SAIL·VOILE CANADA

World Sailing

Topic 5

Oil & Fuel

World Sailing Sustainability Education Programme

Supported by

WORLD SAILING TRUST

Welcome to the World Sailing Sustainability Education Programme!

World Sailing started in 1907 in Paris and is the world governing body for the sport of sailing. The organisation promotes sailing internationally, manages the sailing at the Olympics and Paralympics, develops the racing rules of sailing, and supports sailors from all over the world.

World Sailing is formed of national authorities in 145 countries as well as 115 classes of boat. World Sailing wants its sailors to share their love of sailing, while working together to protect the waters of the world. Sailing is part of a global movement to create change and positive impact, and you can be a part of this through your actions, on and off the water.

To help sailors do this, there is a plan, called World Sailing's Sustainability Agenda 2030. This plan describes changes within sailing that will help achieve the United Nations Sustainable Development Goals and maximise the positive effect that sailors can have on the environment.

What are the Sustainable Development Goals?

The United Nations Sustainable Development Goals were published in 2015 to end extreme poverty, fight inequality and injustice and combat climate change by 2030. There are 17 goals that 193 countries have committed to. In Topic 5: Oil & Fuel you will work with the following goals:

You can access World Sailing's Sustainability Agenda 2030 at the following link: bit.ly/2sjGrKZ

World Sailing's Sustainability Agenda 2030 is aligned with the 5 focus areas of the IOC's Sustainability Strategy

Infrastructure and natural sites

Sourcing and resource management

Workforce

Mobility

Climate

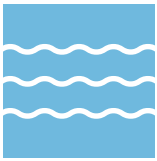
Topics

In Topic 5, you will be introduced to:

- **Oil and fuel as it links to the sport of sailing, e.g. on larger keel boats with engines, as well as RIBs, which most clubs use for safety and coaching**
- **Different types of spills that might happen, on and off the boat and around the club**
- **How spills impact the marine food chain and biodiversity**
- **Actions that prevent spills from happening, on and off the boat and around the club**
- **What to do if there is a spill on your boat or in the sailing club**

Topic 1	Race with World Sailing!
Topic 2	Resources & Climate Change
Topic 3	Navigating Wildlife & Biodiversity
Topic 4	Reducing Waste
Topic 5	Oil & Fuel
Topic 6	Boat Cleaning & Maintenance

Glossary



Surface runoff

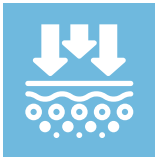
Water from rain or other sources that flows over the land. It can collect contaminants like oil, chemicals, and fertilizers before entering drains, rivers, lakes and the ocean.

Bilge

The lowest point inside the boat where water can collect. Collects rain or water from waves splashing on the deck, but can also collect oil and fuel.

Toxic

Poisonous or dangerous.



Absorb

To soak up a liquid or other substance.

Aquatic ecosystem

Animals and plants that live in water and are inter-dependent on each other.

Carbon footprint

The amount of carbon dioxide released into the air as a result of your activities (electricity use, travel, purchase of clothes etc.).

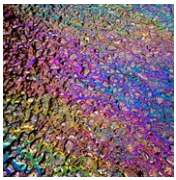
Cetacean

A marine mammal; whales, dolphins and porpoises are all cetaceans.

Let's get under way!

Spills

A spill is a form of pollution that can happen on the land or in the water. Spills cause many devastating effects to plants, animals and people. Unfortunately they happen a lot.

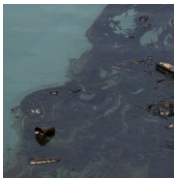


Diffuse pollution

Some activities on land can pollute surface runoff. This happens when water from rain or other sources flows over the land and collects contaminants like oil, chemicals and fertilisers before entering drains, rivers, lakes, and the ocean. This is known as 'diffuse pollution'. At a sailing club we have to be careful to make sure oil and fuel from boats or machinery do not pollute the water and contribute to diffuse pollution.

Bilge

The lowest part inside the hull of your boat, is called the bilge. This is where many things collect, including any spilled or leaked fuel, and oil if your boat has an engine. If you accidently discharge this into the water it is toxic to aquatic animals and plants.



Spills

Spills can happen through accidents, poor maintenance and old/broken parts, for example, in the engine. This means that oil and fuel enters the water directly from the boat and can endanger aquatic life and ecosystems.

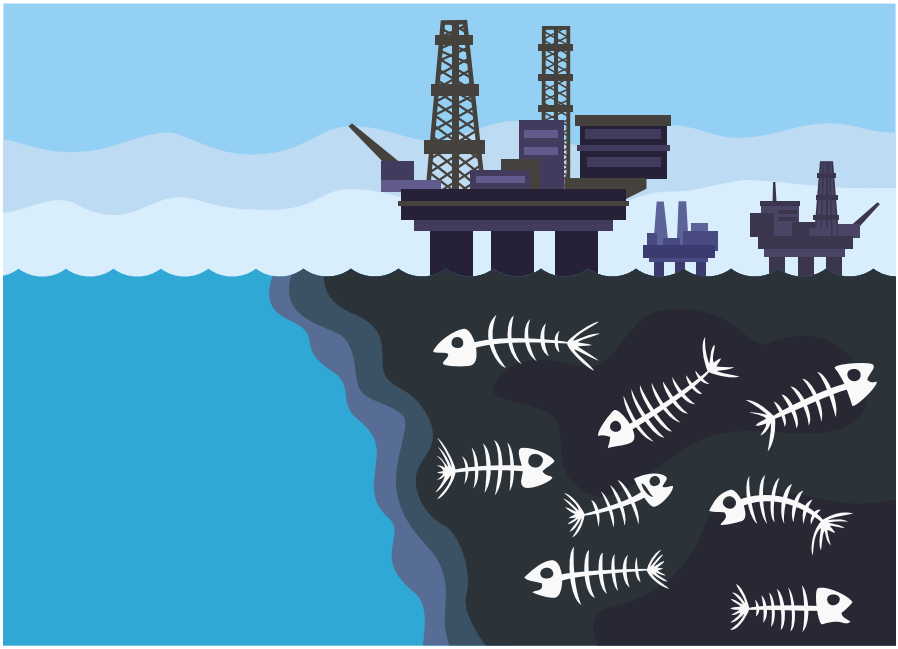
What is oil and fuel used for in an engine?

If you are using a boat that has a 2 or 4-stroke engine, you will be using oil and fuel to keep it running and maintained. Fuel combusts to create energy which powers the engine, while oil lubricates and cools the parts of the engine so they continue to work well.

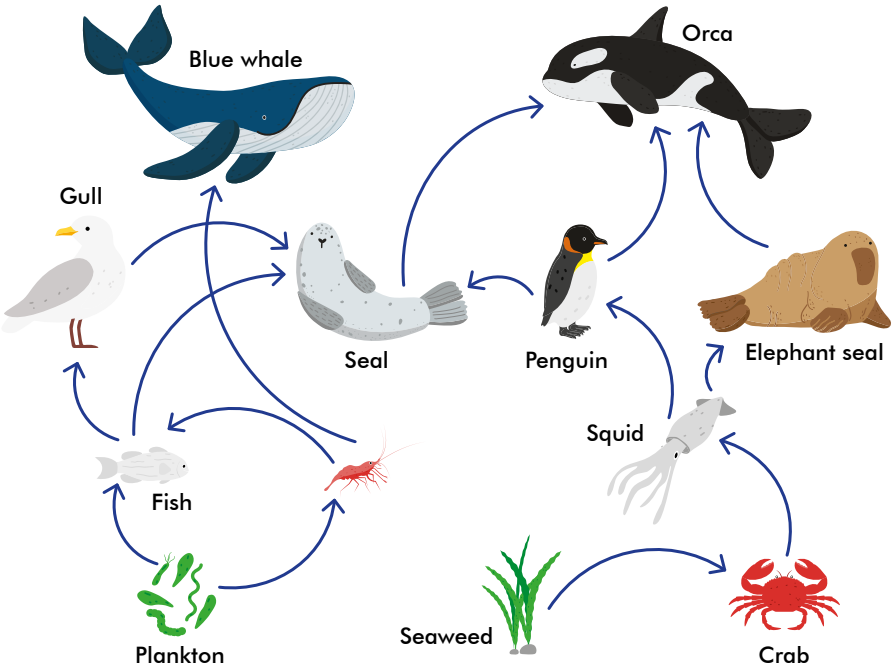
2- Stroke Engine	4- Stroke Engine	Electric Engine
These engines are more affordable and easier to maintain than a 4-stroke engine. They have fewer parts and are lighter, but have a shorter life-cycle.	These engines are slower than 2-stroke, but are considered more reliable and have a longer life-cycle. They are much quieter and use fuel more efficiently.	Electric engines are quite often a more environmentally-friendly option. The motor is silent and it is cheap to recharge the batteries. If electric engines can be recharged using electricity from renewable energy sources it lowers the carbon footprint of running the boat!

Oil and water don't mix!

Spilled oil and fuel sit on the surface of the water where birds, cetaceans, fish and other marine creatures may come into contact with the spill. If animals' fur or feathers become covered in oil they can't keep themselves warm and may die of hypothermia. If animals ingest (eat or drink) oil or fuel when they try to clean themselves it can be poisonous.



Spills coat everything they touch, including rocks, sand and plant life in the ocean or near the shore. They can wash into reefs, coastal marshes, mangrove forests and wetlands, where the spill may be absorbed by the plants and grasses. Not only does this damage or kill them, it also makes the habitat unliveable for the creatures whose home it is.



Plankton, including microscopic animals and marine algae, are the food of choice for lots of different marine creatures. Some animals eat phytoplankton as their primary food source, while other small creatures (like shrimp) eat them and then travel down into deeper waters where they become food for other creatures. If plankton are poisoned by oil and fuel spills, they will pass this poison along the food chain.

Challenge 2024

World Sailing launched a challenge to boat builders to develop coach boats with electric engines. Electric engines are cheaper to run and don't need any petrol to run, so no fuel spills to worry about! Charging the batteries with renewable electricity will reduce the carbon footprint hugely compared to a coach boat with a petrol engine. The challenge is supported by the Paris 2024 Olympic organisers who are also hoping to use electric support boats.

RS Electric Boats launched the first specially designed electric coach boat in January 2020. The batteries provide enough power to last a full day on the water, and it has a top speed of 20 knots and a range of 35 miles, making it suitable for coaching a wide variety of classes.

Preventing oil & fuel spills!

- Oil and fuel should only be handled by adults.
- Regularly check and maintain your boat's engine to avoid any leaks.
- When you are carrying out maintenance or refuelling, be very careful not to allow oil or fuel to enter the water.
- For refuelling older boats where fuel comes out of the air vents, look to buy a fuel whistle, which works like an old-fashioned kettle - it will whistle when the tank is full. Alternatively, special pads can be bought to go over the air vents when refuelling.
- When refuelling a RIB from a fuel berth, have an absorbent pad ready to absorb any excess fuel.
- When filling a small outboard from a jerry can, you can use a special nozzle, which prevents overfilling.
- Put an absorbent pad in your bilge to collect any oil. Take this ashore and dispose of it correctly. If there is too much oil for a pad to absorb, remove oily water at a bilge pump out station.
- Always use containers made for holding oil and fuel.
- Keep your oil and fuel supplies away from stormwater drains.
- Sailing clubs and marinas should install (and maintain!) oil interceptors in places where boats are refuelled and in sailing club carparks. An oil interceptor will separate any oil that is in rainwater so that it doesn't run off into rivers, lakes and the ocean.
- Never dump oil or fuel into the water or down the drain!

There’s been a spill!

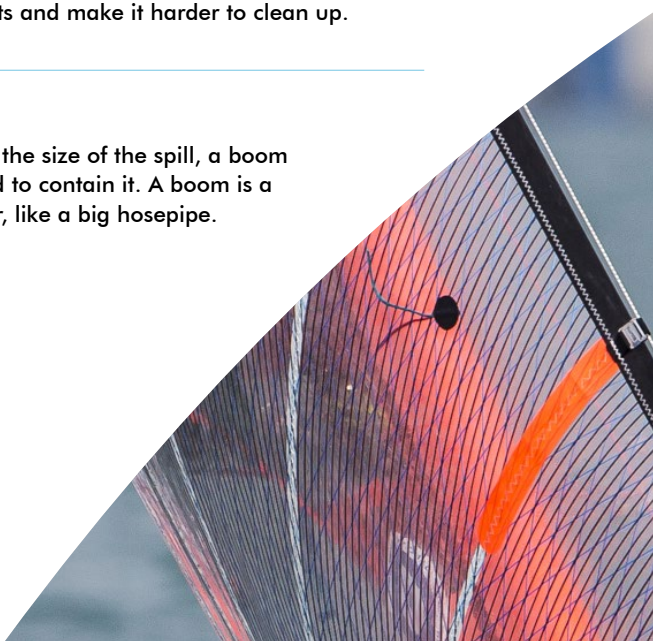
What do we do crew?

Step 1
Identify the cause of the spill. Stop it at the source immediately, if possible.

Step 2
Let the marina or club know, as they can help you control the spill.

Step 3
Never use detergent or dish soap to make the spill disappear. These will break the spill down into smaller droplets and make it harder to clean up.

Step 4
Depending on the size of the spill, a boom should be used to contain it. A boom is a floating barrier, like a big hosepipe.



Step 5
Absorbent spill mats should be used to absorb the oil and fuel.

Step 6
Dispose of the used absorbent material contaminated with oil or fuel as hazardous waste.

Bibliography

World Sailing's Sustainability Agenda 2030
bit.ly/2sjGrKZ

World Sailing 'Code of Environmental Friendly Behaviour'
www.sailing.org/32350.php

World Sailing 'Guidance for Training Centres
on Good Environmental Practice'
www.sailing.org/about/environment.php#.XYoDzyhKg2w

Impacts of oil on marine life
www.oceanservice.noaa.gov/facts/oilimpacts.html

Photos

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