

Plastic case study - tourism in Kenya



Age 11-14



60 minutes

Curriculum links

- Analyse why plastic pollution can have economic and social impacts
- Use mapping skills to assess sources of plastic pollution

Resources



Slideshow 3:

Plastic case study – tourism in Kenya



Student Sheet 3a:

Lamu tourism brochure

Student Sheet 3b:

Holiday heaven or paradise lost to plastic?

Student Sheet 3c:

Lamu mapping

Student Sheet 3d:

Flipflop case study



External Link:

Yes We Can! Shela to Kipungani Beach Cleanup

External Link:

DePollutionizing Shela Beach

Extension or home learning

Students create a report or presentation on the Flipflop project.

Lesson overview

Plastic does not just have an environmental and health impact, it can also affect economies and communities. For tourism locations, a pristine beach will attract more visitors than one covered in plastic waste. In this lesson, students will look at a tourism case study on Lamu Island off the coast of Kenya.

Lesson steps

Learning outcomes

1. What makes Lamu popular? (15 mins)

Students view a range of information about Lamu and assess what they think makes Lamu a popular tourist destination.

- Assess what makes Lamu a popular tourist destination

2. Where might plastic be coming from? (15 mins)

Lamu's beaches are being affected by marine plastic pollution. This could have a knock-on impact on the local tourist industry. Students use their prior knowledge and a mapping activity to develop an understanding of potential sources of plastic.

- Apply mapping skills to describe processes
- Evaluate the threat caused to Kenya's economy by plastic waste

3. What action is being taken? (15 mins)

Students watch a video about the Lamu beach clean-up, and actions of volunteers and residents' groups to tackle the plastic build up.

- Describe how actions at a range of scales are addressing plastic pollution

4. How is Kenya changing? (10 mins)

The build-up of plastic waste could stymie Kenya's strategy to grow its tourism sector. Students review development data about Kenya to reflect on the potential impact of plastic waste on the Kenyan economy.

- Evaluate the threat caused to Kenya's economy by plastic waste

5. How can the Kenyan government help? (5 mins)

As a plenary, students suggest additional actions that the Kenyan government could take.

- Describe how actions at a range of scales are addressing plastic pollution

TEACHER GUIDANCE 3 (page 1 of 3)

PLASTIC CASE STUDY - TOURISM IN KENYA

Step Guidance

Resources

1
15
mins



Having looked at the environmental impact in the previous lesson, students now examine the potential social and economic impact of plastic waste.

- Share the learning objectives with class.
- Locate Lamu on a map either using an atlas, globe or a digital map such as Google Earth (<https://earth.google.com>).
- Hand out Student Sheets 3a and 3b. Student Sheet 3a contains a range of information about going on holiday to Lamu and is in the form of a tourist brochure.
- Introduce the information and questions 1-3 on Student Sheet 3b, using slides 4-8.
- Working in groups, students should then complete the questions.
- Debrief as a whole class mini-review.



Lamu county in Kenya covers both islands and coastal areas. The mainland area is subject to massive government development to create an international hub super-port, oil exploration and pipeline, with huge environmental destruction and disputes with the local fishing and small farmer community.

Lamu island, itself, is a small part of the overall Lamu county with a population of 13,243 (2009). In contrast, it is a small idyllic tourist centre, a UNESCO World Heritage Site on the coast of North East Kenya and is the focus of this lesson.

The population is historically mixed of Arab and African origin, as well as many Europeans who have returned to start businesses or buy houses after holidays spent on the island. It has attracted stars and politicians (Barack Obama) as holiday makers and, like the rest of Kenya's tourist industry has largely recovered from the post 2011 dip following a series of terrorist and kidnapping incidents which affected the Island directly. Parts of the island are struggling with the rise in tourist numbers, particularly Lamu Town which has heritage status, and is probably the oldest town in Kenya. Refuse collection and donkey droppings (6,000 donkeys) are an explicit and obvious problem and many tourists prefer to stay in Shela, the focus of the study, instead of Lamu because it is cleaner, and where cars are banned but tractors are allowed.

However, here plastic pollution is a problem which is growing to a very noticeable extent and has the potential, to derail the development of tourism by damaging the environment and habitats essential for a tourist based economy.

Slideshow 3:
Slides 1-8

Student Sheet 3a:
Lamu tourism brochure

Student Sheet 3b:
Holiday heaven or paradise lost to plastic?

TEACHER GUIDANCE 3 (page 2 of 3)

PLASTIC CASE STUDY - TOURISM IN KENYA

Step Guidance

Resources

Residents have reacted against plastic in two discrete but interlinked ways. Beach clean-ups took place over several months in 2017 and coincided with the Kenyan Government's introduction of the world's most draconian ban on plastic bags. However, in the year since the clean-up, it is estimated 10 tonnes of plastic has been deposited and collected from the beaches.

Alongside this, an advocacy and awareness programme has seen a dhow made from plastic waste, the Flipflopi, which visits coastal communities to raise awareness and action. This is the focus of the home learning activity.

2
15
mins



Having considered what makes Lamu an attractive tourism destination, students consider what the impact of plastic might be.

- Students review three quotes from locals that describe the increasing plastic waste problem. These show that the plastic problem represents a change in the human / physical landscape interaction over a relatively short time period.
- For effective actions to be taken, it is important to know where the plastic waste that is littering the beach comes from.
- Relying on students' prior knowledge about urban populations consuming more convenience items such as those using plastic packaging, students may also consider how likely populations in LICs and MICs may reuse and recycle more than in HICs.
- Students annotate the two maps on Student Sheet 3c with details of potential sources of plastic pollution. These might include: plastic escaping from the Indian Ocean gyre, fed by countries in Africa and Asia; local visiting tourists; Kenya itself, particularly coming from the capital Nairobi, and carried by rivers to the sea and carried north by the Somali Current.

Slideshow 3:
Slides 9-12

Student Sheet 3c:
Lamu mapping

3
15
mins



By this point in the lesson, students will have learned that Lamu's environment is being affected by plastic pollution and that this has potential knock-on impacts on the tourist industry. This lesson step looks at the appropriate actions that can be taken to address this.

- Students watch either of the two listed videos. A longer, 9 minute video gives more information and a shorter 1 ½ minute version if you are stuck for time.
- Students should answer questions 4-7 on Student Sheet 3b individually or as a whole class discussion.

Slideshow 3:
Slides 13-15

Student Sheet 3b:
Holiday heaven or paradise lost to plastic?

Video
Yes We Can! Shela to Kipungani Beach Cleanup

Video
DePollutionizing Shela Beach

TEACHER GUIDANCE 3 (page 3 of 3)

PLASTIC CASE STUDY - TOURISM IN KENYA

Step Guidance

Resources



Delete the slide for the video that you will not be using.



These videos are hosted on YouTube and you may need to unblock this service, liaising with your IT department.

The links for the videos are:

Yes We Can! Shela to Kipungani Beach Cleanup (9 mins)

<https://youtu.be/MnNUnAjP4Ck>

DePollutionizing Shela Beach (1 ½ mins)

https://youtu.be/zCu_V9wMb9k

4
10
mins



Step 4 broadens out students' thinking about the economic and social impact of plastic waste to include development and economic data on Kenya.

- Review the information on slides 16-19.
- Complete questions 8-10 on Student Sheet 3b.

Slideshow 3:

Slides 16-19

Student Sheet 3b:

Holiday heaven or paradise lost to plastic?

5
5
mins



End the lesson, by asking students what additional actions the Kenyan government could be taking to address the issue of marine plastic pollution and its knock-on impacts on the economy and community of Lamu island.

- Slide 20 shows a postcard template addressed to the Minister of the Environment.
- As a whole class discussion, students consider what Lamu residents might suggest.

Slideshow 3:

Slide 20

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Students create a report or presentation on the Flipflop project individually or in groups.

Student Sheet 3d:

The Flipflop Project