



## The Hong Kong Jockey Club Ridge to Reef Environmental Education Program Life, Society and humanities (History) – Hong Kong Local Oyster Industry and Ridge to Reef

- (A) Topics:
- Topic 4: History, culture and heritage of early Hong Kong region
  - Topic 12: The growth and transformation of Hong Kong in the 20th century
- (B) Duration: 2 lessons (45min per lesson)
- (C) Venue: normal classroom setting
- (D) Lesson Flow:

### Sustainable Development Goal

11.4: strengthen efforts to protect and safeguard the world's cultural and natural heritage

12.8: ensure that people everywhere have the relevant information and awareness for sustainable development and lifestyles in harmony with nature



	<b>Lesson 1</b>	<b>Lesson 2</b>
Sub-topic:	<b>Introduction to the Hong Kong oyster farming industry</b>	<b>Oyster industry and sustainable development</b>
Learning objectives:	<p>Topic 4: History, culture and heritage of early Hong Kong region</p> <ol style="list-style-type: none"> <li>1. Understand the early life of the local people (Primary production mode)</li> <li>2. Understand the life of local people by knowing the intangible cultural heritage (HK oyster farm as a case study)</li> </ol>	<p>Topic 12: The growth and transformation of Hong Kong in the 20th century</p> <ol style="list-style-type: none"> <li>1. Understand the situation and changes of Hong Kong before and after WWII (oyster farming as an introduction)</li> <li>2. Understand the socio-economic development of Hong Kong after WWII (oyster farming as an example)</li> </ol>
Key concepts:	<p>A1 Five major clans and major ethnic groups in Hong Kong</p> <p>A2 Intangible Cultural Heritage (ICH)</p> <p>A3 Hong Kong's Early Economic Industry and Transformation at the earlier stage</p> <p>A4 Food safety</p> <p>A5 Sustainable development</p>	<p>B1 Oyster reef restoration</p> <p>B2 Man-made oyster reefs</p> <p>B3 Ridge to Reef</p>

Learning objectives	Knowledge	<ol style="list-style-type: none"> <li>1. From the five major clans and major ethnic groups in Hong Kong, to understand the background and history of local oyster farmers and oyster industry</li> <li>2. Realize the events and timings affecting the development of the local oyster industry</li> </ol>	<ol style="list-style-type: none"> <li>1. Understand the current situation of Hong Kong's oyster industry</li> <li>2. Compare the similarities and differences of Hong Kong traditional oyster cultivation method and current oyster cultivation method</li> <li>3. Using foreign oyster farming as an example, point out the sustainable development elements in oyster farming</li> </ol>
	Skills	<ol style="list-style-type: none"> <li>1. List out the sequence of the local oyster industry development</li> <li>2. Based on historical data to make induction and inference and conduct critically thinking</li> </ol>	<ol style="list-style-type: none"> <li>1. Ability to conduct data comparison</li> </ol>
	Attitude	<ol style="list-style-type: none"> <li>1. Foster students' interest and curiosity in the history of Hong Kong's oyster farming industry</li> </ol>	<ol style="list-style-type: none"> <li>1. Integrate sustainable development elements into the daily life.</li> </ol>

(Reference: EDB PSHEKLA- History)

## Lesson 1

Time	Contents	Teaching materials	Guiding questions
<b>Setting</b>			
5min	<p><b>Introduction and induce motivation</b></p> <p>Using life-related experience and news clip as introduction to the topic of local oyster farming industry</p> <p>Introduce the learning objectives:</p> <ul style="list-style-type: none"> <li>- the background of the local oyster farming industry</li> <li>- the historical events of the local oyster farming industry</li> </ul>	<p><b>News:</b>  <a href="https://orientaldaily.on.cc/cnt/news/20190731/00176_080.html">https://orientaldaily.on.cc/cnt/news/20190731/00176_080.html</a></p> <p><b>Main points:</b></p> <ol style="list-style-type: none"> <li>1. 700 years history of local oyster farming industry</li> <li>2. Listed in the intangible cultural heritage list</li> <li>3. Unique and a large variety of oysters could be found in Hong Kong</li> </ol>	<p>Have your tried oysters? Where are they come from?</p> <p>Have you been to Lau Fau Shan to try the local sea food? Do you know any famous seafood from Lau Fau Shan?</p> <p>Do you know Hong Kong has the production of oysters? How long is the history?</p>
<b>Development</b>			
15min	<p><b>Background of local oyster farming industry</b></p> <ol style="list-style-type: none"> <li>1. The origins of the 5 Great Clans in Hong Kong</li> <li>2. The early economic industries in Hong Kong</li> <li>3. The oyster farming industry in Guangdong (including HK): origin and some trivia</li> </ol>	<ol style="list-style-type: none"> <li>1. The background of the oyster farming industry and the 5 Great Clans: <ul style="list-style-type: none"> <li>- the 5 Great Clans: Tang, Man, Liu, Hau and Pang</li> <li>- major ethnic groups in HK: Hakka, Tanka and Hoklo</li> <li>- moved and settled in the N.T. since the Song Dynasty</li> <li>- The Tangs settled at Kam Tin and started oyster farming at the Deep Bay</li> </ul> </li> <li>2. Early primary industries in Hong Kong: <ul style="list-style-type: none"> <li>- fisheries, agriculture, salt, lime, ceramics</li> <li>* The lime industry is highly related to the oyster shells</li> </ul> </li> <li>3. Oyster farming in Guangdong <ul style="list-style-type: none"> <li>- Zhujiang Delta is rich in shellfish production</li> <li>- However, in the Tang Dynasty and 19<sup>th</sup> century, because of the extraction of lime, the production of oyster greatly reduced</li> <li>- Other factors causing reduction in oyster production: <ul style="list-style-type: none"> <li>~ reclamation</li> <li>~ overfishing due to loosen policies</li> <li>~ changes in the conditions of estuary (water velocity, temperature, quality and eutrophication)</li> <li>~Teacher can briefly introduce the use of oyster shell house</li> </ul> </li> </ul> </li> </ol> <p>Summary</p> <ul style="list-style-type: none"> <li>- the local oyster farming industry started at the Deep Bay</li> <li>- it was driven by the Tangs</li> </ul>	<p>When did the oyster farming industry start to develop in Hong Kong? Who started the oyster farming?</p>
20min	<p><b>The historical development of the local oyster farming industry</b></p> <p>Transition to the timeline of local oyster farming</p> <p>The rises and falls of the oyster farming industry</p>	<p>1<sup>st</sup> rise</p> <ul style="list-style-type: none"> <li>- The Tangs settled at Kam Tin and the Ha Village at Lau Fau Shan. They gained the right to run oyster farming from the Qing government</li> </ul> <p>1<sup>st</sup> fall</p> <ul style="list-style-type: none"> <li>- The oyster breeding grounds were all destroyed because of the WWII. Farmers were forced to abandon the farms</li> </ul> <p>2<sup>nd</sup> rise</p>	<p>What makes our local oysters become so famous?</p>

		<ul style="list-style-type: none"> <li>- A lot of experienced oyster farmers moved from Shajing to HK since the WWII. They started the oyster farming again</li> <li>- The opening of the road linking Yuen Long and Lau Fau Shan, and the construction of the infrastructure in Lau Fau Shan attracted a lot of tourists</li> </ul> <p>2<sup>nd</sup> fall</p> <ul style="list-style-type: none"> <li>- In 60s-70s, because of the rapid development of agriculture and industry, the water quality of the Deep Bay greatly deteriorated</li> <li>- Farmers at Shajing restarted oyster farming. This causes intense competition to local oysters due to the lower price and cost</li> </ul> <p>3<sup>rd</sup> rise</p> <ul style="list-style-type: none"> <li>- Local farmers adopt modern technology to lower the production cost and raise the quality of the oysters</li> <li>- Oyster farming at Shajing was prohibited</li> </ul>	
<b>Conclusion</b>			
<b>5min</b>	Summary of the lesson	<ol style="list-style-type: none"> <li>1. The 5 Great Clans in HK, and the background of the local oyster farming industry</li> <li>2. The historical events and the timeline of the local oyster farming industry</li> </ol>	

## Lesson 2

Time	Contents	Teaching materials	Guiding questions
<b>Development</b>			
10min	<p><b>Local oyster industry recent situation</b></p> <ol style="list-style-type: none"> <li>Background: current Hong Kong oyster restoration work (TNC)</li> <li>Impacts of oyster restoration (What challenges can be addressed) <ul style="list-style-type: none"> <li>Improve local water quality</li> <li>Provide natural habitat and promote biodiversity</li> <li>Stabilize shorelines</li> </ul> </li> </ol>	<p>Restoring Hong Kong's Lost Oyster Reefs for Nature and People!  <a href="https://www.youtube.com/watch?v=1QaB12zzX9I">https://www.youtube.com/watch?v=1QaB12zzX9I</a></p> <p>Current situation about Hong Kong oyster industry.            Dialogue with oysters farmer.  <a href="https://www.youtube.com/watch?v=adc01AAFwe4">https://www.youtube.com/watch?v=adc01AAFwe4</a></p>	<p>What are the challenges faced by the local oyster industry?</p>
10min	<p><b>Different oyster farming methods</b></p> <p><u>Bottom culture method</u></p> <ul style="list-style-type: none"> <li>Place young oysters in wild or artificial oyster reef</li> <li>Harvest in two years</li> <li>The underdeveloped oysters will be placed on the recovered oyster shells and continue to grow.</li> </ul> <p><u>Raft culture method (Morton &amp; Wong, 1975)</u></p> <ul style="list-style-type: none"> <li>Place the oysters in a bag or cage and let them float in the water</li> <li>Regularly check the breeding status of oysters until they grow to a size suitable for sale</li> <li>The oyster eggs will be placed on the recovered oyster shell and removed when the oyster eggs mature</li> </ul> <p>Continue to circulate and produce more high-quality oysters</p>	<p>refer to attached file "A timeline for the oyster aquaculture process "</p>	
15min	<p><b>Foreign example:</b></p> <p><b>The uprise of oyster industry</b></p> <p><u>Example 1: Montauk, New York, U.S.</u></p> <ol style="list-style-type: none"> <li>The income of oyster farmers is largely dependent on changes in water quality</li> <li>Farmed oysters can release more than one million sperm or eggs each year, which enables a steady increase in the number of wild oysters.</li> <li>Urban development and human activities have brought many major challenges to oyster farming. For example, sewage ponds and septic tanks built near lakes seriously pollute water quality.</li> <li>Factors leading to the decline in the number of oysters: <ul style="list-style-type: none"> <li>Habitat reduction, growth of harmful algae and nitrogen pollution are the main reasons.</li> <li>Nitrogen pollution caused by sewage caused large-scale fish and sea turtle deaths in Peconic Bay in the early summer of 2015.</li> </ul> </li> </ol>	<p>We're Oyster Framers - Montauk  <a href="https://www.youtube.com/watch?v=McPQfdNZEY0">https://www.youtube.com/watch?v=McPQfdNZEY0</a></p> <p>Water quality in Long Island: We are oyster farmers- Montauk  <a href="https://www.nature.org/en-us/about-us/where-we-work/united-states/new-york/stories-in-new-york/long-island-water-quality/we-re-oyster-farmers/">https://www.nature.org/en-us/about-us/where-we-work/united-states/new-york/stories-in-new-york/long-island-water-quality/we-re-oyster-farmers/</a></p>	<p>How does water quality affect oyster farming and oyster farming sites?</p> <p>How do human activities affect water quality and oyster farms?</p> <p>What challenges and difficulties might be encountered in the restoration of oyster reef?</p>
	<p><u>Example 2: Virginia, Chesapeake Bay, U.S.</u></p>	<p>refer to attached file</p>	<p>Why do humans fight for</p>

	<p>I. In the 1970s, the Chesapeake Bay's water ecological environment was bad, with poor water quality and overfishing as the main problems.</p> <p>II. The number of wild oysters in the Chesapeake Bay has dropped to a historical low, with less than 1% remaining.</p> <p>The sharp drop in the number of oysters has greatly affected the ecological environment of the Bay Area. The ability of seawater to purify sediments and remove harmful substances such as nitrogen and phosphorus has been greatly reduced.</p>	<p>Oyster Wars The Historic Fight For The Bay's Riches (Kimmel, 2008)</p> <p>Aquaculture in the Chesapeake Bay</p> <p><a href="https://www.nature.org/en-us/about-us/where-we-work/priority-landscapes/chesapeake-bay/aquaculture-by-design-chesapeake-bay/">https://www.nature.org/en-us/about-us/where-we-work/priority-landscapes/chesapeake-bay/aquaculture-by-design-chesapeake-bay/</a></p>	<p>oysters?</p> <p>How is the oyster industry affected?</p> <p>How is the number of oysters affected?</p>
	<p><u>Example 3: Oyster restoration: increase the number of oysters</u></p> <p>I. Shelter for shellfish: artificial oyster reef</p> <p>II. Sustainable development of fishery products-oysters</p> <p style="padding-left: 20px;">A. Gradually increase the habitat of finfish and shellfish.</p> <p style="padding-left: 20px;">B. By 2025, the work of conserving oyster glutinous habitat will be extended to ten rivers.</p> <p>III. Benefits: Improve breeding efficiency and ability to resist diseases</p> <p>IV. For every 100,000 oysters cultivated, six pounds of nitrogen and phosphorus can be eliminated from the ocean</p> <p>V. Oysters can absorb waves, resist and stabilize the coastline</p> <p>VI. Influencing factors/challenges: opposition from farmers, government funding and legal restrictions</p>	<p>Aquaculture by Design, Chesapeake Bay</p> <p><a href="https://www.youtube.com/watch?v=CUWePUvBGBE">https://www.youtube.com/watch?v=CUWePUvBGBE</a></p> <p>Aquaculture by Design Chesapeake Bay: Results</p> <p><a href="https://www.youtube.com/watch?v=W1-VK1Sgvl8">https://www.youtube.com/watch?v=W1-VK1Sgvl8</a></p> <p>Aquaculture in the Chesapeake Bay</p> <p><a href="https://www.nature.org/en-us/about-us/where-we-work/priority-landscapes/chesapeake-bay/aquaculture-by-design-chesapeake-bay/">https://www.nature.org/en-us/about-us/where-we-work/priority-landscapes/chesapeake-bay/aquaculture-by-design-chesapeake-bay/</a></p> <p>Results of the Chesapeake Bay Oyster Restoration Work-Data</p> <p><a href="https://www.chesapeakeprogress.com/abundant-life/oysters">https://www.chesapeakeprogress.com/abundant-life/oysters</a></p>	<p>What are the advantages and disadvantages of artificial oyster reef?</p> <p>Who are the stakeholders involved in the restoration of oyster reef?</p> <p>What challenges and difficulties might be encountered in the restoration of oyster reef?</p>
<b>Conclusion</b>			
<p><b>10min</b></p>	<p>Conclusion</p> <ol style="list-style-type: none"> <li>1. Summarize the knowledge learned in the past class</li> <li>2. Lead students to brainstorm with guiding questions</li> <li>3. Introduce sustainable development through class discussion</li> </ol>	<p>Class discussion and PPT present</p> <p>Cooperation with restaurants-Hong Kong launches the first shellfish shell recovery project-helping to rebuild natural oyster reefs</p> <p><a href="https://www.hk01.com/18區新聞/615817/與餐廳合作-本港推首個回收貝類殼計劃-有助重建天然蠔礁">https://www.hk01.com/18區新聞/615817/與餐廳合作-本港推首個回收貝類殼計劃-有助重建天然蠔礁</a></p>	<p>What are the benefits of developing an oyster industry in Hong Kong?</p> <p>Which method of oyster cultivation is better? Is the previous or current method better? why? (Try to start from the perspectives of cost-effectiveness and sustainable development.)</p> <p>Is the restoration of the Chesapeake Bay oyster reef applicable to Hong Kong? why?</p> <p>How can the oyster industry achieve sustainable development?</p>

## Reference

- 東方日報 (2019)。《綠色先鋒：淨洋蠔傑》。擷取自網頁 [https://orientaldaily.on.cc/cnt/news/20190731/00176\\_080.html](https://orientaldaily.on.cc/cnt/news/20190731/00176_080.html)
- 東方日報 (2019)。《政府唔計塑累人食膠蠔》。擷取自網頁 [https://orientaldaily.on.cc/cnt/news/20190321/00174\\_001.html](https://orientaldaily.on.cc/cnt/news/20190321/00174_001.html)
- 香港 01 (2018)。《TVB 堅稱流浮山蠔可生食 食安中心、漁護署齊反擊：只適合熟食》。
- 香港 01 (2018)。《【流浮山生蠔】餘波未了！《東張》與食安中心、漁護署隔空駁火》。
- 香港 01 (2019)。《【漁業基金·2】80 後斥百萬養香港蠔 冀重奪本土市場》。
- 陳穎艾、朱芷晴、鄺寶堯、蕭桐、蘇芷穎 (2018)。《由流浮山生蠔到香港巨牡蠣：流浮山養蠔業初探》。
- 蘋果日報 (2016)。《三物種以「香港」命名 生蠔正名香港巨牡蠣》。擷取自網頁 <https://hk.news.appledaily.com/local/daily/article/20161230/19881257>
- 蘋果日報 (2020)。《【流浮山蠔民】養香港蠔 50 年收成等三年半 良叔獨撐蠔田捱到殘：阿仔唔接手冇人做》。擷取自網頁 <https://hk.appledaily.com/lifestyle/20200222/C6FPSR6WNXKH4ZA4ZCHCI5HRRA/>
- AFCD(n.d.). Marine fish culture, pond fish culture and oyster culture. Retrieved from [https://www.afcd.gov.hk/english/fisheries/fish\\_aqu/fish\\_aqu\\_mpo/fish\\_aqu\\_mpo.html](https://www.afcd.gov.hk/english/fisheries/fish_aqu/fish_aqu_mpo/fish_aqu_mpo.html)
- Bromhall, J. D. (1958). On the biology and culture of the native oyster of Deep Bay, Hong Kong, *Crassostrea* sp. Hong Kong University, *Fisheries Journal*, 2, 93-107
- Chesapeake Bay Program (n.d.). Eastern Oyster *Crassostrea virginica*. Retrieved from [https://www.chesapeakebay.net/discover/field-guide/entry/eastern\\_oyster](https://www.chesapeakebay.net/discover/field-guide/entry/eastern_oyster)
- Chesapeake Progress (n.d.). Sustainable Fisheries: Oysters. Retrieved from <https://www.chesapeakeprogress.com/abundant-life/oysters>
- Kimmel, R. M. (2008). Oyster Wars: The Historic Fight For the Bay's Riches. The Maryland Natural Resource. Maryland Department of Natural Resources: 4-6.
- Morton, B., & Wong, P. S. (1975). THE PACIFIC OYSTER INDUSTRY IN HONG KONG (香港的蠔業). *Journal of the Hong Kong Branch of the Royal Asiatic Society*, 139-149.
- SCMP (2016). The scientists helping Hong Kong's oyster farmers get over hard times. Retrieved from <https://www.scmp.com/lifestyle/food-drink/article/1901294/scientists-helping-hong-kongs-oyster-farmers-get-over-hard>

## Task Sheet

Let's watch the video!

Watch the video and answer the following questions.

1. How long is the history of the local oyster farm development?

---

2. What is so special about the local oysters?

---

---

---

3. What is the relationship between the local oysters and cultural heritage?

---

---

\*4. What is the name of the unique oyster species of Hong Kong?

---

Let's learn more!

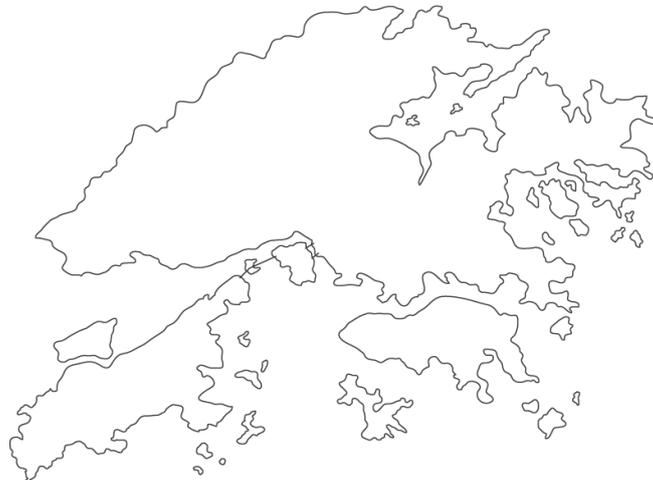
The 5 Great Clans and the oyster farm

What are the "Five Families" in Hong Kong? Which of them started oyster farming in Hong Kong?

---

---

Please mark down the location where they settled and started oyster farming in the map below.



**The early Primary industries in Hong Kong**

What are the primary industries in the early times of Hong Kong?  the appropriate boxes.

- Fisheries                       Agriculture                       Livestock rearing  
 Lime                               Mining                               Ceramics

**Oyster Farming in Guangdong**

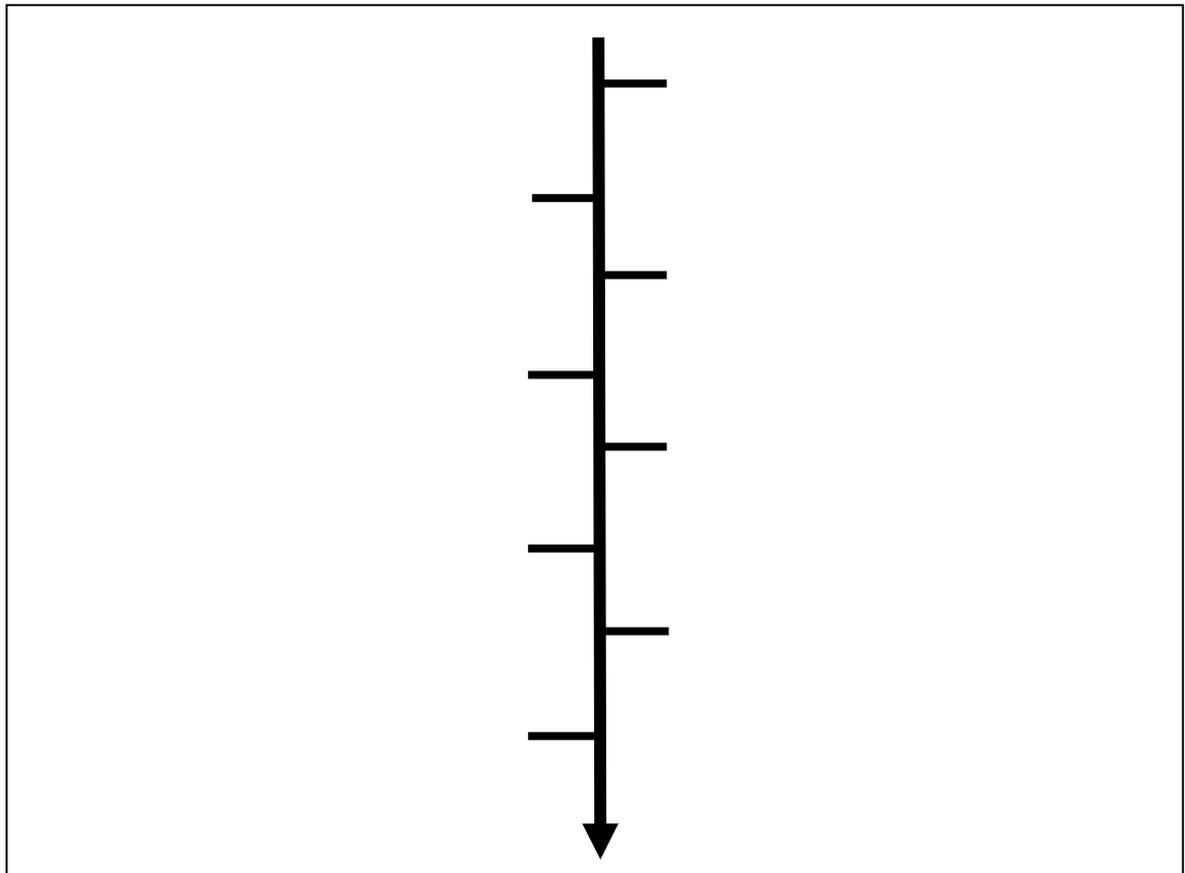
What are possible reasons causing the reduction in oyster yield?

- i \_\_\_\_\_  
ii \_\_\_\_\_  
iii \_\_\_\_\_  
iv \_\_\_\_\_

**Development history of the local oyster farms**

Let's sequence!

Finish the timeline below by marking the historical events of local oyster farm.





# **The History of the Local Oyster Farming Industry**

# What are they in common?



**Have you tried this before?  
What is so special about this?**



香港巨牡蠣  
*Magallana*  
*hongkongensis*

# Video Watching

Watch the news report on local oyster growing industry and answer the questions in the worksheet



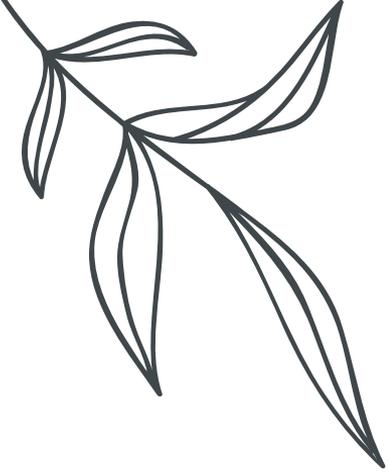


# Local Oyster Farming Industry

- 700 years of history
- One of the intangible cultural heritage in HK
- Among all 36 species of oysters, 20 species can be found in HK
- “Hong Kong oyster” is the unique oyster species in HK

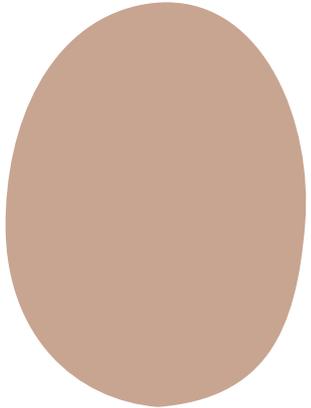
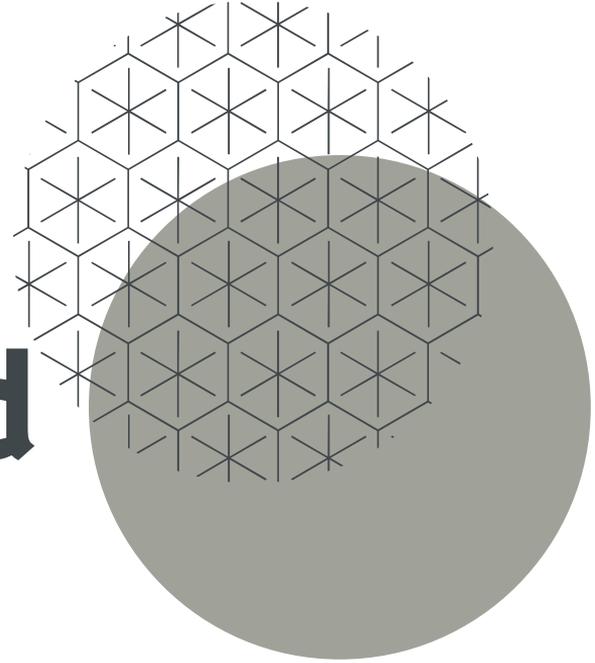


**What is the history of local oyster farm?**



01

# Background



# The relationship between the 5 Great Clans and the oyster farming industry

- Tang, Man, Liu, Hau, Pang
- Major ethnic groups: Hakka, Tankas (boat people), Hoklo
- Moved and settled in HK in the Song Dynasty --> 5 Great Clans
- The Tangs settled at Kam Tin and started the oyster farming at the Deep Bay



# Early Primary Industry in HK

- Fishing (Deep Bay and Pak Sha Wan)
- Agriculture
- Salt
- Lime ( 石灰 )
- Porcelain ( 瓷器 )

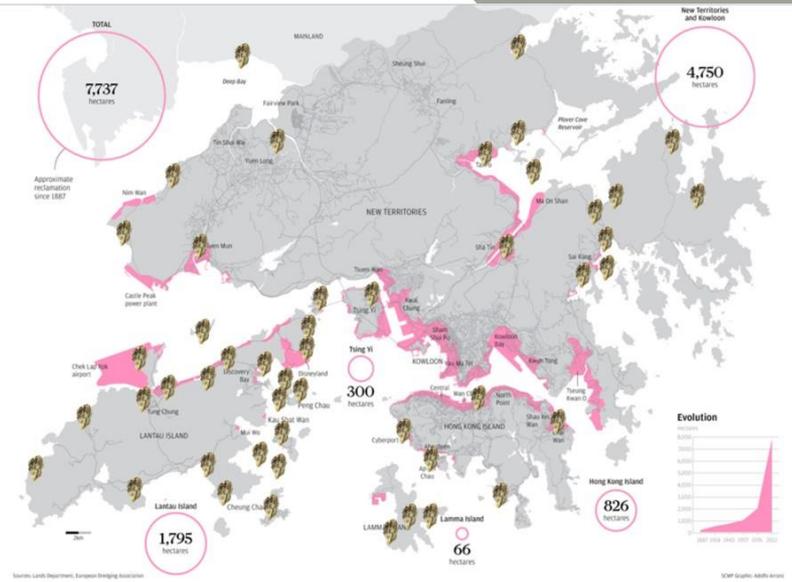
→ Lime industry is closely related to the oyster farming industry



Oyster shells alongside the creek before transport to the lime works.

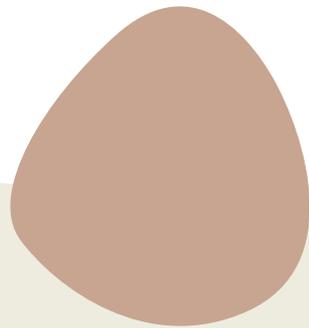
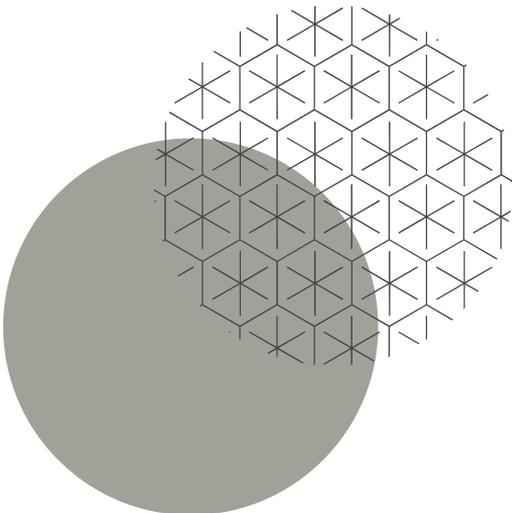
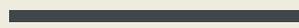
# Oyster Farming Industry in Guangdong

- Pearl River Delta Region is rich in shellfish
- Since Tang Dynasty, because of the extraction of lime, the yield of oyster greatly decreased:
  - Reclamation
  - Overfishing due to loosen policy
  - Change in estuary environment (river velocity, temperature, quality, eutrophication)



02

# History



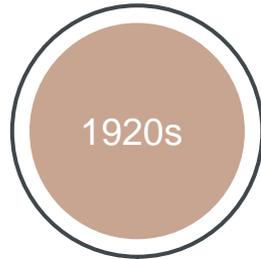
# What is the history of the local oyster farm?



VS



# Timeline



1920s

## Origin

The Tangs from the Ha Village in Yuen Long rent oyster farms from the government



1930s

## Development

Tang Chek Hing, the ancestor of the Tangs started the oyster farming business (including retail and restaurant)



WWII

## Decline

A lot of oyster farms were destroyed due to prolonged wars. At the same time, a lot of oyster farmers moved from Shajing and settled at Deep Bay

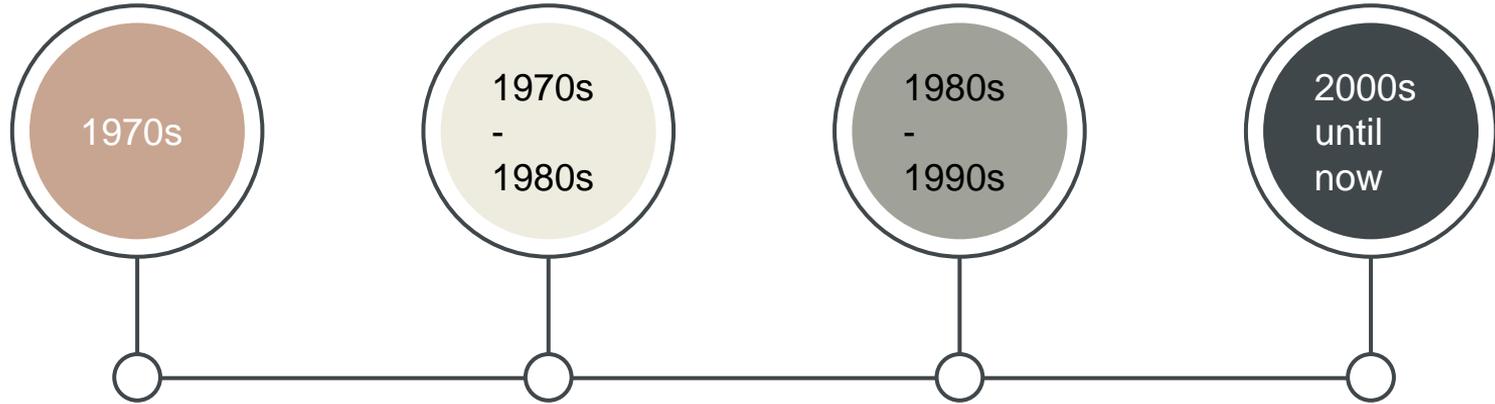


1950s  
-  
1970s

## Redevelopment

- The new labour facilitated the redevelopment of oyster farming.
- The road linking Yuen Long and Lau Fau Shan facilitated tourism in Lau Fau Shan.
- The government built more infrastructure at Lau Fau Shan

# Timeline



## Development

The advancement in technology under China-HK cooperation facilitated the development of the oyster farming

- Water quality was poor as the Deep Bay was polluted by the fast-growing livestock rearing industry
- Rumours that the local oyster had excessive heavy metal
- Oyster from Mainland was competitive (cheap and fresh)

## Decline

## Redevelopment

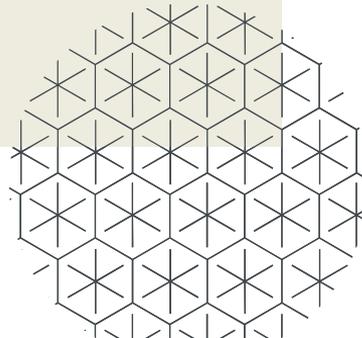
- Advancement in local technology → higher yield with lower cost
- Prohibition of oyster farming in Mainland

## Redevelopment

- HK oyster entered the Mainland market
- The unique oyster species of HK was named *Magallana hongkongensis*

# Summary

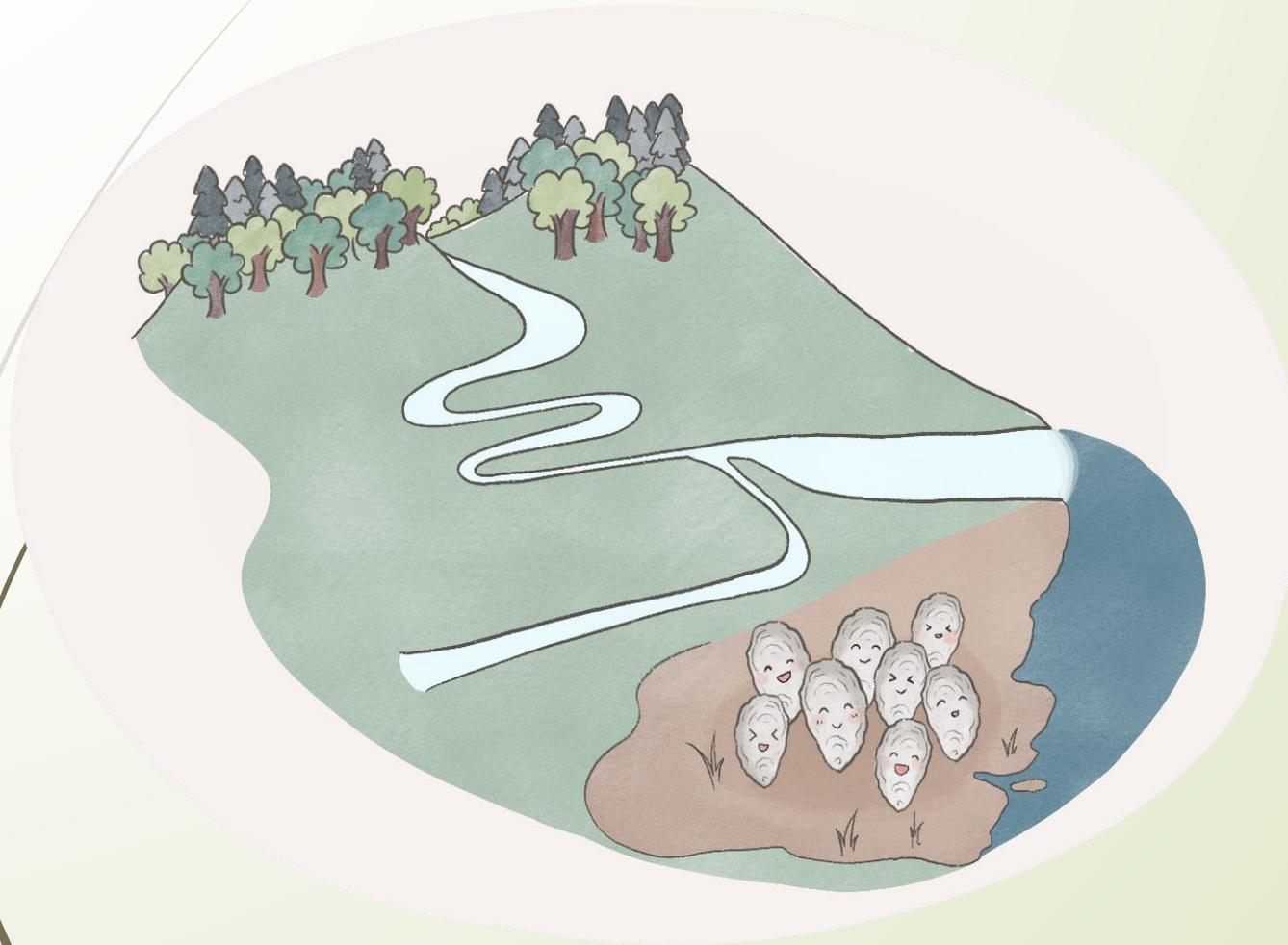
- The 5 Great Clans <-> The early development of local oyster farm
- The timeline and major historical events of the local oyster farming industry





An example of human use  
of marine resources: Hong  
Kong's oyster farming

# Lesson 1 The Habitat of Oyster

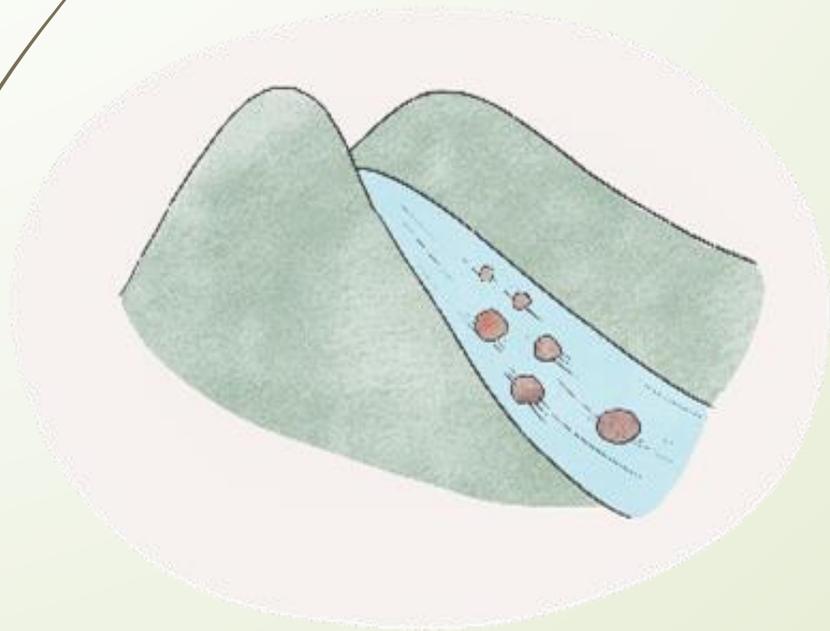
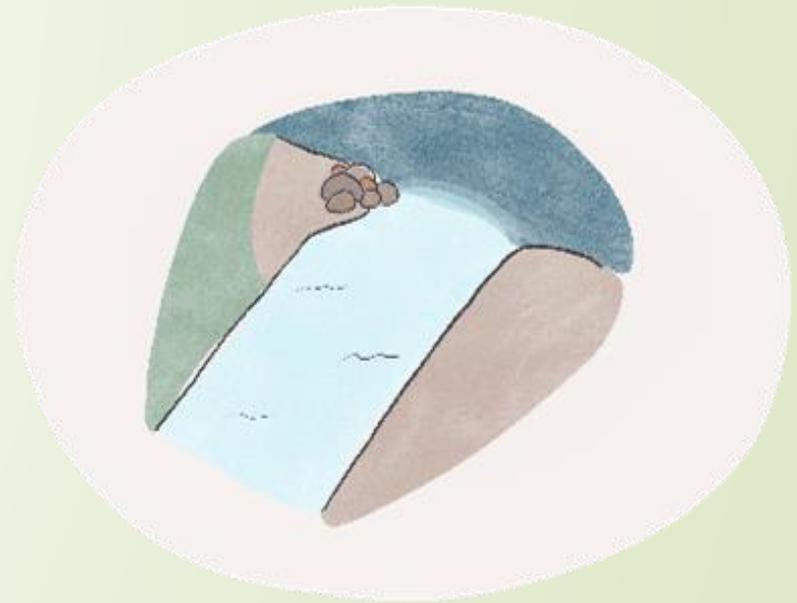
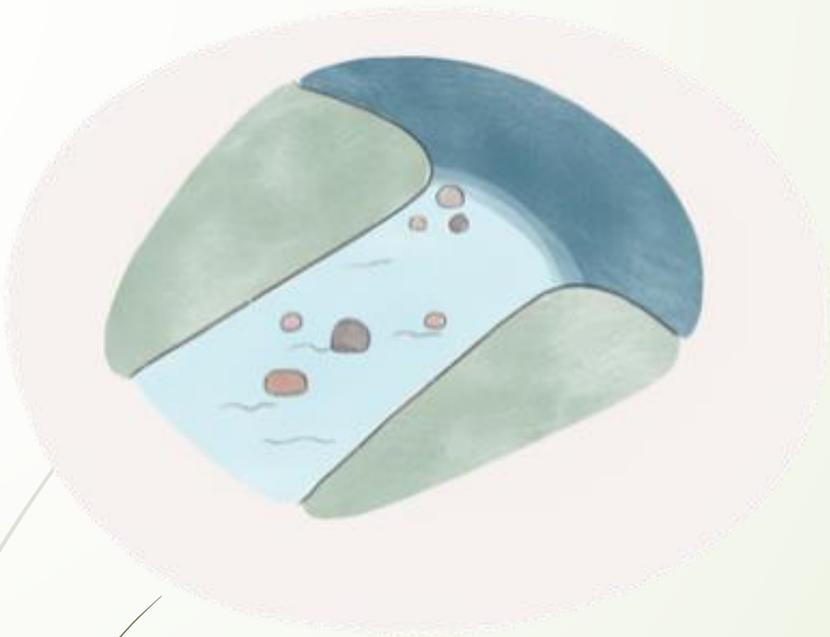




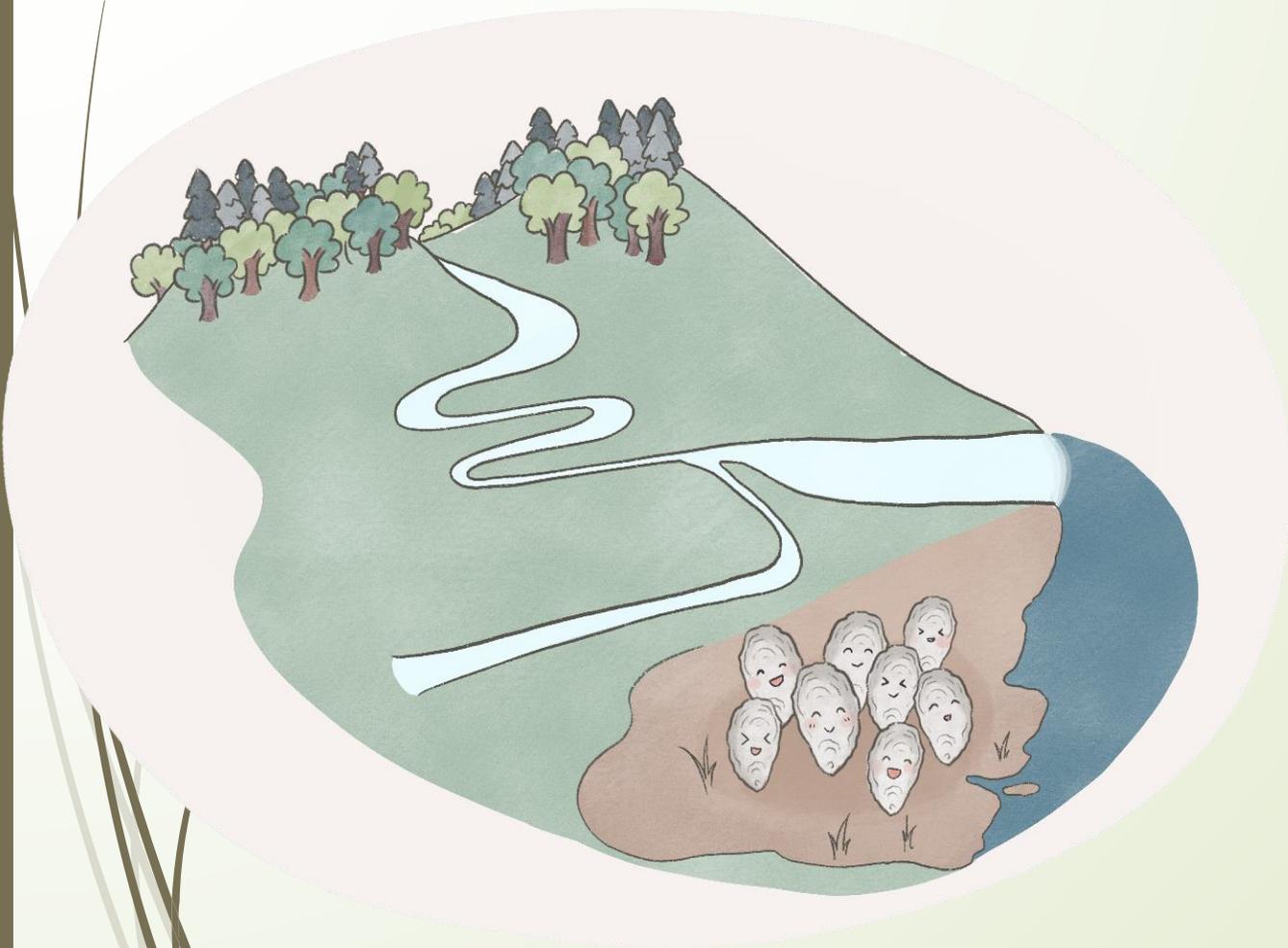
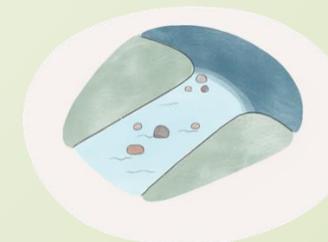
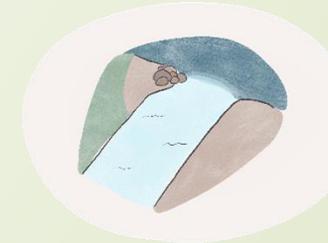
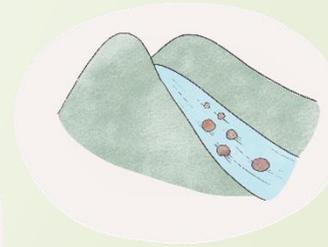








# How is the mudflat formed?





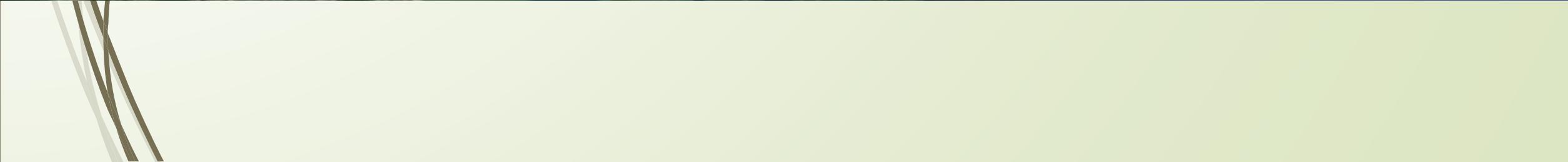






# The Characteristics of Mudflats

- ❑ Areas that are intermittently flooded by seawater
  - ❑ The ground is covered with fine sediments
  - ❑ Habitats of many species (rich in biodiversity)
- 







# 港人十大最愛海鮮

排名	海鮮名稱
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	

資料來源：港人對環保海鮮的認知調查  
製表：香港文匯報記者 鮑旻珊

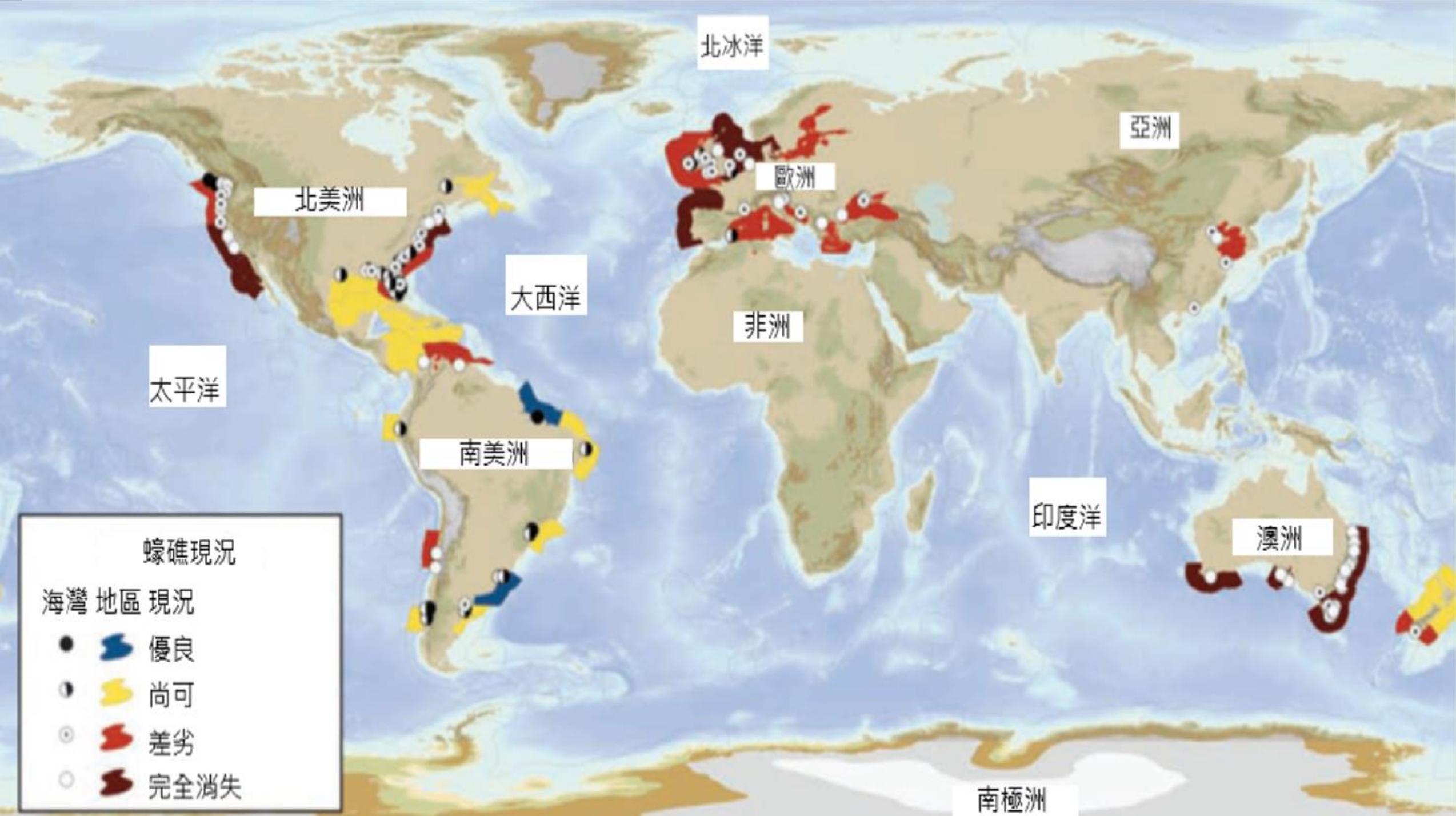
**毒 人**

**筍工**

**品嚙專員**  
**\$20,000**  
**5天工作**

**無伏**

品嚙生蠔及報告  
中學程度，五感正常  
專業培訓、10天年假、OT有補水



北冰洋

亞洲

北美洲

歐洲

大西洋

非洲

太平洋

南美洲

印度洋

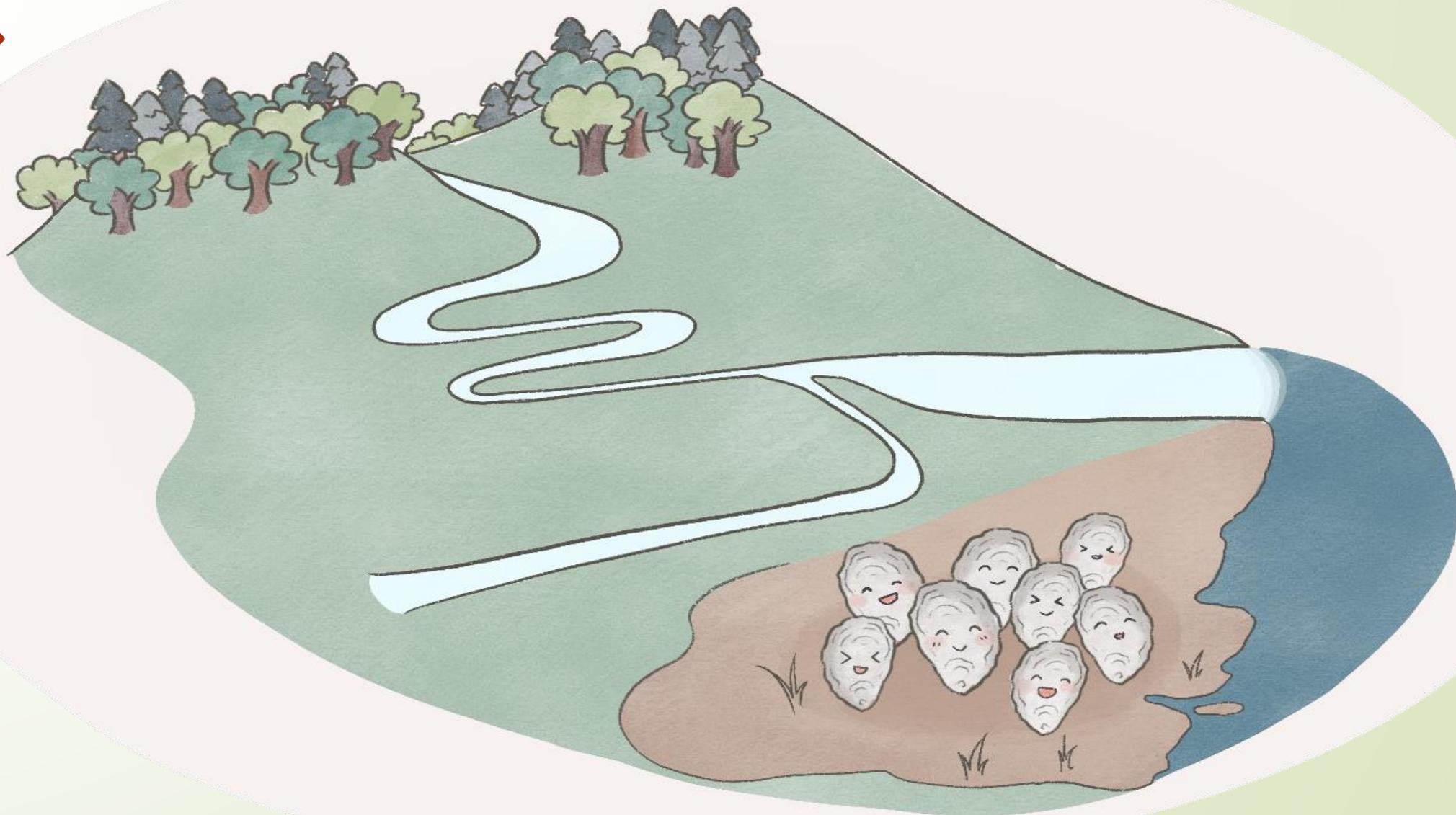
澳洲

蠔礁現況

海灣地區現況

- 優良
- 尚可
- 差劣
- 完全消失

南極洲





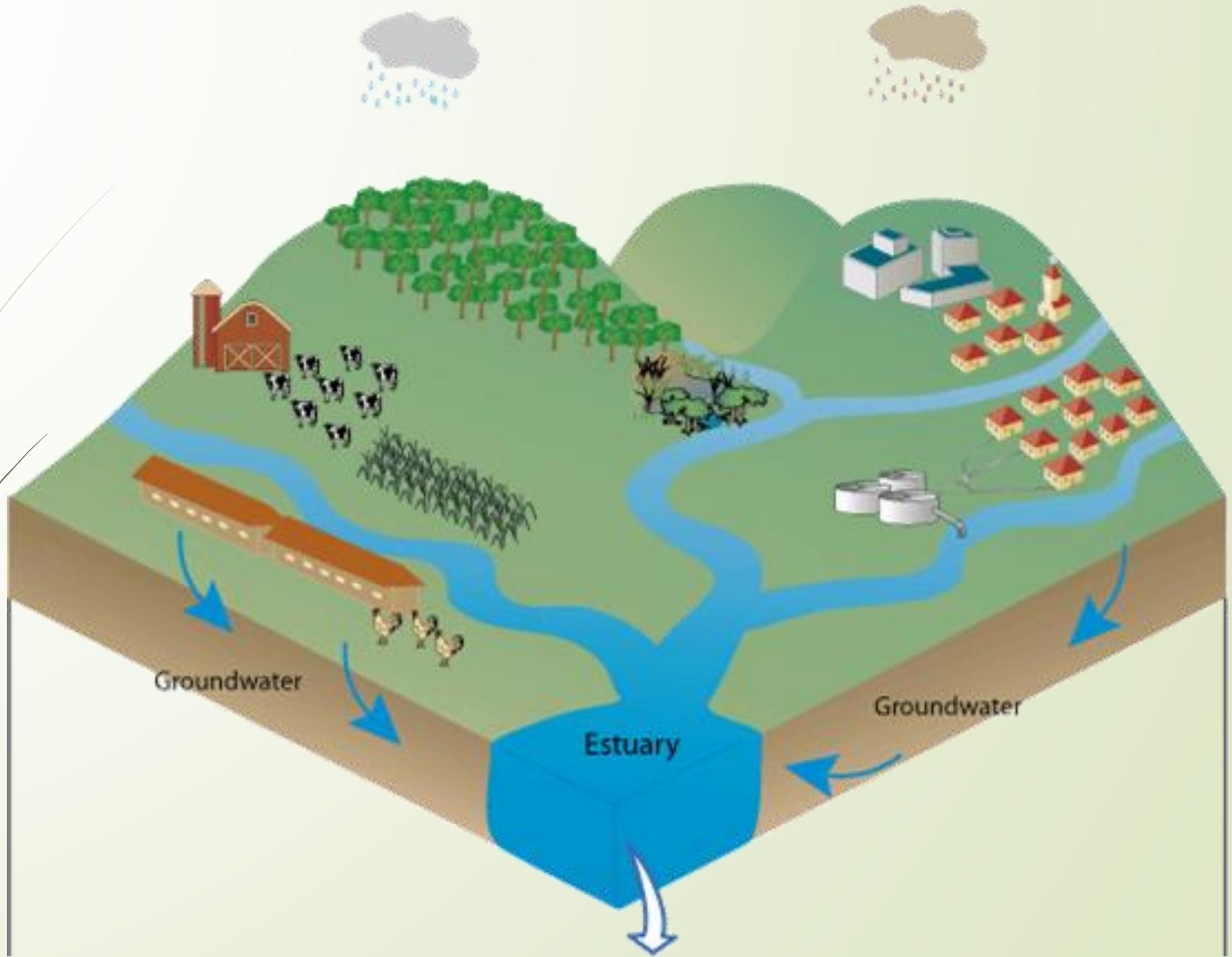


We must remember our duty to  
**NATURE**  
before it is too late



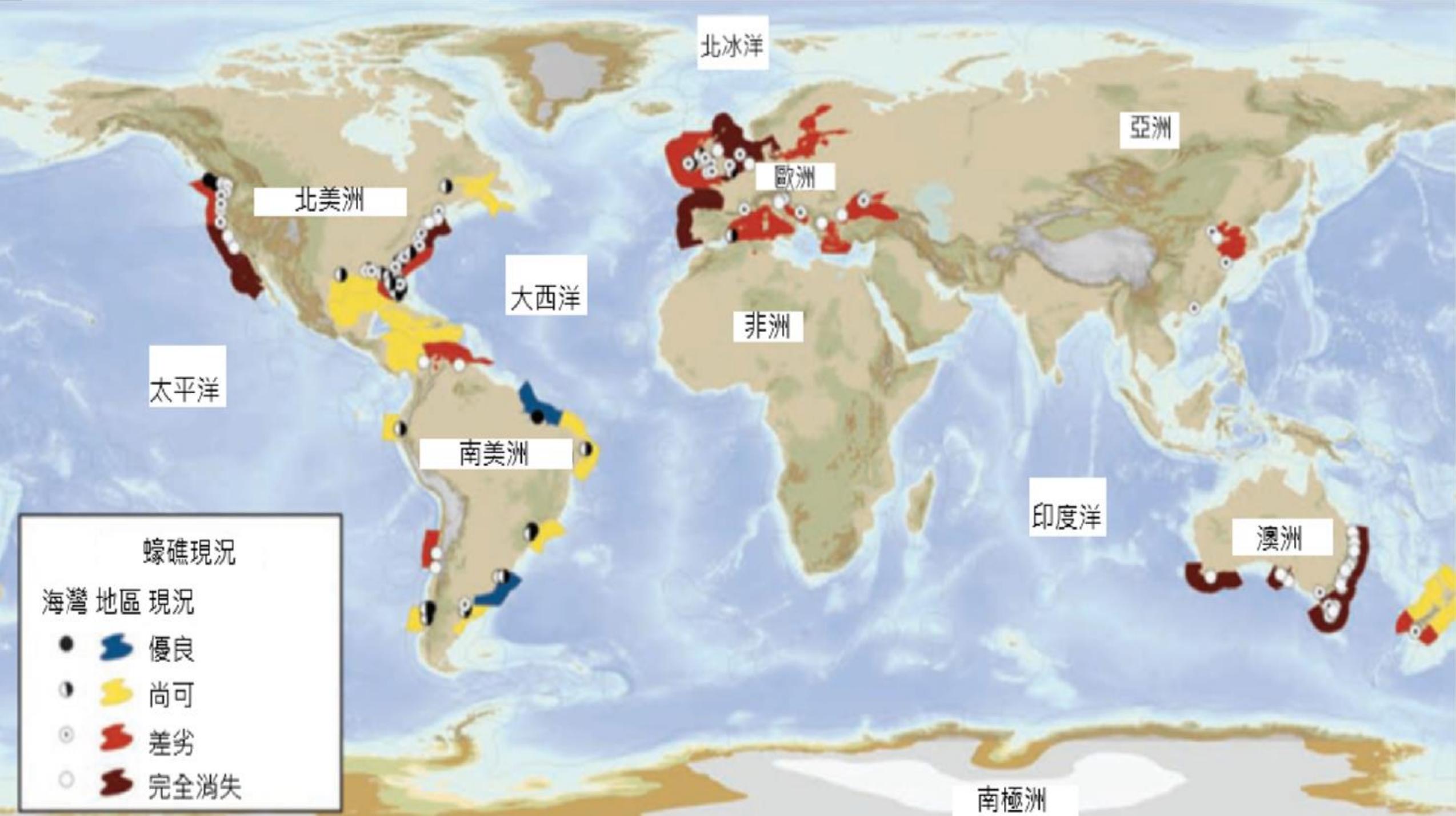
*Global Warming Quotes via Gecko&Fly*











蠔礁現況

海灣地區現況

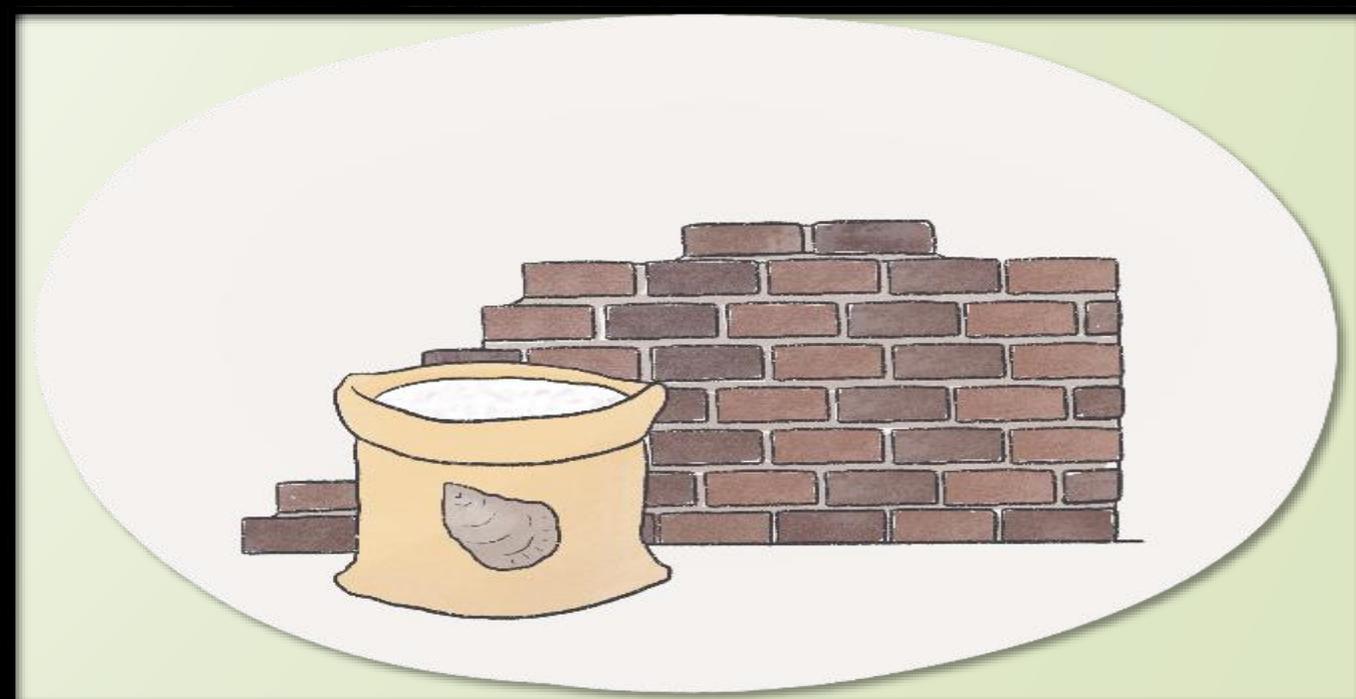
- 優良
- 尚可
- 差劣
- 完全消失

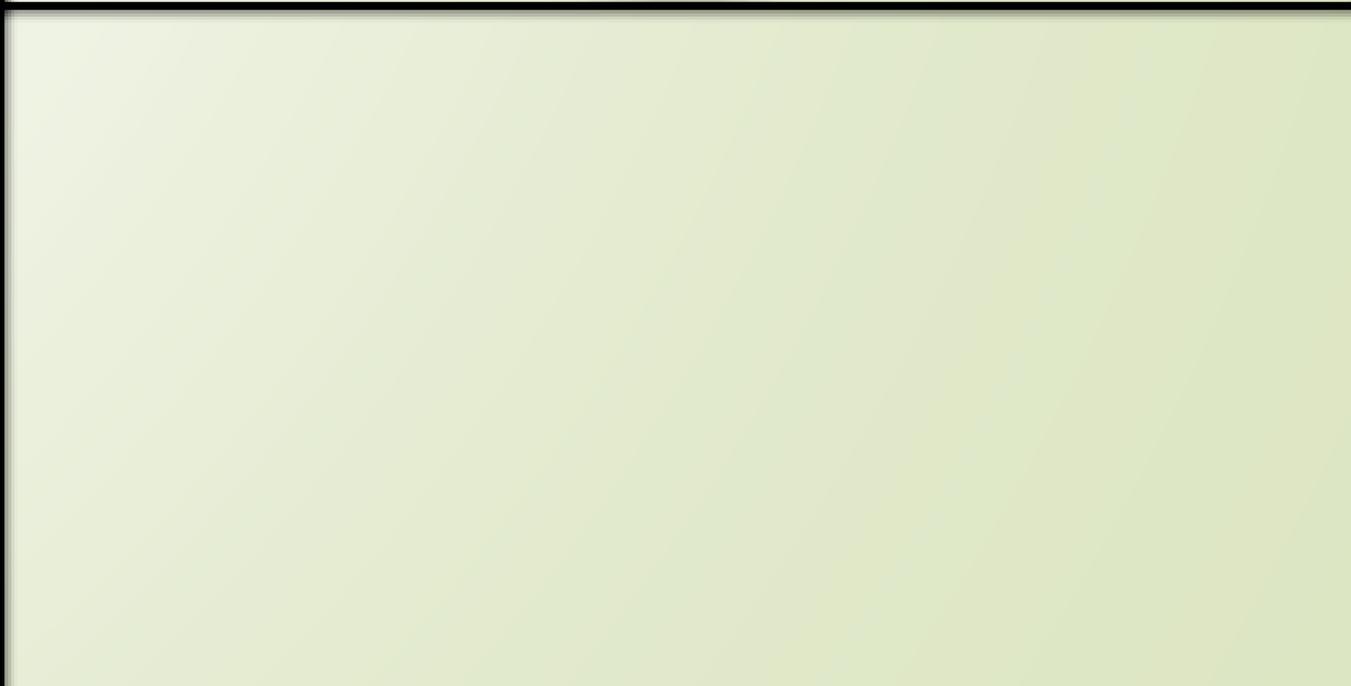
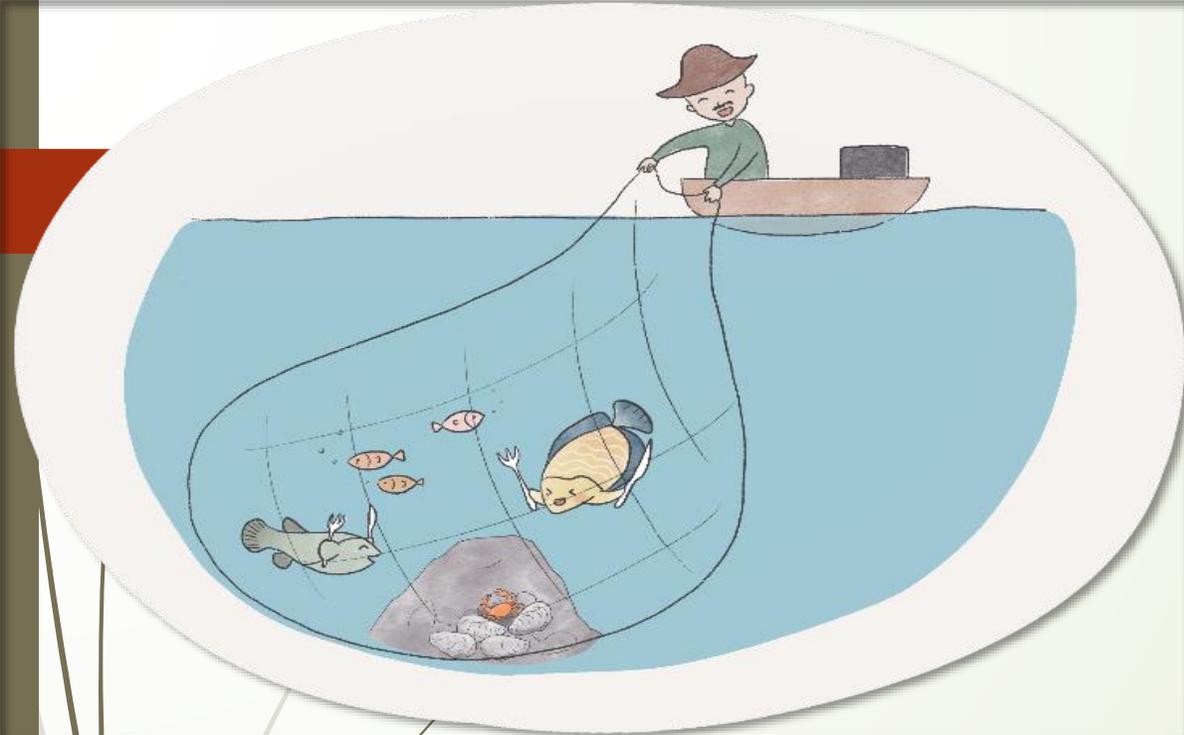


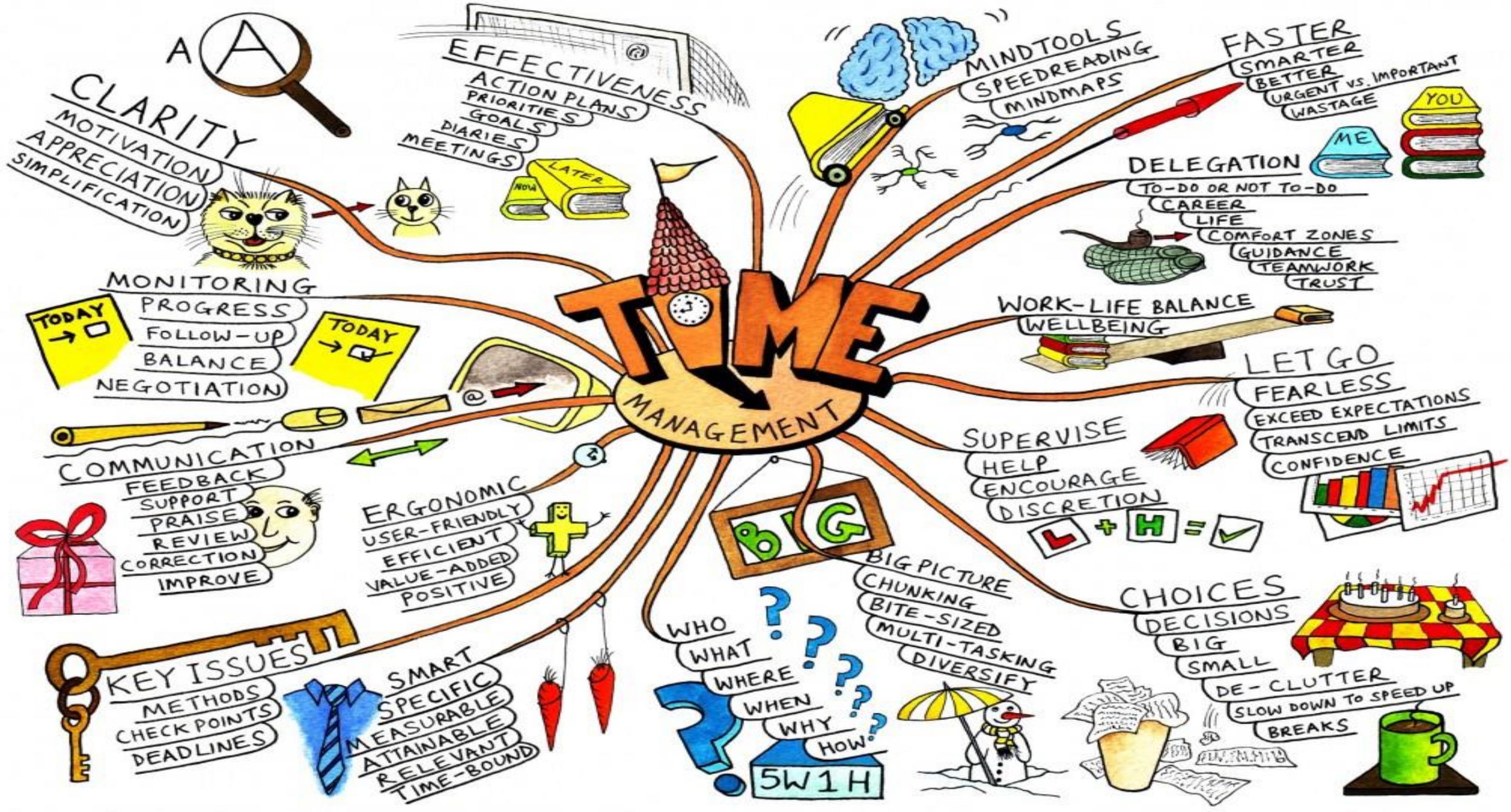
### 3-3.5小時流浮山－香港蠔鄉之旅

- 1.5小時乘船遊覽蠔排養殖
- 蠔村參觀
- 入場參觀生蠔淨化工場  
(已包每人1隻已淨化蒸蠔)













提供拍攝素材  
的特殊地貌



科學研究



教育資源



藝術作品

社會  
層面



作為旅遊  
資源



供人食用



製作副產品

經濟  
層面



製作副產品



抵擋海浪  
減低海岸侵蝕



為生物提供  
棲息地



淨化海水



生物覓食  
的地方

環境  
層面





# Creating a new home for the Olympia oyster

100 reef balls were lowered into the shallow waters off Point Pinole Regional Park, creating a man-made oyster reef. Here's how it will work.

- 1 Reef balls** are created with a mix of concrete, silt and shells.
- 2 The hard textured surfaces** are ideal for Olympia oyster larvae to latch onto.
- 3 The artificial reef** also creates an environment attractive to other marine animals and plants.

