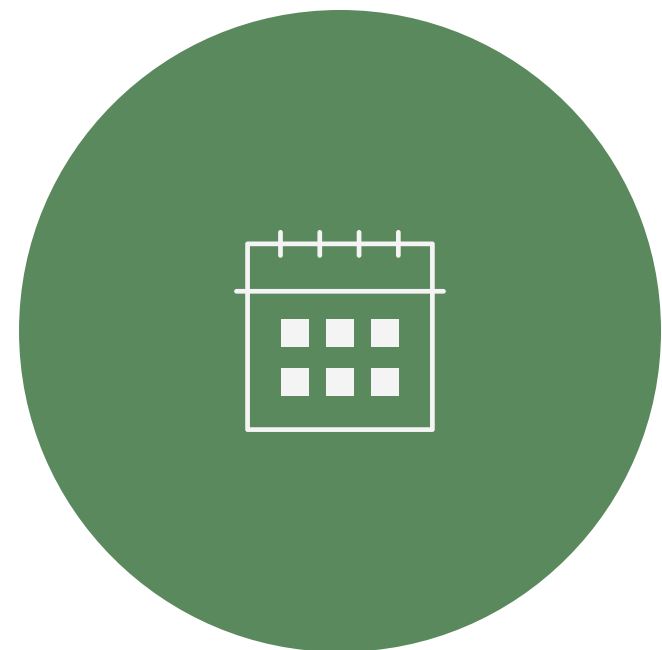


Sponsor's Desires



Water purifier recommendation

To reduce the use of plastic water bottles



Behavioral change plan

To motivate the resort staff to stop using plastic water bottles

Our Goal

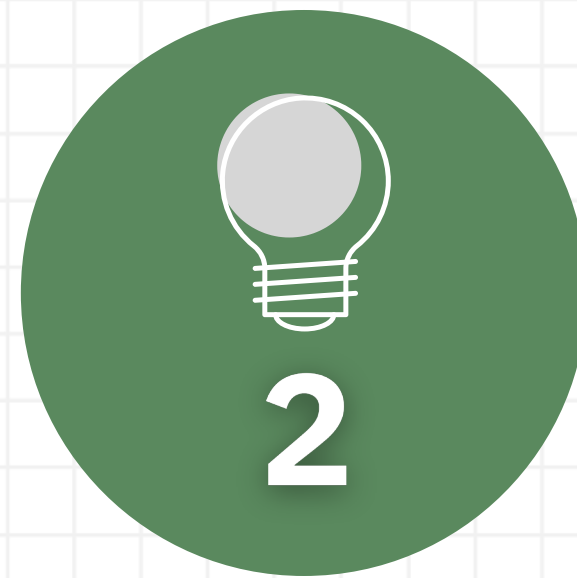
Develop a behavioral plan and recommend a water purification system to reduce plastic waste at the River Kwai Park & Resort



Objectives



Understand
the current waste
generation and waste
management at River
Kwai Park & Resort



Identify
the values and
sustainable habits
of the River Kwai
Park & Resort staff



Provide
a behavioral analysis
of the resort staff and
a behavioral plan to
motivate the staff to
stop using plastic
water bottles



Recommend
a water purification
system to produce
drinkable water from
the Khwae Yai River

Methodology



Interview with Stakeholders

- Manager
- Staff
- Village Leader & Health Volunteer
- Chongsadao SAO



Staff survey



WPI



BSAC

Manager

showed
overall waste
management
at resort

Staff

gave
information and
suggestions for
waste
management

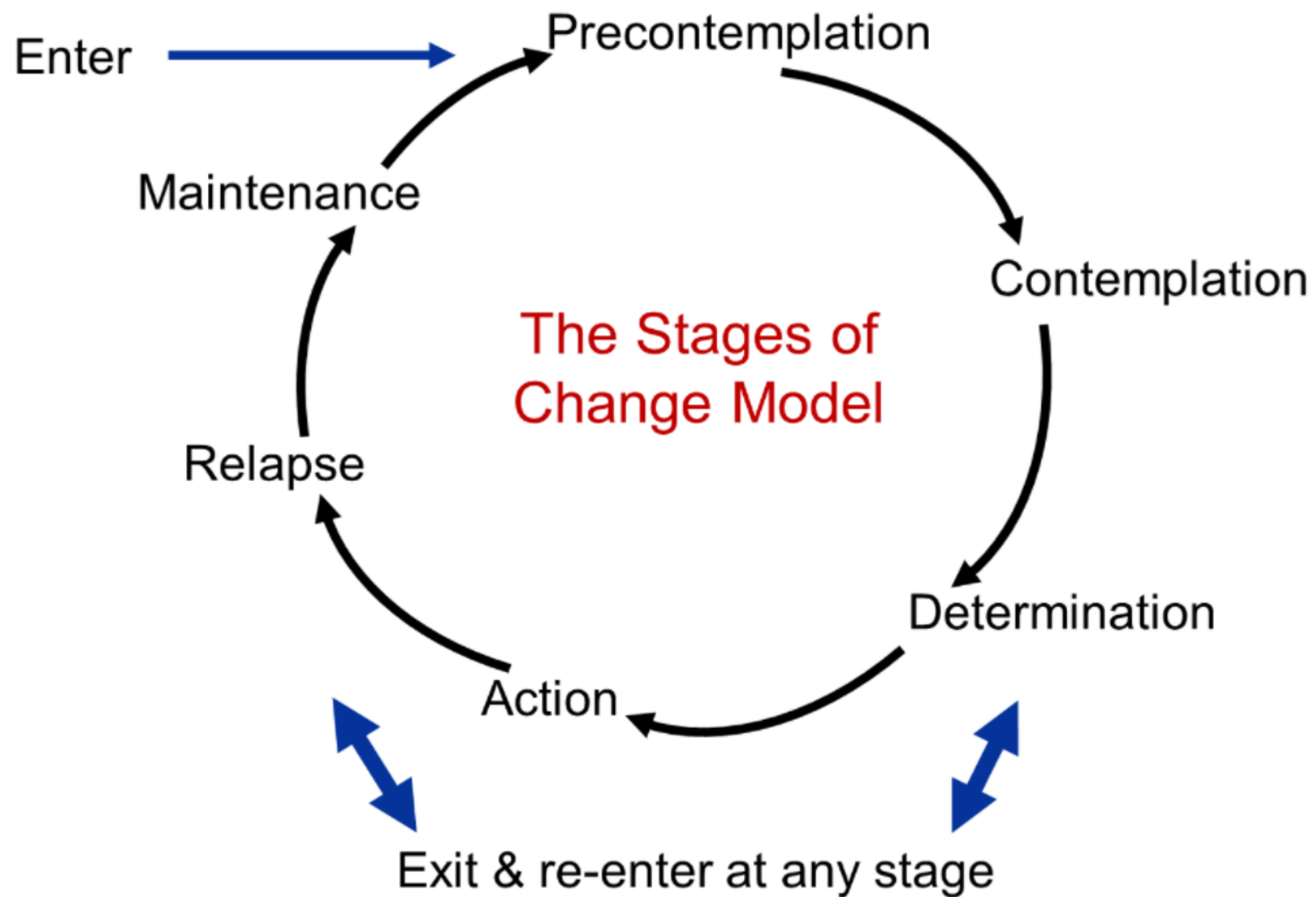
**Village Health
Volunteer and
Village leader**

**explained
local waste
management**

**Chongsadao
SAO**

**discussed policies
and
waste obstacles**

Prochaska's Transtheoretical Model Guides Behavior Change Overtime



Staff Survey to identify current stage of change

11

13 Questions

Using a Likert Scale

Received 18 Responses

"I try to reduce my plastic waste at work"

Never

Not Often

Sometimes

Often

Always

Results



WPI



BSAC

Current Waste Management ¹³

General waste → Private contractor

Organic waste → Animal feeding and fertilizer

Hazardous waste → Waste separation station

Plastic waste → Private contractor

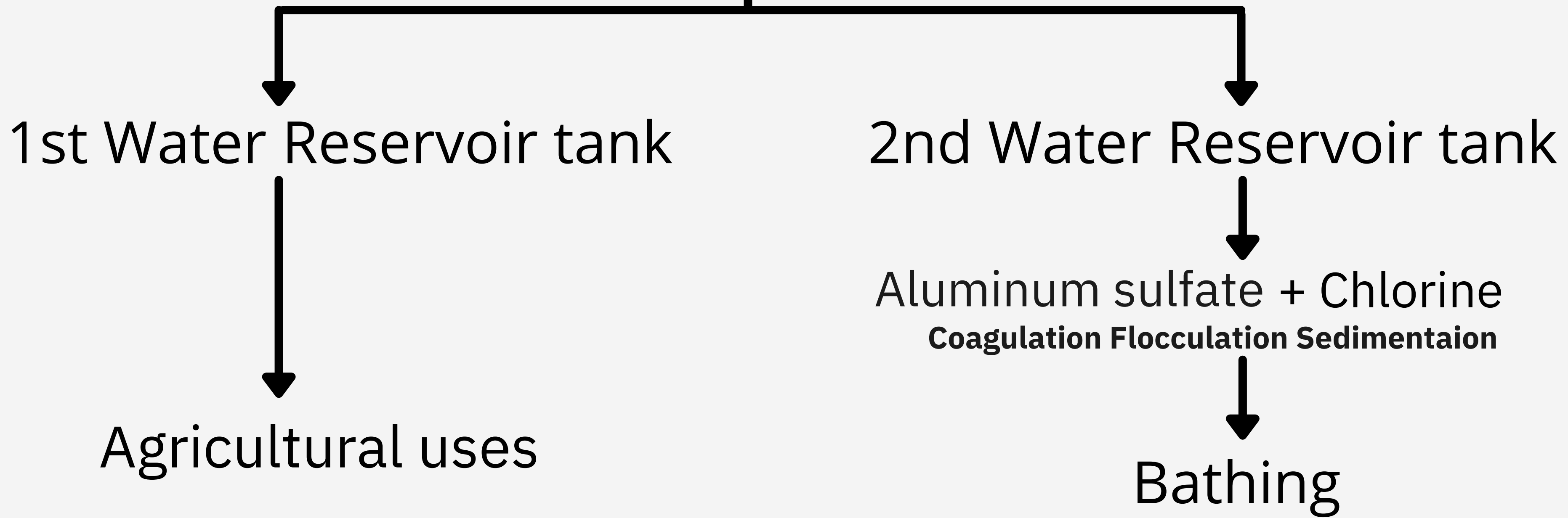
Plastic Waste



- Main concern
- Utilization of water from the **Khwae Yai River**
- Drinking water for the staff

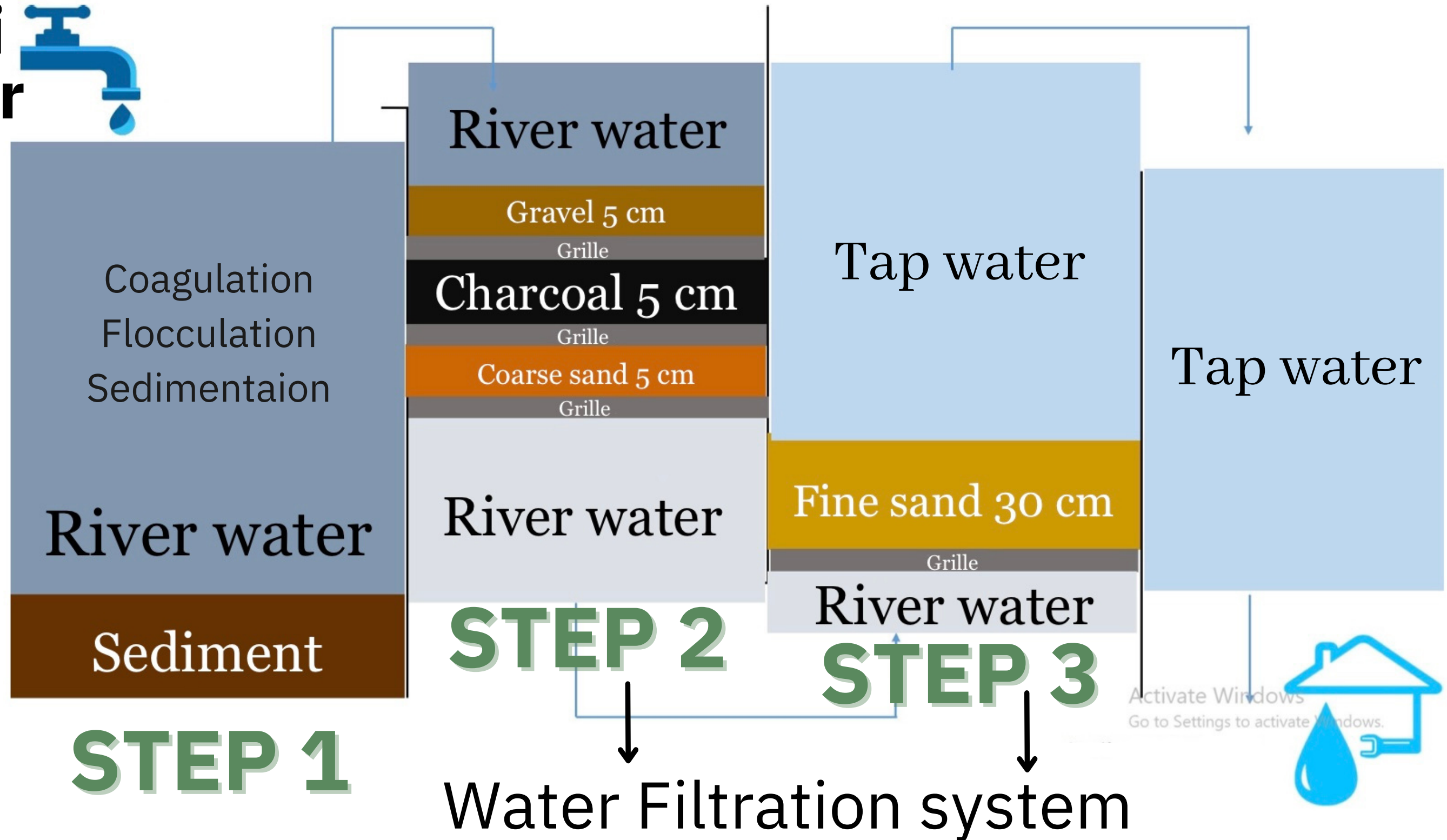
Current Water Circulation System

Raw water from
Khwae Yai River



New Water Treatment System

Khwae Yai River Water 



Activate Windows
Go to Settings to activate Windows.



Staff Interviews

Suggestions

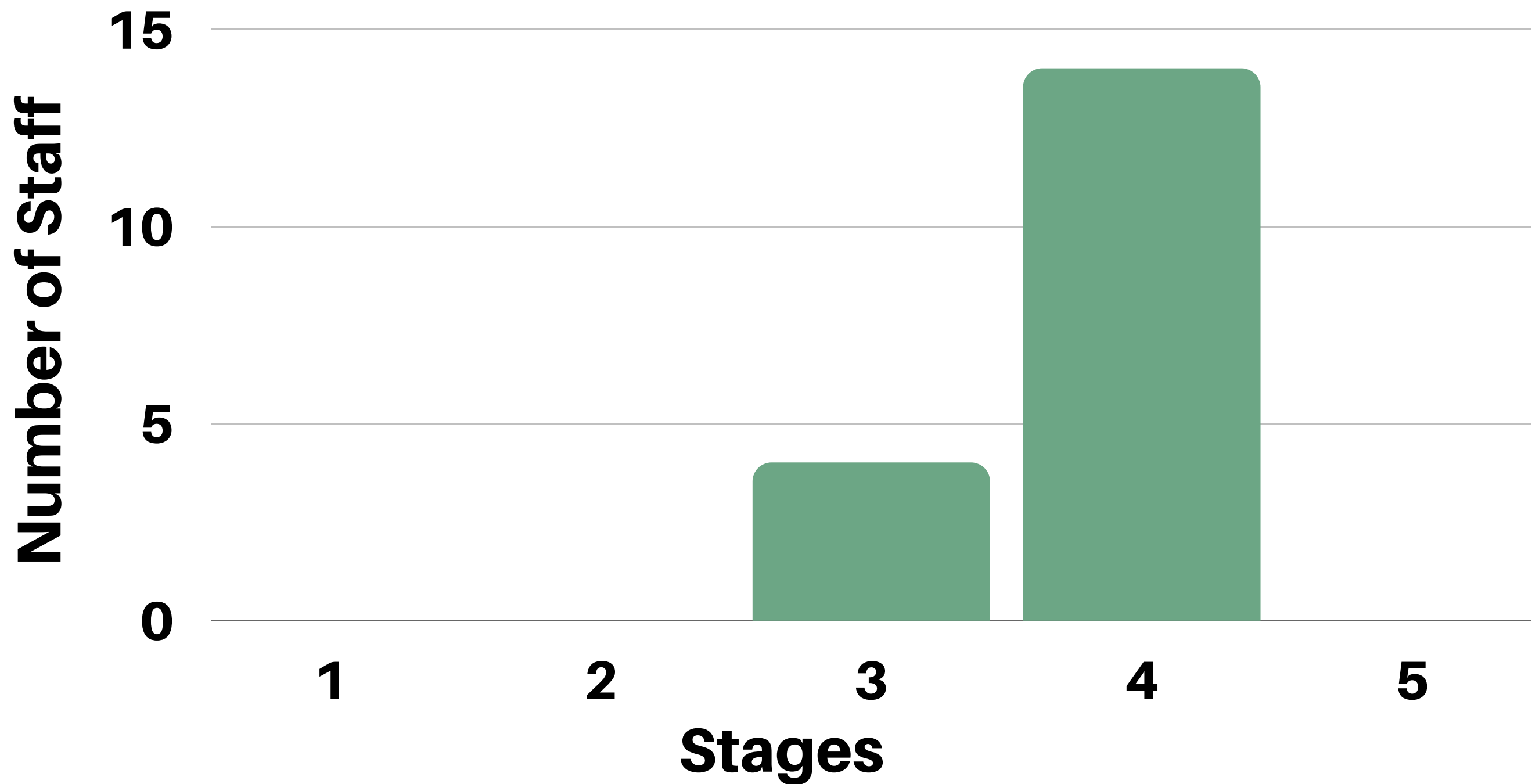
- Waste separation stations for guests
- Role Models
- Solid roles & rules

Needs

- Color coded bins & distinct waste pictures
- More waste separation stations at the resort
- More durable bins & ease of maintenance

The Staff is mainly in the Preparation and Action Stages

Distributions of Resort Staff in TTM Change Stages, n=18



The Action and Preparation Stage represent that the staff has the will but not the ability



Recommendations for the Staff are based on the stage of change the staff is in



Motivation

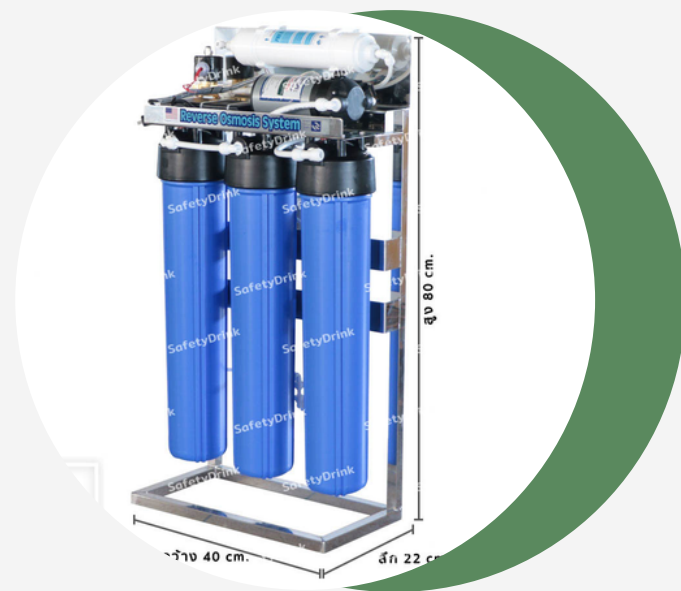


Incentives



Mentors

Water Purification Systems



Treatton water purifier 600 GPD Reverse Osmosis

Cost : 20,000 - 25,000 baht
Capacity : 90 liter/hr
Purification process : 5 steps



MAKITIS RO water purification system with Fiber tank

Cost : 30,000 - 35,000 baht
Capacity : 90 liter/hr
Purification process : 6 steps + 1 step



water purifier RO 5 steps STIBEL ELTRON "Glacier"

Cost : 20,990 baht
Capacity : 90 liter/hr
Purification process : 3 steps + 2 steps

The Decision Matrix shows that the Treatton and MAKITIS are the best purification systems for the resort

	Size	Cost	Capacity	Performance	Lifetime of filter	Cost of filter	Total Score
Treatton	2	2	3	4	2	2	15
MAKITIS	1	1	3	6	2	2	15
STIEBEL ELTRON "Glacier"	2	2	3	2	2	2	13

น้ำกรอง จากแม่ข่ายใหญ่

Staff Infographic to communicate the water purification and filtration system



Suggested Behavior Change Plan to reduce the use of disposable water bottles

Preparation

Action

Maintenance

Owner & Managers drink filtered water

Monetary or other incentives

Owner & Managers support staff

Positive reinforcement

Provide guide to access clean water

Thank you!

Questions/Comments?

Sponsor

River Kwai Park & Resort

WPI Advisors

Assoc. Prof. Stephan Sturm

Assoc. Prof. Holly Ault

BSAC Advisors

Prof. Supawan Tantayanon

Asst. Prof. Siripastr Jayanta

Asst. Prof. Numpon Insin



WPI



BSAC



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