

# What are the impacts of coral reef destruction?



Age 14-16



60 minutes

## Curriculum links

- Bio-diverse ecosystems are under threat from human activity.
- Increasing demand for resources affected our planet.

## Resources



### Slideshow 6:

What are the impacts of coral reef destruction?



### Student Sheet 6a:

Facts and consequences



### Video:

Stakeholders on the reef - Community

### Video:

Stakeholder on the reef - Fisherman

### Video:

Stakeholder on the reef - Government

### Video:

Stakeholder on the reef - Local tourism

### Video:

Stakeholder on the reef - Tourism operator

## Lesson overview

This lesson will look at the impacts of coral reef destruction, categorising those impacts. We discover the impacts to different stake holders in Timor-Leste through watching videos. Students will then write a letter to their local MP informing them of the threats the coral reefs are facing and why they need protection.

## Lesson steps

## Learning outcomes

### 1. Introduction to the lesson (5 mins)

Students to review the learning objectives.

- Understand the wider context and learning outcomes

### 2. Threats recap (5 mins)

Students as a class make two lists of the local and global threats of the coral reef destruction.

- Remember some of the threats to coral reefs

### 3. Impacts of coral reef destruction (10 mins)

Students to categorise the impacts of coral reefs found on the student sheet.

- Describe the impacts of coral reef destruction

### 4. Impacts of coral reef destruction in Timor-Leste (20 mins)

Students to watch the videos and make notes of the different impacts of coral reefs on Timor-Leste in a spider diagram.

- Explain the short term and long-term consequences of the loss of the coral reef

### 5. Consolidation and evaluation of information (15 mins)




Students to write a letter to their local MP. This task will get students to evaluate the impacts as they must be selective with what they will write to their MP.

- Explain the short term and long-term consequences of the loss of the coral reef

### 6. Mitigation (5 mins)

In pairs students to discuss the strategies they think are needed to mitigate the issues facing Timor-Leste and other coral reefs.

- Predict a strategy to mitigate the threats to coral reefs

| Step                   | Guidance   | Resources  |
|------------------------|--|--|
| <b>1</b><br>5<br>mins  |  <p>Step 1 introduces the students to the lesson.</p> <ul style="list-style-type: none"><li>· Select students to read out the learning objectives.</li><li>· Choose students to answer questions that are related to previous lessons such as: How will climate change affect coral reefs in Timor-Leste? What is ocean acidification?</li></ul>  | <b>Slideshow 6:</b><br>Slides 1-2  |
| <b>2</b><br>5<br>mins  |  <p>Step 2 recap the threats to coral reefs learnt about in previous lessons.</p> <ul style="list-style-type: none"><li>· Ask students to put their hands up and give you threats they can remember.</li><li>· Write the threats on the board.</li></ul>  | <b>Slideshow 6:</b><br>Slides 3  |
| <b>3</b><br>10<br>mins |  <p>In step 3 students read facts about coral reefs and use the information to predict some of the potential consequences of coral reef destruction.</p> <ul style="list-style-type: none"><li>· Hand out Student Sheet 6a.</li><li>· Students to categorise the facts about coral reefs into social, economic and environmental.</li><li>· Following this students attempt to predict consequences of coral reef destruction. Examples include: increased rates of malnutrition as the amount of food available decreases due to loss of marine habitats. Increasing rates of coastal flooding as reefs are not there to dissipate wave energy causing more coastal erosion. Increased cost of coastal destruction after tropical storms as coral reefs will not be there to dissipate the wave energy.</li><li>· Ask students to put hands up and share their predictions.</li></ul> | <b>Slideshow 6:</b><br>Slide 4<br><br><b>Student Sheet 6a:</b><br>Facts and consequences |

### Step Guidance

### Resources

4

20  
mins



Step 4 impacts in Timor-Leste.

- Play the videos from Timor-Leste, students to make notes about the different impacts in their books in the format of a spider diagram.
- Once you have played all the videos give the students a minute or so to finish writing any notes down.
- Choose students at random to share consequences of coral reef destruction specific to the people of Timor-Leste.
- Ask students to think about how many of the threats to coral reefs in Timor-Leste are caused by local actions or systemic actions.
- Start a discussion about the consequences of the coral reef destruction on the economy of Timor-Leste, thinking about the facts learnt about Timor-Leste in the first lesson. E.g. Timor-leste 41% employment in Primary industry. GDP Per capita 134/184, 30th fastest growing population in the world. More people will depend on the reef for food and income without it the people of Timor-Leste may struggle to develop.

**Slideshow 6:**

Slide 5-10

**Video:**

Stakeholder on the reef - Community

**Video:**

Stakeholder on the reef - Fishermen

**Video:**

Stakeholder on the reef - Government

**Video:**

Stakeholder on the reef - Local tourism

**Video:**

Stakeholder on the reef - Tourism operator

5

15  
mins



Step 5 consolidate the learning from the last two lessons.

- Go through the format that is to be used by students on slide 11 as they write a letter to the local MP, a good website for this is [www.theyworkforyou.com](http://www.theyworkforyou.com). Ensure students are aware of what they need to include in the letter – both threats and impacts to coral reefs and especially the consequences to Timor-Leste.

**Slideshow 6:**

Slides 11-12

6

5  
mins



Step 6 mitigation strategies.

- Students to use the research they completed for homework to discuss the strategies we can use to reduce the effects of threats on coral reefs. Thinking about different scales – global and local.

**Slideshow 6:**

Slide 13