

## **APPENDIX 1: STUDENT ACTIVITIES Dr Susan Bliss**

### **IS OCEAN FISHING SUSTAINABLE?**



Investigate the following issues related to ocean fishing

#### **1. Ornamental Fish trade**

Refer to the web and other sources to answer the following questions.

- What is an ornamental fish?
- List the major ornamental fish exporting countries.
- Name the major ornamental fish importing countries.
- Explain why quarantine is important (page 59).
- Sketch the supply chain and explain the movement of ornamental fish (page 19).
- Describe the results of intensive breeding.
- Discuss the ornamental fish business in Thailand (page 41) or Sri Lanka (page 42).
- Explain the problems of transport and the packaging system (page 53).

#### **Resource**

Food and Agriculture Organisation  
<http://www.fao.org/3/a-bb206e.pdf>

#### **2. Role of women in fishing**

- Explain why women are described as the 'invisible gender' in fishing.
- Propose strategies to recognise the important role women play.

#### **Resources**

The Hidden Half, Part I – Women's role in Southeast Asia's fisheries (English Subs)  
[https://www.youtube.com/watch?v=pp\\_j8OUWETM](https://www.youtube.com/watch?v=pp_j8OUWETM)

More than selling seashells: The unsung role of women in fisheries  
<https://blogs.adb.org/blog/more-selling-seashells-unsung-role-women-fisheries>

Fisherwomen-The Uncounted Dimension in Fisheries Management: Shedding light on the invisible gender <https://academic.oup.com/bioscience/article/67/2/111/2931761>



## **OCEANS SURROUNDING ASIAN COUNTRIES AT CRISIS POINT**

Choose a selection of the following topics to investigate.

### **1. Fishing gear**

a. In groups describe the common types of fishing gear such as:

- Gillnets
- Longlines
- Purse seine
- Pole and line
- Pots and traps
- Dredges
- Pelagic or midwater trawls

b. Present your investigation as an oral report.

#### **Resources**

Marine Stewardship Council

[https://www.msc.org/en-au/what-we-are-doing/our-approach/fishing-methods-and-gear-types?gclid=EAIAIqobChMIy\\_jdoJmd7wIVjSErCh1v7wfLEAAYASAAEgJs9\\_D\\_BwE](https://www.msc.org/en-au/what-we-are-doing/our-approach/fishing-methods-and-gear-types?gclid=EAIAIqobChMIy_jdoJmd7wIVjSErCh1v7wfLEAAYASAAEgJs9_D_BwE)

Australian Fisheries management Authority

<https://www.afma.gov.au/fisheries-management/methods-and-gear/longlining>

### **2. Bottom trawling**

a. Describe Bottom Trawling.

b. In a two-column table, list the advantages and disadvantages of Bottom Trawling.

#### **Resources**

How seafood is caught-Bottom Trawling

[https://www.youtube.com/watch?v=BcJFS1\\_YJHk](https://www.youtube.com/watch?v=BcJFS1_YJHk)

Destructiveness of Bottom Trawling

<https://www.youtube.com/watch?v=yxfyB3-eaRY>

### **3. Ghost fishing**

a. What is ghost fishing?

b. List the causes of ghost fishing.

c. Describe the problems of ghost gear to fish, marine animals, birds and humans.

d. Explain the reasons for the quantity of fishing gear lost or discarded.

e. Discuss the use of Drones or ROVs for Ghost Gear Retrieval.

f. Analyse the effectiveness of the Global Ghost Gear Fishing Initiative (GGGI).

## Resource

Deep Trekker

[https://www.deeptrekker.com/news/ghost-fishing?matchtype=b&network=g&device=c&keyword&campaign=11858879946&adgroup=114981062613&gclid=EA1aIQobChMIuJfV9Z-d7wIVUzUrCh3qAA\\_mEAAYASAAEgJe-fD\\_BwE](https://www.deeptrekker.com/news/ghost-fishing?matchtype=b&network=g&device=c&keyword&campaign=11858879946&adgroup=114981062613&gclid=EA1aIQobChMIuJfV9Z-d7wIVUzUrCh3qAA_mEAAYASAAEgJe-fD_BwE)

## 4. Illegal fishing

a. Refer to the storyboard below. Using ICT draw your own story of one type of IUUF from the Geography Bulletin article

<https://www.storyboardthat.com/sv/storyboards/dwinnie/cyanide-fishing>

Cyanide Fishing av dwinnie Uppdaterad: 8/4/2019

Hi my name is Aldwin and I'm a Fisherman. What a good day to catch some fish! Let's go!

What's the matter?

It's hard to catch some fish. I wonder if we can do cyanide fishing

Is it illegal? Am I right?

At least we can catch many of them.

I'm not sure about this.

It's okay no one is around. Im going to dive now

\*dives

There's a lot of fish here! Now I'll use cyanide fishing so that i can easily catch them

Cyanide fishing was initially developed to stun and capture fish for aquariums and collectors, but it was soon used for catching food fish as well.

The fishermen dive into the sea. When they reach the coral reefs, they spray the poison between the individual layers.

Yeah. Aside from possible effects on human health, cyanide fishing inflicts damage on the coral reefs where it is employed, as the poison kills the reefs and many of the life-forms that rely on them

I'm back! And it's a good thing that i am able to catch many fish. Finally, we can return back now.

b. Role of satellite fishing in tracking illegal fishing

- Explain how satellite imagery and technology works to reduce IUUF.
- Discuss how Artificial Intelligence (AI) and satellites are used to combat illegal fishing.

## Resources

World Ocean Review

<https://worldoceanreview.com/en/wor-2/fisheries/illegal-fishing/>

How AI and satellites are used to combat illegal fishing

<https://news.microsoft.com/on-the-issues/2019/06/06/ocean-mind-illegal-fishing/>