

## Lesson Summary

Overfishing is emptying the ocean, with 90% of fisheries already overfished. Illegal fishing is having a big impact. This lesson focuses on the shark poaching aspect of illegal fishing.

This lesson will take approx. 45 mins.



## Subjects relevant to

English, Geography, History, Math, Science and Social Science.

## Learning objectives

From this lesson students will:

- Understand the impact of IUU fishing activity on sharks.
- Understand the reasons sharks are in demand.
- Learn how sharks are being targeted as an extent of overfishing.
- Discuss ways students can help address the issue.

## Preparation

- This lesson has been designed to provide a complete lesson, but can be stopped at any time and split over multiple lessons, should you wish to include your own discussion/questions or incorporate the lesson activities.
- Definitions of key terms have been provided at the end of the guide to assist with the learning process.
- Each lesson has case study options showing Sea Shepherd campaigns, including videos to provide students with a firsthand experience of ocean conservation in action.
- Depending on whether students are working in a classroom or remotely, you can choose to discuss questions in the class or use the online learning app.
- This digital lesson has an interactive option called student devices. If you choose this option ask the students to bring their mobile phones or tablets to the lesson.
- Should you choose the interactive option, it will run a quiz during the lesson. Recommendation: only use this interactive option in classes of up to 30 students.
- Students can sign up on their mobile device to the [www.LessonUp.app](http://www.LessonUp.app). They will be asked for a PIN code (this will appear automatically on slide 3 and will also show at the bottom of the screen). Students who sign up under a false name may be removed by the teacher.
- Students who do not have a mobile device can join the quiz with another student.
- If student devices is turned ON, you can opt to turn the sound and the share screen ON or OFF. Further on you can choose if you want to 'show ranking after each quiz' question. Doing so will create a competitive element, but it can be distracting. Recommendation: turn the 'show ranking after each quiz' OFF.
- The abovementioned options will also show if you click on the PIN code at the bottom of the screen.

## Lesson plan

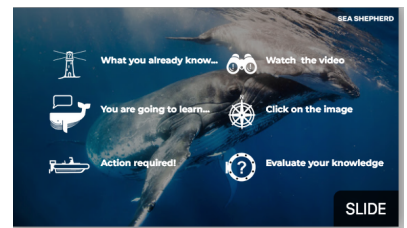
### Slide 1 Introduction

This lesson is provided by Sea Shepherd. Sea Shepherd was founded in 1977 and is a marine conservation organisation working to protect the oceans and marine wildlife. Sea Shepherd works globally on a range of issues impacting the oceans, running numerous direct action campaigns each year. Shark poaching is one area Sea Shepherd is working on to help stop illegal fishing and reduce by-catch.



### Slide 2 Lesson action icons

During the lesson we will use these icons to identify the learning actions.



### Slide 3 Lesson summary

In this lesson we explain the impact overfishing is having on sharks and why this is occurring.

**INTERACTIVE JOIN** – ask students to go to [www.LessonUp.app](http://www.LessonUp.app)



### Slide 4 What do you already know?

Ask students to answer the following question using [www.LessonUp.app](http://www.LessonUp.app) or discuss in the classroom.

“What do you already know about shark poaching?”

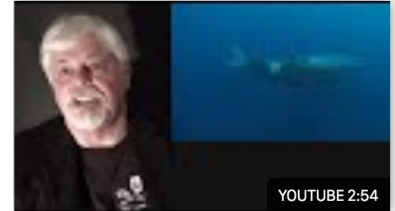


## Slide 5 Empty ocean by 2050

Scientists estimate that by 2050 the ocean ecosystem will be on the verge of collapse, empty of fish and marine wildlife, unless urgent action is taken on the issues impacting on the oceans and marine wildlife.

Show this video (2.53min), which explains how important all species are to our planet.

<https://www.youtube.com/watch?v=TLcA31VRIRU>



Discuss the video with the class and what it means.

## Slide 6 Sharks

One of the reasons for this is overfishing of the ocean. It is estimated that over 100 million tons of fish is caught each year. Fish is the largest traded commodity in the world.



## Slide 7 90% of predatory fish species are gone.

The result of commercial fishing activities is that over 90% of global fisheries have now been exploited or overexploited. Which means, according to UN data, that less than 10% of global fisheries are deemed to have healthy numbers. Now 90% of the predatory fish, including sharks, tuna, albacore, icefish, swordfish and grouper are gone.



## Slide 8 Over 100 million sharks killed each year

One species that has been heavily targeted is sharks, with over 100 million killed each year.





### Slide 9 Over 400 shark species

Sharks have been on this planet for over 450 million years, before the dinosaurs.

There are currently over 400 species of sharks that have been identified.

Ask students which shark species they can name?



### Slide 10 Question

Ask students to answer the following question using [www.LessonUp.app](http://www.LessonUp.app) or discuss in the classroom.

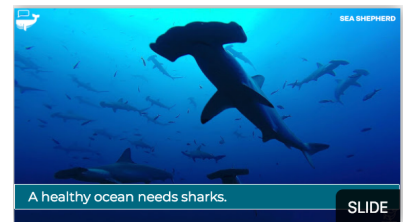
“What do you think the impacts might be of removing sharks from the ocean ecosystem?”



### Slide 11 Health oceans need sharks

Sharks are a very important part of the ocean, they help to keep the ecosystem in balance.

They can be lazy hunters and will take an easy meal, such as scavenging the seabed eating the remains of dead sea-life. Effectively cleaning up the ocean floor. They also eat the old, sick and weak members of the species they prey on, which helps make that species population healthier.



### Slide 12 Balancing ecosystems

Sharks help to maintain a balance and control smaller predators.

In areas where shark numbers have been reduced, particularly around coral reef systems, it has had a negative impact on the whole system, other fish species have gotten out of control and killed off many small species of fish.

Those smaller species are often the ones that help keep corals healthy.

Where sharks have been allowed to recover to healthy numbers the reef systems flourish with hundreds of different species living in a healthy ecosystem.





## Slide 13 Endangered species

Many shark species are now endangered. Of the over 400 shark species:

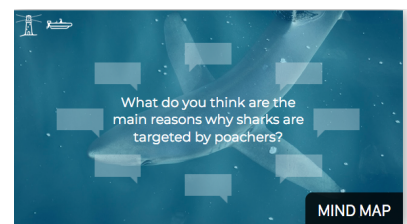
- 143 shark species are endangered.
- 210 data deficient, so we can't determine how severely they have been overfished.
- The remaining species have healthy populations.



## Slide 14 Question

Ask students to answer the following question using [www.LessonUp.app](http://www.LessonUp.app) or discuss in the classroom.

“What do you think are the main reasons sharks are targeted by poachers?”



## Slide 15 Shark finning

The biggest reason we kill sharks is for their fins.

Most of the shark is not used for food, the fishermen just cut the fins off the shark and then throw the shark back into the ocean alive, to drown.

Fins are used for herbal remedies and Shark Fin Soup.

Shark Fin Soup has no health benefits or real taste, but it is a sign of wealth in some Asian cultures and therefore people pay a lot of money for it. This is the main cause of demand for shark fins globally.



## Slide 16 Shark liver oil

Other than for their fins sharks are killed to extract the oil from their liver. It has been used for many years as a folk remedy for healing wounds and many other ailments, including cancer.

The benefits and side effects of this have not been scientifically tested. People used to believe that sharks don't get cancer, so they must have an immunity, thus they are used for remedies.

We now have evidence that sharks do in fact get cancers and tumours.





## Slide 21 Poaching

Illegal fishing operations intentionally take sharks. These poachers are part of the illegal network, that supply shark fins and shark liver oil, contributing to the deaths of millions of sharks each year.

They are caught using nets or long lines

The Sea Shepherd Case Study Operation Sola Stella provides additional information to enhance learning in this area.



## Slide 22 By-catch

Sharks are often caught as by-catch, which is basically anything that gets caught in the nets that the fishermen don't want or cannot sell. It mostly gets thrown back into the oceans as rubbish, a waste of life effectively.

This includes sharks who become trapped in fishing nets while chasing their food.

While they should be released often they are still finned before being dumped back into the ocean.



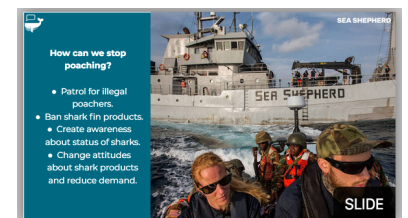
## Slide 23 Entanglement in nets

Illegal gillnets used by poachers or fishing nets lost overboard from fishing vessels are also dangerous for sharks and other species. They become floating death traps.



## Slide 24 How we can stop poaching

- Patrol for illegal poachers – monitoring for illegal activity.
- Ban on shark fin products – legislate to protect sharks and the trade in shark products.
- Create awareness of the status of shark – protecting endangered species.
- Correct the misconception about benefits of shark products,
- Changing attitudes and the demand for shark fins.





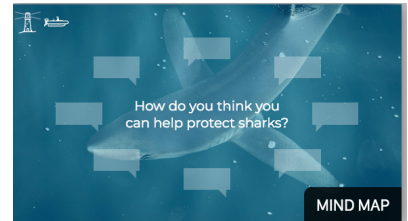
## Slide 25 How do you think you can help protect sharks?

Ask students to answer the following question using [www.LessonUp.app](http://www.LessonUp.app) or discuss in the classroom.

“How do you think you can help protect sharks?”

Some suggested answers:

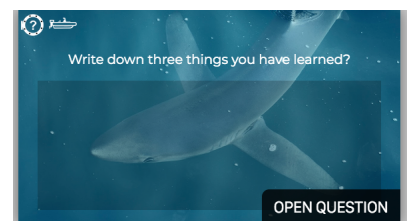
- Do not buy shark products.
- Help raise awareness.
- Push for your government to ban shark fishing and the sales of shark fins.



## Slide 26 What did you learn?

Ask students to answer the following question using [www.LessonUp.app](http://www.LessonUp.app) or discuss in the classroom.

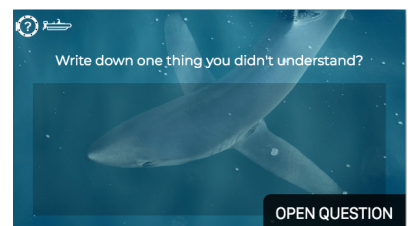
“Write down three things you have learned?”



## Slide 27 What don't you understand?

Ask students to answer the following question using [www.LessonUp.app](http://www.LessonUp.app) or discuss in the classroom.

“Write down one thing you didn't understand?”



## Slide 28 Case studies

To enhance learning on this issue use some of the Sea Shepherd Case Studies on this topic, showing first hand accounts of what is happening to sharks and other species in our ocean.



## Slide 29 Close



## Case Study Options

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Case Study – Operation Albacore  
Case Study – Operation Apex Harmony – Timor Leste  
Case Study – Galapagos Islands  
Case Study – Operation Sola Stella

## Key Definitions

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By-catch - is basically anything that is caught in fishing nets or on lines that the fishermen don't want or are not allowed to legally sell.

Ecosystem - a biological community of interacting organisms and their physical environment.

Extinction - the state or process of being or becoming extinct. No longer in existence.

IUU – Illegal Unreported and Unregulated Fishing.

Illegal fishing - means that the fishermen enter the territorial waters of a country or regulated marine zone without permission or without a license for the fish they intend to catch.

Poaching - illegally hunt or catch (marine mammals or fish) that is not one's own or in contravention of official protection.

Overfishing:

The United Nations believes two-thirds of the world's fisheries are fully exploited and 26% are over-exploited, which means that only 10% of our planet's fisheries are actually healthy. Overfishing in this context looks at fishing that depletes a population to a level that reduces its population.

Overfished populations - depleted the numbers of fish in specific area) by excessive fishing. Even though these numbers could still be considered sustainable, they could ultimately lead to the collapse of fisheries.

Shark finning - the practice of removing fins from sharks.

Unreported - means that a fishing vessel may have a license with an allocated quota for fishing a particular species, such as tuna, but then catches more than their quota states and without reporting the extra catch.

Unregulated - refers to areas where there may not be a quota or any regulations in place, either in that location or for the type of species. There are areas of the ocean that are not subject to any regulation.

## YOUR FEEDBACK

We value your feedback and would be pleased to hear your thoughts about this lesson and activities. Any comments, suggestions or requests for further information can be sent to [education@seashepherdglobal.org](mailto:education@seashepherdglobal.org).