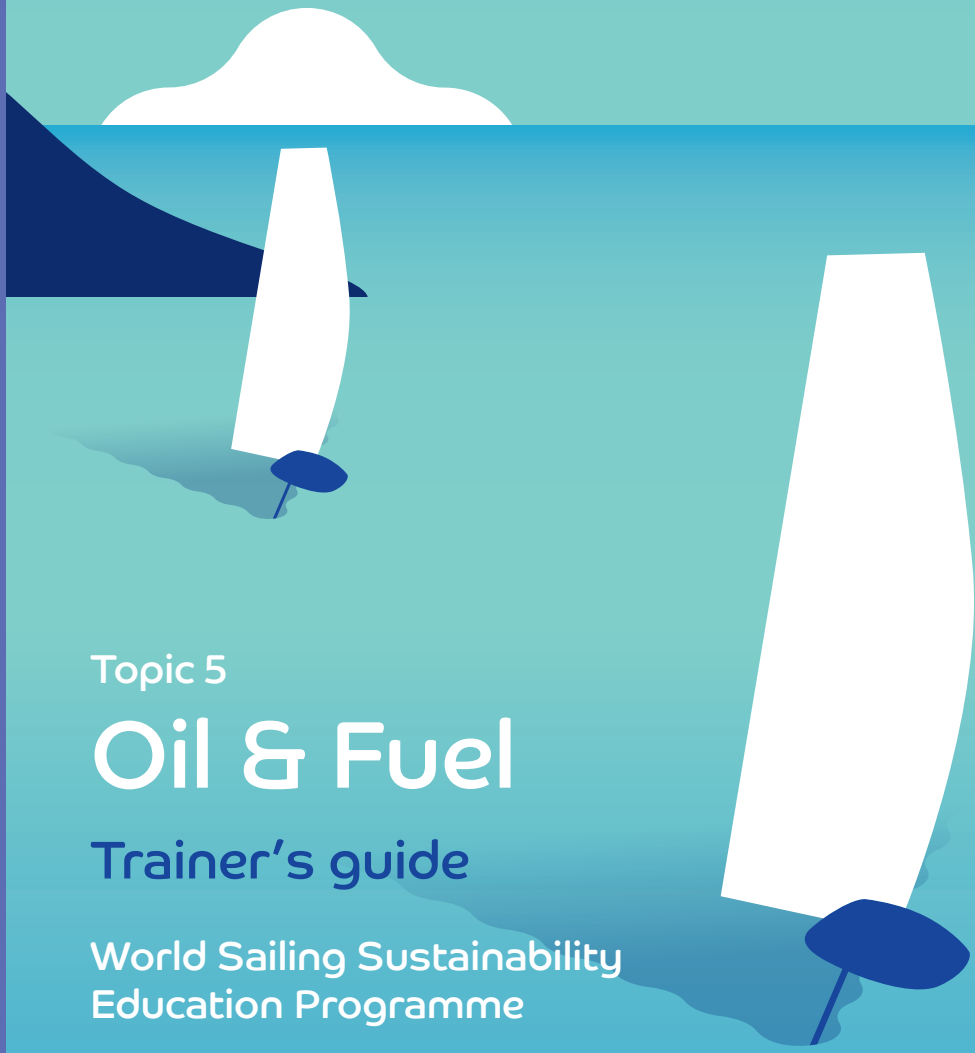
Trainer's guide

World Sailing



Topic 5

Oil & Fuel

Trainer's guide

World Sailing Sustainability Education Programme

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Welcome to the World Sailing Sustainability Education Programme!

World Sailing has a long term sustainability strategy called 'Sustainability Agenda 2030'. The aim is to ensure that sustainability is embedded into our sport.

This Education Programme aims to encourage participants to:

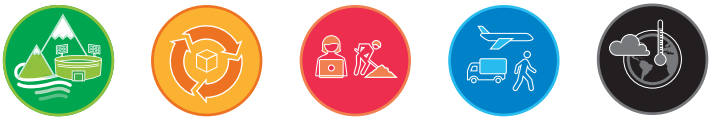
- **Implement sustainable actions on and off the water**
- **Increase awareness of sailors' impact on the ocean and marine life**
- **Increase awareness of climate change and how actions can reduce effects**
- **Understand sailing's place within the UN Sustainable Development Goals**

The United Nations Sustainable Development Goals are 17 global goals set by the United Nations General Assembly in 2015 for the year 2030. These goals include ending poverty, combatting climate change, fighting injustice and inequality for a better, more sustainable world. World Sailing is committed to contributing to the United Nations 2030 Agenda for Sustainable Development. World Sailing's Sustainability Agenda 2030 outlines the Sustainable Development Goals that the sport can contribute to, as well as the alignment with the 5 focus areas of the International Olympic Committee's Sustainability Strategy. Sailing is part of a global movement to create change and positive impact, and sailors themselves can be part of this through their actions, on and off the water.

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

Sustainable Development Goals

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

There are 6 topics in the Sustainability Education Programme.

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

There are links between the topics, but you can use them in any order with your students.

For each topic, there is a...

Age colour coding

6-8 years | 8-10 years | 10-12 years

This is the Trainer's Guide for **Topic 5 Oil & Fuel**. The objectives of this topic are:

- **Consider oil and fuel's links to the sport of sailing**
- **Identify types of spills that can happen while sailing or in the club**
- **Examine the impact of spills on the marine food chain and biodiversity**
- **Introduction to spill prevention**
- **Introduction to correct management of spills**

Worksheet answer key

Vocabulary review answer key

Key word	Meaning	Trainer prompts
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.	Someone washed their boat at the club with chemicals and the polluted water flowed into the drains.
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.	This is where the extra water collects, but can also have chemicals and waste material mixed in. It is so important to dispose of this water properly so it doesn't contaminate aquatic ecosystems.
Toxic	Poisonous or dangerous.	If a person, animal or plant eats or drinks this type of material, they could become very sick or die.
Cetacean	A marine mammal; whales, dolphins and porpoises are all cetaceans.	A label given to this group of marine mammals.

Key word	Meaning	Trainer prompts
Absorb	To soak up a liquid or other substance.	A bilge pad can soak up the harmful material from the water collected in the blige so that it does not end up in the lake, river or ocean.
Aquatic ecosystem	Animals and plants that live in water and are inter-dependent on each other.	The 2 main types are marine and freshwater. The animals and plants living there will be different from 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.).	You need transportation, electricity, food, clothing, and other goods. Your choices can make a difference to the size of your carbon footprint.

Consequences of spills

Before beginning the worksheet activity, talk about the consequences of spills with your crew to refresh their memories.

Step 1

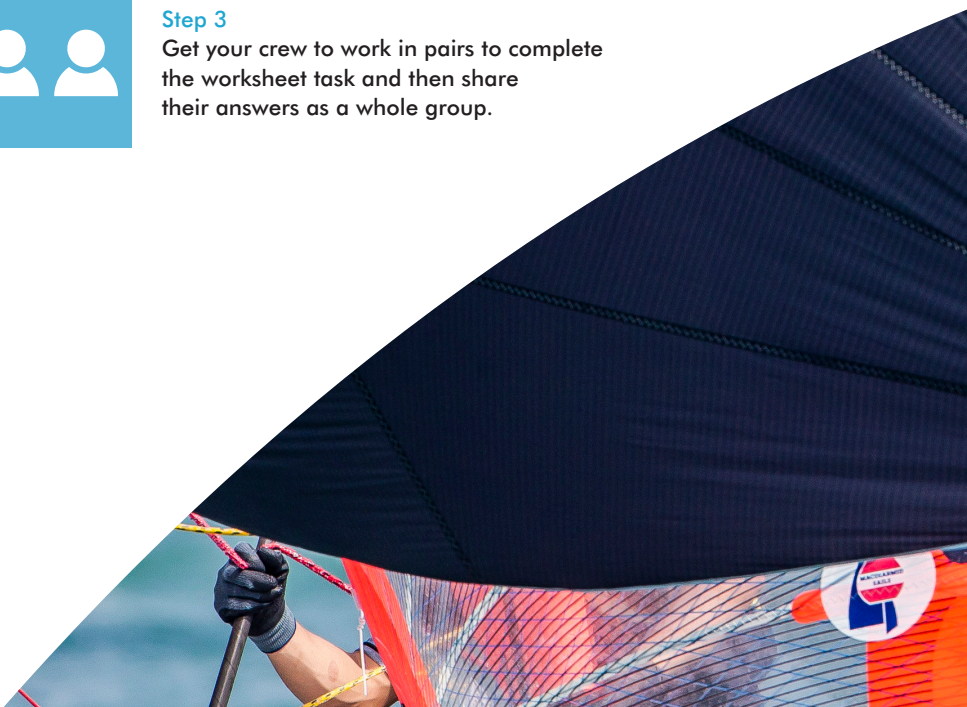
Remind them of the different types of spills they might encounter on a sailing boat or in the club (diffuse, small spills, bilge). Elicit some examples from them. Have they seen a spill before? Where was it? What happened?

Step 2

Ask your crew who or what can be affected by spills (e.g. humans, birds, fish, marine mammals, plants).

Step 3

Get your crew to work in pairs to complete the worksheet task and then share their answers as a whole group.



Suggested answers

Illustration 1:
Consume oil and become poisoned, choke on oil/fuel.

Illustration 2:
Feathers covered in oil, can't regulate their temperatures, die from cold, choke on oil/fuel.

Illustration 3:
Oil coats plant, lack of oxygen and sunlight and die, damage plant life, make habitats unliveable.

Illustration 4:
Plankton consume spill and send poison along the food chain, humans may consume fish that have been contaminated by spill.

Call to action

Let's remember to be top sustainable sailors at our club!

A call to action is so important for enabling your crew to spread their message of sustainability. By sharing this message to people (namely adults!) in the club, your crew will feel empowered and more confident in being top, sustainable sailors.

Before beginning the worksheet activity, get your crew to brainstorm the tips they remember about preventing oil and fuel spills.

They can then refer to **Topic 5 Booklet, 'Being a Top Sustainable Sailor: Preventing Oil & Fuel Spills!'** to select their tips.

Age: 6-8 years

The crew will each select 1 or 2 tips that they would like to draw about. Encourage them to select tips that are connected or relevant to each other (if they are choosing 2).

Follow up suggestions:

Present their drawings to the whole group and their reasons for choosing the tip(s). You could invite the sailing club manager or some other sailors to participate!

Photocopy their drawings onto larger paper to be displayed in the club.

Age: 8-12 years

The crew will each select 1 tip that they want to design a postcard about. Discuss the information in the design pointer box on the worksheet before they begin.

Follow up suggestions:

Present their drawings to the whole group and their reasons for choosing the tip(s). You could invite the sailing club manager or some other sailors to participate!

Get the crew to do a final copy on blank postcards and send them out to members of the sailing club.

Extension activities

Age: 6-12 years

Oil spill challenge

This hands-on experiment will help your crew see how difficult it can be to remove oil from water once it is spilled. It will sit on the surface of the water, so you can remind them that this is why fur, feathers and plants can get coated in oil if there has been a spill. It allows you to have a discussion on the objectives of Topic 5 and review why it is so important to try and prevent spills in the first place.

Material:

- Pan, bucket or container (1 per team)
- Water (to fill the pan/ container halfway)
- Vegetable oil (2 tablespoons per team)
- Spoons (1 per team)
- Paper towel (1 per team)
- Strainer (1 per team)

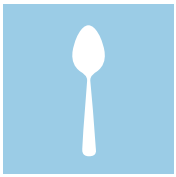
Step 1
Divide your crew into small teams of 3-4.

Step 2
Explain that they are going to see what it might be like to have to clean up an oil spill. Ask them if they think it will be easy? Why/why not?

Step 3
Give each team their materials (not the water).

Step 4
Ask a team member to fill up their bucket/ pan/container halfway with water.

Step 5
Ask them to pour the vegetable oil into the water. Notice what happens. Does the oil sink to the bottom or stay on the surface of the water? Remind them that oil and water don't mix!



Step 6
Encourage them to try and clean up the oil with their materials (spoon, paper towel, strainer).

Step 7
Did you remove all of the oil from the water? What helped clean the oil up best?

Step 8
Make sure the oil is disposed of correctly according to the waste disposal at your club.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