

# “Hong Kong Wetland Park: Indoor Exhibition Galleries” Worksheet 1

Please mark a “✓” beside the pictures of wetlands.



## “Hong Kong Wetland Park: Indoor Exhibition Galleries” Worksheet 2

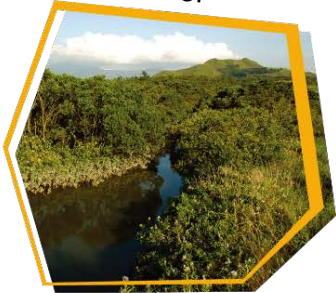
**Wetlands are multifunctional. The loss of wetlands would threaten the life of human beings and wildlife.**

Please list the major functions of the following wetlands.

(Complete by filling the alphabet on the line)

Functions of Wetlands: a. Store water    b. Filter pollutants    c. Protect riverside or coastline  
d. Provide food (to animals and human)    e. Provide habitats for wildlife

River



Mudflat



Fishpond



Coral reef



Mangrove



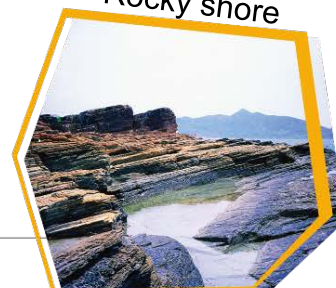
Reed bed



Wet agricultural land



Rocky shore



## “Hong Kong Wetland Park: Indoor Exhibition Galleries” Worksheet 3

### (A) Hydraulic engineering – The Three Gorges Project

The Three Gorges mentioned are the Qutang Gorge, Wuxia Gorge and Xiling Gorge, which lie along the ChangJiang (Yangtze River). The Three Gorges Project (TGP) starts from Chongqing to Yichang, is one of the largest hydropower-complex projects in the world.



(B) Please state the pros and cons of the Three Gorges Project in terms of environmental, social and economic aspects.

**Environmental Aspect:**

☺Pros

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☹Cons

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**Social Aspect:**

☺Pros

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☹Cons

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**Economic Aspect:**

☺Pros

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☹Cons

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## “Hong Kong Wetland Park: Indoor Exhibition Galleries” Worksheet 4

(A) Interview a classmate and finish the “Water Consumption Habits Record Table” according to the “Water Consumption Chart”.

### Water Consumption Chart

Activity	Water consumption
Showering	15 - 20 L/min
Washing faces, brushing teeth	6 - 10 L/min
Traditional water closet	9 - 12 L
Washing clothes by machine	35 L/kg

### Water Using Habits Record Table

My habit	Habits of Classmate, _____
Every day, I brush my teeth and wash my face for _____ minutes; shower for _____ minutes and go to the toilet _____ times.  My family wash _____ kilograms of clothes every day.  I use _____ liters of water per day on average.	Every day, he/she brushes teeth and washes face for _____ minutes; showers for _____ minutes and go to the toilet _____ times.  His/Her family wash _____ kilograms of clothes every day.  _____ (Classmate’s name) uses _____ liters of water per day on average.

(B) Suggest how can we reuse water in our daily life?

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(C) Please list the reasons for the water wastage, and how it could be reduced.

Reasons of wasting drinking water	Solution

(D) Make your own "Water saving pledge"



I promise to save water in future and protect the wetlands.

Signature: \_\_\_\_\_

Name: \_\_\_\_\_

Date: \_\_\_\_\_



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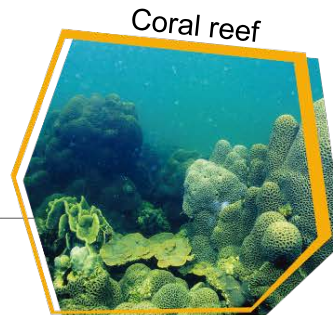
a, d, e



d, e



a, d, e



c, d, e



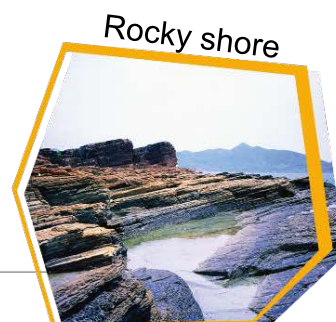
b, c, d, e



a, b, d, e



a, d, e



e



## **“Hong Kong Wetland Park: Indoor Exhibition Galleries” Worksheet 3**

### (A) Background Information:

The Three Gorges mentioned here are the Qutang Gorge, Wuxia Gorge and Xiling Gorge, which lie along the ChangJiang (Yangtze River). The Three Gorges Project (TGP) starts from Chongqing to Yichang, is one of the largest hydropower-complex projects in the world.

It is expected that the TGP is capable to regulate the flow rate of river and reduce the risk of flooding in the middle and lower course of Changjiang. In addition, the hydroelectricity power station is capable to generate 84.68 billions kilowatt electricity per year. It is considered to be a clean approach for generating electricity by hydropower, as less air pollutants will be produced compare to burning fossil fuel. Moreover, the TGP deepens and widens the river, which facilitate the navigation in Changjiang.

When the TGP is completed, an enormous area (632 square kilometers) will be submerged. Therefore, more than 1 million people have to leave their homelands to uphill area, and some important cultural heritages have to be resettled. However, there is limited flatland for farming at the uphill areas. Many people were forced to move farther to other provinces. In addition, the TGP brought great ecological impacts. The original river ecosystem was fragmentized by the dams. The Chinese sturgeon (*Acipenser sinensis*) could not return to their breeding ground (Jinshajiang) at the upper course.

### Objective:

Let students understand the environmental, social and economic impacts in connected with the Three Gorges Project.

### Suggested Procedures:

1. Visit the "Wetland Challenge" gallery in Hong Kong Wetland Park Visitor Centre.
2. Let students have a discussion on the pros and cons of the Three Gorges Project.
3. Complete Worksheet 3.

### Reference Websites:

The State Council — Three Gorges Project Construction Committee

[http://www.gov.cn/english/special/sanxia\\_index.htm](http://www.gov.cn/english/special/sanxia_index.htm)

CNN.com: China's Three Gorges Dam

<http://www.cnn.com/SPECIALS/1999/china.50/asian.superpower/three.gorges/>

(B) Please state the pros and cons of the Three Gorges Project in terms of environmental, social and economic aspects.

### Environmental Aspect:

#### ☺Pros

- Generate electricity by hydropower is cleaner than burning fossil fuel (e.g. coal) as it produces less air pollutants.

#### ☹Cons

- Fragmentation of the ecosystem along the course of Changjiang block the migration route of *Acipenser sinensis* (Chinese sturgeon).
- The natural habitat of the *Rhinopithecus roxellana* (Golden Monkey) is submerged. The Golden Monkey is a Class I protected species in China.

### Social Aspect:

#### ☺Pros

- People migrate to new areas will facilitate the development of new communities.
- The Three Gorges Project help to regulate the flow of water, thus, reduce the occurrences of flood.

#### ☹Cons

- People are forced to leave their homelands (e.g. Fengdu - the "Abode Of Ghosts") as it will be submerged in connection with the project.
- Fertile farmlands will be submerged.
- Many cultural relics will be submerged.

### Economic Aspect:

#### ☺Pros

- Three Gorges Project is capable of providing electricity for long-term development.
- Navigation is facilitated by the widened and deepened waterway.
- The Three Gorges Project will be an attraction for visitors.

#### ☹Cons

- The investment on this project is huge, which is a heavy burden for the Chinese Government.

(Or any other reasonable answers)

(Answers)



**“Hong Kong Wetland Park: Indoor Exhibition Galleries” Worksheet 4**

(B) Suggest how can we reuse water in our daily life?

- The bathing water and water collected by dehumidifier, could be reused for cleaning the toilet, car and floor.
- Rice-rinsing water could be used for flowering plant.

(C) Please list the reasons for the water wastage, and how it could be reduced.

<b>Reasons of wasting drinking water</b>	<b>Solution</b>
● <u>Water tap dripping</u>	● <u>Turn off the tap immediately after use;</u> ● <u>Repair dripping tap</u>
● <u>Water leakage due to rusty water pipe</u>	● <u>Replace all dilapidated water pipes</u>
● <u>Consume large amount of water for washing a few clothes</u>	● <u>Water can be recycled such as mopping floor</u>

(Or any other reasonable answers)

**Reference Website:**

Water Supplies Department: <http://www.wsd.gov.hk>