

ILLEGAL, UNREPORTED AND UNREGULATED (IUU) FISHING

LESSON 4

TEACHERS GUIDE: SEONDARY SCHOOL (Age 11 – 16)

Lesson Summary

Overfishing is emptying the ocean, illegal fishing is increasing and 90% of the fish populations are already overfished. In this lesson we will look at how illegal fishing vessels operate and the activities they undertake.

This lesson will take approx. 45 mins.



Subjects relevant to

English, Geography, History, Science and Social Science.

Learning objectives

From this lesson students will:

- Learn about the types of illegal activities fishing vessels undertake.
- Consequences of fishing industry – on marine wildlife and humans.
- Understand the importance of tackling illegal fishing activity.

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. 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.

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Lesson plan

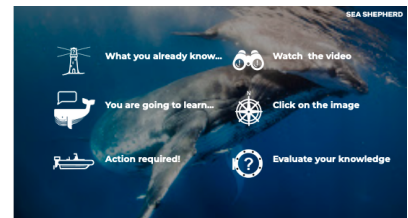
Slide 1 Introduction

This lesson is provided by Sea Shepherd. Sea Shepherd is a marine conservation organisation with a mission to protect the ocean and marine wildlife. Sea Shepherd operates globally on a range of issues impacting the ocean and is running numerous direct action campaigns each year. IUU is one area Sea Shepherd is working on in order 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

During this lesson we will be focusing on the activities conducted by illegal fishing vessels.

INTERACTIVE JOIN – ask students to go to www.LessonUp.app

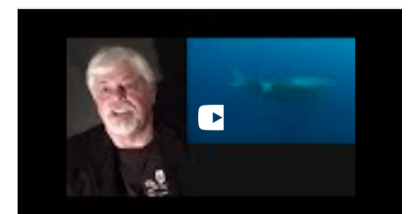


Slide 4 Empty ocean by 2050

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 the ocean 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.

Slide 5 IUU Lessons

In IUU lessons 1 to 3 we discussed and learned that:

90% of fish populations have already been overfished. One of the reasons for this is overfishing.

It is estimated that over 100 million tonnes of fish are caught each year. Fish is the largest traded commodity in the world.

The United Nations estimates that 30% of the global fishing catch is considered to be from Illegal, Unreported and Unregulated (IUU) fishing. The amount varies by region from 15% to 40%.



Slide 6 IUU fishing

In previous lessons we discussed the meaning of IUU and learned that:

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. In basic terms they are stealing from these waters.

Unreported means that a fishing vessel may have a license with an allocated quota for fishing a particular species, such as tuna, but catches more than their quota states without reporting that catch. This can also be legally licensed fishing vessels that fail to declare the full amount of their by-catch. When vessels are inspected the information recorded in the fishing log books are compared against what is in the fishholds of the vessel.

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. They aren't controlled by a particular country or form part of any regulated zone. Fishing vessels can head to these areas knowing no one is likely to be patrolling or monitoring activity.

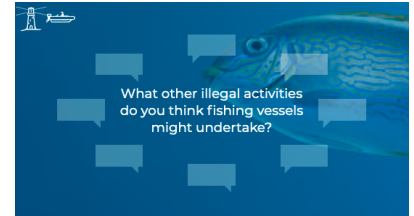
Regulating the fishing industry is a huge task, given the size of the oceans and the scale of commercial fishing operations. There are thousands of illegal fishing vessels out at sea catching marine wildlife.



Slide 7 What other activities do fishing vessels undertake?

Ask students answer via www.LessonUp.app or discuss in classroom:

“What other illegal activities do you think fishing vessels might undertake?”



Slide 8 Illegal activities

Illegal fishing fleets are plundering the ocean all around the world:

- Catching fish illegally, without a license.
- Taking fish outside of their quota,
- High levels of by-catch are discarded.

While taking their illegal catch these vessels carry out a number of illegal activities.



Slide 9 Keeping false logbooks

Fishing vessels are required to record their catch in a logbook.

Illegal operators will sometimes keep two sets of logbooks, one that shows the legal fishing catch, where they have a license to fish, and a second set which is a true record of their catch.

The second logbook will be kept hidden in case of inspection by law enforcement authorities.

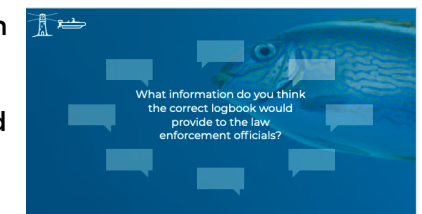


Slide 10 What information does a logbook provide?

Ask students answer via www.LessonUp.app or discuss in classroom:

“What information do you think the correct logbook would provide to the law enforcement officials?”

- Actual catch numbers.
- The species being caught.
- When the vessel has been fishing.
- Where the vessel has been fishing illegally.
- How long the vessel has been operating illegally.



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Slide 11 Fishing methods

Illegal fishing vessels are likely to be using illegal or destructive fishing methods to ensure a bigger catch.

Review some of the methods covered in IUU Lesson 3. These methods include:

Driftnet – which refers to the setting of nets along the top of the ocean. A driftnet is not anchored to the ocean floor, instead it hangs vertically in the water attached to ropes along the ocean surface with buoys and weights along the bottom. These nets are used to target pelagic fish, which simply means fish that are not in coastal waters, reefs or on the seabed. These nets can be several kilometres under the surface and were banned in December 1991 by the UN.

Gillnets - walls of netting set in a straight line that are very effective at trapping fish. Using floats on the surface the length of the lines can be adjusted to set the nets at varying depths. They are usually set several kilometres below the surface and can be many kilometres long. They are used for deep living fish like toothfish. Laws on gillnets vary between countries.

Longlines - fishing lines that can run for up to 100 km with thousands of baited barbed hooks. They will catch everything that tries to go for the bait or any fish caught on the hooks. This includes sharks, seals or turtles.

Bottom trawling - this means the fishermen are dragging the nets along the seafloor scraping up everything in their path. This method brings up with them all life and the habitat, this includes corals and sponges along with the fish, jellyfish, starfish and anything else in their path. Any fish of reasonable size is sold separately the rest is called 'trash fish' and is sent to be turned into fishmeal which can be used for food in fish farms, like prawn farms. Bottom trawling is very destructive, wiping out a habitat and ecosystem all in one go.

Fish Aggregating Device - these devices are designed to lure fish into an area to make it easier to fish. The device can attract multiple species of pelagic fish.

Slide 12 Fishing along country borders

Illegal vessels will conduct raids into a country's Economic Exclusion Zone (EEZ) to fish, and then disappear back into international waters, or those of a neighboring country to evade law enforcement patrols.

This is where regional fisheries management organisations (RFMO) and regional cooperation are helping to tackle this issue.



In South East Africa eight countries have formed FISH- I Africa to tackle these issues, this includes the Comoros, Kenya, Madagascar, Mauritius, Mozambique, Seychelles, Somalia and Tanzania.

RFMO - These organisations are international bodies that help to regulate fishing in a region.

Slide 13 Transshipment

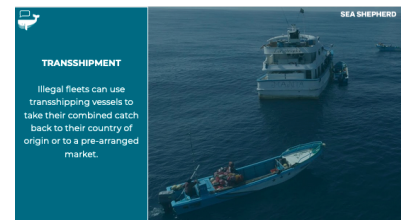
Illegal operators use a number of methods to try and hide the origin of their catch and avoid detection by law enforcement authorities as they move between countries.

One way to hide the source of the fish is by using transshipment.

Transshipping vessels will receive fishing catches from a number of vessels before heading to port to offload. This provides an opportunity for the source of the catch to be hidden, as fishing catches are combined.

Illegal fleets can use transshipping vessels to take their combined catch back to their country of origin or to a pre-arranged market.

Transshipping vessels are also used to provide supplies and transfer crew to fishing vessels. so that these fishing vessels can stay at sea for long periods of time without having to visit port.

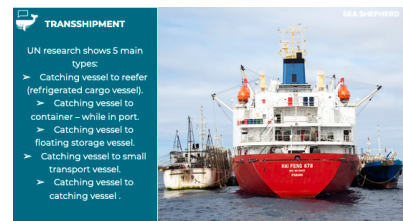


Slide 14 Transshipment

Transshipping involves small and large scale commercial fishing.

United Nations research shows 5 main types:

- Catching vessel to reefer (refrigerated cargo vessel) – This occurs in port or at sea - species tuna, small pelagic, krill, squid.
- Catching vessel to container – while in port – tuna, squid, multi-species catch.
- Catching vessel to floating storage vessel- anchored at sea – tuna, multi-species catch.
- Catching vessel to small transport vessel – within EEZ/coastal area – multi-species catches, small pelagic, conch or crab.
- Catching vessel to catching vessel – at sea (EEZ to high seas) – multi-species, small pelagic, conch or tuna.



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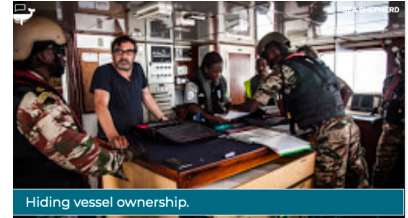
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Slide 15 Hiding vessel ownership

To hide the true owners of a ship, operators may use holding companies. These are unlisted companies created to own an asset, such as a ship.

Hiding the owners of the company reduces the ability of law enforcement to prosecute them for illegal activities.



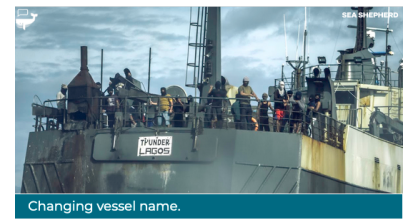
Slide 16 Changing names

Illegal vessels, particularly those that have previously been caught operating illegally, will use fake names and documentation.

Regularly changing a ships name makes it difficult to track a vessel that has previously been caught operating illegally.

The owners may change the ships name when they change its registration details or simply create forged documents.

Illegal vessels may also change their name as they enter port, simply by painting over the name on the side of a ship or creating new signs to hang over the official name of the vessel.



Slide 17 Country of registration

All vessels must be registered with a flagstate. This is referred to as their country of registration and allows the vessel to fly the flag of that country. It is considered to be their home port and the vessel must comply with the laws of that country.

Vessels which are not registered are considered to be stateless and are called 'pirate vessels'. Pirate vessels have no flagstate protection at sea and can be bordered by anyone.

Illegal vessels will change the country of registration for several reasons. First if they have been caught operating illegally they may have been struck from a registry. This means the country that runs the shipping registry does not want to support an illegal operator and has revoked the registration.

The second reason to change the name is that the owners are trying to hide ownership. They will look for a new country to register in. Some countries have been known to run registries that do not have strict controls in place to properly identify vessels or ownership, making it easy for illegal operators to register a vessel.



Slide 18 Licensed to fish

To help hide their intentions illegal operators may apply for a license, so they can operate in a country's waters, but they then target different species. For example they may be licensed to catch albacore, but their intended catch is sharks, particularly for their fins or shark livers for oil.



Slide 19 Abandoned, Lost and Discarded fishing gear

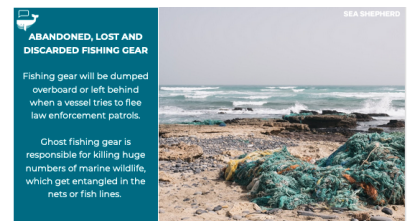
Illegal fishing vessels are big contributors to the issue of abandoned, lost and discarded fishing gear.

Fishing gear will be dumped overboard or left behind when a vessel tries to flee law enforcement patrols.

If they are using illegal fishing gear, like gillnets, then it may also be dumped before they go into port.

Ghost fishing gear is responsible for killing huge numbers of marine wildlife, which get entangled in the nets or fishing lines.

For more information see the lesson: Abandoned, Lost and Discarded fishing gear.



Slide 20 Slavery and poor working conditions

Illegal fishing operators look to keep their costs low, to maximise their profits. One way they do this is by hiring cheap labour or tricking people into modern slavery.

Discuss with class what they think slavery means.



Slide 21 Slavery and poor working conditions

The fishing crews on illegal vessels are often from poor countries where wages are low – including countries such as the Philippines, Indonesia, Myanmar and African countries.

The crews are promised a wage if they sign up for a period of time, maybe for 6 months or several years. Once on board the fishing vessel they may receive a low wage or no income at all.

These men want to support their families, hoping to send the money they earn home.



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Slide 22 Poor working conditions

Fishing crews work long days to bring in the catch. Their sleeping quarters are often cramped and dirty.

Crews may be subject to harsh treatment from the officers, this could include being beaten if not working hard or not receiving food if the catch for the day is deemed to not be large enough.



Slide 23 Trapped at sea

Fishing crews will have their passports taken from them, so they can't leave, especially if they do go into a port.

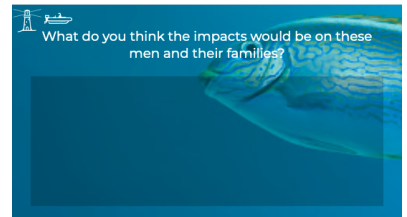
Where transshipping is used the crews may not be able to leave, as the ship stays at sea for years at a time. During this time they may have no contact with their families, who have no way of knowing if their loved ones are still alive.



Slide 24 What are the impacts?

Ask students to answer via www.LessonUp.app or discuss in classroom.

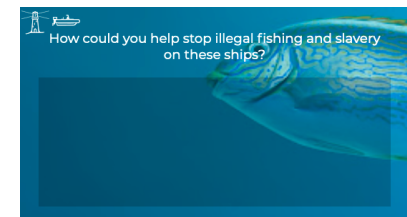
"What do you think the impacts would be on these men and their families?"



Slide 25 How can you help

Ask students to answer via www.LessonUp.app or discuss in classroom.

"How do you think you can help stop illegal fishing and slavery on these ships?"



Slide 26 Interpol

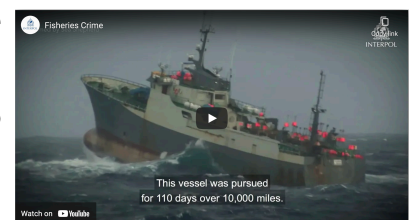
One law enforcement agency that is helping to identify and tackle these issues is Interpol.

Interpol is an international police force involved in operations to monitor and coordinate the evidence required to arrest illegal operators, no matter where they are in the world.

Show the video (1.49 min) from Interpol that explains about the issue of illegal fishing and other crimes they commit.

<https://www.youtube.com/watch?v=fzJj10B6JVY&feature=youtu.be>

Discuss the video with the class.



Slide 27 Impacts on artisanal fishing

One issue mentioned in the video is the impact on food security. Along the African coast many communities rely on the ocean for food and an income. Using small-scale fishing methods, often referred to as artisanal fishing.

Illegal fishing vessels have raided the waters of these countries, reducing fish numbers close to shore and impacting these communities.



Slide 28 Impacting coastal areas

Show the video (3.28 min) from Sea Shepherd's Operation Gambian Coastal Defense, that shows illegal fishing and the impacts on coastal communities:

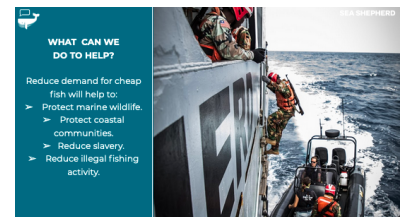
<https://www.youtube.com/watch?v=HCmG5WS4DPo>



Slide 29 What can you do?

Tackling the issue of illegal fishing will help address some of these issues. We can help by reducing the demand for cheap fish. This will help to:

- Protect marine wildlife.
- Protect coastal communities.
- Reduce slavery.
- Reduce illegal fishing activity.



Discuss what other ideas students have that could help tackle these issues.

Slide 30 Question

Ask students to answer via www.LessonUp.app or discuss in classroom.

"What crimes are illegal vessels committing?"

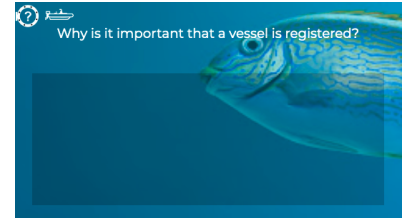
- Fishing illegally without a license.
- Falsifying documentation.
- Creating fake logbooks.
- Enslaving crew.
- Using illegal fishing gear.
- Dumping fishing gear into the ocean.



Slide 31 Question

Ask students to answer via www.LessonUp.app or discuss in classroom.

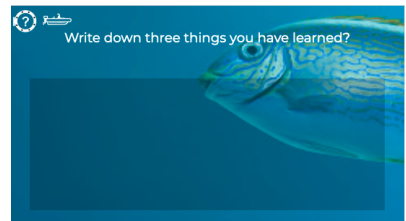
“Why is it important that a vessel is registered?”



Slide 32 What did you learn?

Ask students to answer the following question using www.LessonUp.app or discuss in the classroom.

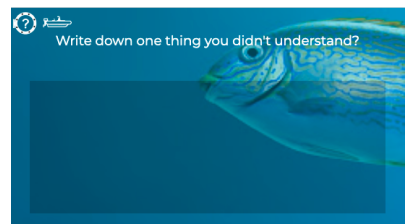
“Write down three things you have learned?”



Slide 33 What don't you understand?

Ask students to answer the following question using www.LessonUp.app or discuss in the classroom.

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



Slide 34 Case Studies

Sea Shepherd Case Studies cover a number of Sea Shepherd campaigns and show video of some of our work to stop IUU fishing activity, working with law enforcement officials around the world. These can be used to enhance the learning experience from these lessons



Slide 35 Close





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Resources

Transshipment: a closer look

Food and Agriculture Organizations of the United Nations

Case Study Options

Case Study – Operation Albacore

Case Study – Operation Sola Stella

Case Study – Operation Gambian Coastal Defense

Case Study – Operation Guegou

Case Study – Operation Jodari

Case Study – Operation Vanguard



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Key Definitions

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.

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.

Artisanal fishing – food sourced in a traditional way.

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.

Discarded fishing gear – deliberate disposal of fishing gear at sea.

Driftnet - refers to the setting of nets along the top of the ocean. A driftnet is not anchored to the ocean floor, instead it hangs vertically in the water attached to ropes along the ocean surface with buoys and weights along the bottom.

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

EEZ – Economic Exclusion Zone.

FAD – Fish Aggregating Device. Aggregating means to form or group into a cluster.

Fishing gear – includes nets, lines, traps, pots, FAD's and other devices used by the fishing industry to catch or trap marine species.

Ghostnets – abandoned, lost and discarded nets that float in the ocean trapping marine wildlife

Gillnets - walls of netting set in a straight line that are very effective at trapping fish. Using floats on the surface the length of the lines can be adjusted to set the nets at varying depths. They are usually set several kilometres below the surface and can be many kilometres long.

Long lines - fishing lines that can run for up to 100 km with thousands of baited barbed hooks.

Lost fishing gear – accidental loss at sea of fishing gear.

Logbook – an official record of events, such as fishing activity and catch.

Overfishing - depletion of fish numbers by excessive fishing.

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

Slavery – the practice of keeping slaves, be ownership or forcing them to obey.

Transshipping – transfer of cargo from one ship to another ship or form of transport.



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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.