



## Liberal studies Conservation and Development

<b>Group</b>			<b>Date</b>		
<b>Group Leader</b>	<b>Clerk</b>	<b>Clerk</b>	<b>Action</b>	<b>Action</b>	<b>Time</b>

**Group Marks:**



### Objectives

After attending the course, students should be able to

1. Investigate how to maintain balance among living quality, economic and social development and conservation.
2. Investigate the impact of land development with views of different stakeholders.
3. Learn to use instruments to collect data and analyze them.
4. Analyze problems with different perspectives and enhance their critical thinking ability through group discussion.

### Content

Students will participate in a investigative exploration activity in responds to the topic set by teacher.  
Study Procedure:

1. Selection of study area or theme
2. Research on study topic
3. Collection of information
4. Organisation of data or information
5. Evaluation on study topic
6. Design of work plan

### Equipments

	Items	Quantity	Checked	Returned
1.	Clipboard	x 1	<input type="checkbox"/>	<input type="checkbox"/>
2.	pH paper + pH paper index	x 1	<input type="checkbox"/>	<input type="checkbox"/>
3.	Forceps	x 1	<input type="checkbox"/>	<input type="checkbox"/>
4.	Total dissolved solid (TDS) meter	x 1	<input type="checkbox"/>	<input type="checkbox"/>
5.	Electronic thermometer with probe	x 1	<input type="checkbox"/>	<input type="checkbox"/>
6.	Plastic bottle	x 1	<input type="checkbox"/>	<input type="checkbox"/>
7.	Telescope	x 2	<input type="checkbox"/>	<input type="checkbox"/>
8.	Common Plants and birds in Hong Kong (Guide)	x 1	<input type="checkbox"/>	<input type="checkbox"/>
9.	Common Butterflies (Guide)	x 1	<input type="checkbox"/>	<input type="checkbox"/>

## I. Selection of study area

### Development and Conservation of Ha Fa Shan



#### Background:

A land developer brought a 7,000 square metre land in Ha Fa Shan Tsuen of Route Twisk to develop low-rise residential buildings. No environmental impact assessment is needed as this development project is not a designated project listed under Environmental Impact Assessment Ordinance. According to government information, there are 72 squatter huts with 23 families living in that area. The total population is 52. The land developer currently discusses compensation with the residents on land resumption.

During the negotiation process, some green groups discovered that the area is rich in biodiversity including several local tree species, dragonflies and damselflies, and *Acraea issoria* (苧麻珍蝶) which is hardly seen in Hong Kong. Green groups prepare to conduct a simple environmental impact assessment in that area so as to raise the public awareness and protect the biodiversity of the area

## 2. Research on study topic

#### Role play:

Students will participate in the role play with teacher's instruction. Please think about standpoints of your role before acting.

Role : \_\_\_\_\_

Standpoint : \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Reason : \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_





### 3. Water quality assessment



#### 3.1 Please find out source(s) of water pollution

Use ✓ the possible source(s) of water pollution

- Sewage discharge       Industrial discharge (Sewage, hot or cold water)   
 Stormwater Discharges Sediments

#### 3.2 Water quality baseline site inspection

Determine water quality of the affected river before development project starts.  
 (Please observe carefully and use equipments to record data)

Floating objects:      None      Some      Many      Extremely numerous  
 Types: \_\_\_\_\_  
 (e.g. Grease, foam, faeces)

Colour:      Clear      Not quite clear      Brown      Black

Turbidity:      Clear      Low      Medium      High

Smell:      No      Some      Fair      Heavy

Total dissolved solid (TDS) (ppm)      Extremely low (<50)      Low (50 - <100)      Medium (100 - <200)      High (200-<400)      Extremely high (>=400)

pH: \_\_\_\_\_      Temperature: \_\_\_\_\_

#### 3.3 Analysis of river current situation

Please use the data from table 3.2 to analysis the current situation of the river.

5      4      3      2      1      0  
 Serious      No pollution



## 4. Ecology evaluation

4.1 Ecology baseline investigation  
Find out the ecological environment of the area may be affected by the development on site.

### *Plant investigation*

Identify 5 trees that will affect by the development.

1. \_\_\_\_\_ 2. \_\_\_\_\_ 3. \_\_\_\_\_  
4. \_\_\_\_\_ 5. \_\_\_\_\_

Other Plants

### *Insect investigation*

Identify all the insects you know in the area such as butterflies, dragonflies and damselflies.

### *Birds and other animals*

Identify all the birds and animals you know in the area.

4.2 Ecology Evaluation  
Use the above information to analysis the biodiversity of the area.  
Biodiversity can be measured by number of plants and animals, types and diversity of environment.

Extremely    Low    Medium    High    Extremely high

Low



## 5. Visual and landscape

Please draw a picture of the area before development.



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Please draw a picture of the area after development.



## 4. Environmental impact assessment table (Evaluation)

After discussion, please identify the potential environmental impacts cause by the development and evaluate the levels of impact.

Level of impact: No ( × ) 、 Mild ( ☆ ) 、 Medium ( ☆☆ ) and Serious ( ☆☆☆ )

Type of potential impact	Impact level (Construction)	Impact level (Living)
Air Quality (Emission of gas, dust or smell)		
Noise and light pollution (Noisy operation, night operation)		
Water quality (Sewage, discharge or polluted run-off)		
Solid waste <ul style="list-style-type: none"> <li>• By-product of waste</li> <li>• Land pollution</li> <li>• Dispose of waste or damaged materials at landfills</li> </ul>		
Ecology <ul style="list-style-type: none"> <li>• Damage, divide or eliminate of important habitat</li> <li>• Damage area with high conservation value</li> <li>• Loss of native species or biodiversity</li> </ul>		
Visual and landscape (Ugly appearance)		
Sites of cultural heritage <ul style="list-style-type: none"> <li>• Damage to the site of cultural heritage by excavation work</li> <li>• Structural vibration of the historial buildings or structures</li> </ul>		



## 5. Design of work plan

# Market Forum

## Development and conservation of Ha Fa Shan

What is/are your opinion(s) on Ha Fa Shan development project? Write down your arguments and reasons (Information support your arguments), and your questions on other group's investigation.

*Our arguments :*

*Our reasons:*

*Our questions:*