



A joint environment initiative

INLAND SUSTAINABLE BOATING SURVEY

Duke of Edinburgh's Award Expedition Aim



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Introduction

Aim of Expedition

To determine how environmentally sustainable boaters are along an inland expedition route.

Objective

Develop and undertake questionnaires to determine how sustainable individual inland boaters are.

Recreational Boating and the Environment

Recreational boating can have a variety of environmental impacts, but through raising awareness amongst the boating community on why it is important to protect their boating environment and providing them with ways to reduce their individual potential impacts, adverse changes to the environment can be prevented or reduced.

Table 1 highlights some of the causes and impacts that recreational boating can have on the environment.

By talking to individual boaters along a stretch of water and gaining information on what they are already doing to be more sustainable, participants can help to determine areas where boaters are less aware of the environmental impacts they can cause and how to reduce them. Once these are identified, solutions can be proposed for that particular stretch of water where the questionnaires were performed.



Table 1: The Potential Impacts of Recreational Boating on the Environment

This table highlights some of the causes and potential impacts boating can have on the environment and provides environmental best practice. More information can be found in [‘The Green Guide to Inland Boating’](#).

Causes	Environmental Impact	Recommended Best Practice
<p>Antifoul and other paints entering the water.</p>	<p>By their very nature, many antifouls are toxic to aquatic life. When applying and removing antifoul, paint can end up entering the water and build up over time resulting in a more severe impact.</p>	<p>When removing or applying antifoul and paint take the following precautions:</p> <ul style="list-style-type: none"> • Place a tarpaulin under your boat to capture any paint drops or flakes of paint. • Dispose of used brushes and paints into hazardous waste bins
<p>Oil and fuel spills from engine leaks, for example when refuelling or when transferring from one container to another.</p>	<p>When oil or fuel enters the water it floats on the surface creating a thin film. This film can harm wildlife when ingested, smother bird feathers which restricts flight, block fish gills limiting respiration or reduce the amount of sunlight entering the water which plants need to grow.</p>	<p>Boaters should do the following to reduce oil and fuel spills:</p> <ul style="list-style-type: none"> • Regularly maintain their fuel lines, connections and seals to prevent leaks. • Remove oil from bilge water by using an absorbent sock before pumping out. • When refuelling have a spill kit handy and use fuel spouts and funnels to catch drips and blowback.
<p>River bank or shoreline disturbance</p>	<p>When boats are launched and landed on beaches or banks sediment and habitats can be eroded or disturbed especially if done frequently in one place. The sediment can make the water murky and prevent sunlight from penetrating.</p>	<ul style="list-style-type: none"> • Keep a safe and reasonable distance from the bank. • Slow down when close to the banks if there are waves at the bow or stern of the boat. • When launching and going ashore use recommended landing places.



<p>The spread of Invasive Non-Native Species (INNS). INNS are animals and plants that have been introduced by human activity (on purpose or by accident) to parts of the world where they are not normally found. All water based users have the potential to spread INNS from one area to another.</p> <p>These species can hitch a ride on boats and equipment. When water users move from one area to another they can unknowingly spread these species.</p>	<p>INNS can cause both environmental and economic damage in the UK.</p> <p>Environmental Impacts:</p> <ul style="list-style-type: none"> • Can outcompete native species for space and nutrients • Can change the chemical and physical balance of native ecosystems. <p>Economic Impacts:</p> <ul style="list-style-type: none"> • Smother, block and damage boat equipment e.g. propellers and inlets/outlets • Block water treatment systems • Interfere with aquaculture 	<p>When moving a boat from one waterbody to another it is recommended that boaters follow the Government's 'Check Clean Dry' campaign to reduce the spread of INNS.</p> <ol style="list-style-type: none"> 1. Boaters need to check their boat and equipment for any visible animal or plant matter and remove it. 2. They need to use tapwater to thoroughly clean parts of the boat and equipment that have come into contact with the water. 3. Where possible dry equipment and clothing before coming into contact with water at the next destination.
<p>Discharge of Greywater</p> <p>Many boats may use detergents on-board for cleaning. These detergents contain chemicals such as bleach, chlorine and phosphate that can enter the water from greywater outlets from showers and sinks.</p>	<p>Most detergents contain phosphates which is a plant nutrient. When the natural level of phosphate is increased by human activity it can cause algal blooms to form. When the excess phosphate has been used by the algal it starts to die and the bacteria that decomposes it uses up oxygen in the water. This lack of oxygen can suffocate aquatic life.</p> <p>Other chemicals such as Chlorine and potassium hydroxide and solvents used to clean, disinfect and deodorise are toxic to aquatic life.</p>	<p>Grey water from sinks and showers may be discharged but guidance by the Environment Agency states that care should be taken to avoid the release of polluting materials such as strong cleaning agents and cooking oil.</p> <ul style="list-style-type: none"> • Use eco-friendly products for cleaning and maintaining boats. Avoid chlorine, bleach products and phosphates in particular. • Use non-toxic solutions where possible, water and elbow grease are great!
<p>Wildlife Disturbance</p>	<p>When boating there are many opportunities to observe wildlife which can be disturbed either when people get too close, make too much noise or cause disturbances in the water. Repetitive disturbance can result in animals not returning to an area or it can disrupt their breeding patterns.</p>	<ul style="list-style-type: none"> • Find out if the areas being visited are protected and why. • Keep noise and wash to a minimum. • Keep a constant speed and direction when you spot wildlife. Don't chase, harass or stay too long.



Methodology

Identify stop off sites along the expedition route where you can ask other boaters to participate in your questionnaire. Locations can be identified on the initial recce of the expedition route or using a map.

Equipment Needed

Questionnaire sheets

1 x notebook

1 x pencils (to record answers)

1 x Camera

2 x 'The Green Guide to Inland Boating'

Developing a Questionnaire

The Green Blue has developed three different questionnaires (find on following pages) for participants to use or to help leaders recommend questions for participants to develop their own questionnaire.

The example questionnaires can record only 8 different boaters' answers. If you wish to record more just print out another copy and change the numbers at the top of the answer columns.

If you know the expedition route is going to have more narrow boats than motor cruisers print and take more narrow boat questionnaires. An alternative could be to focus on just one type and it is recommended that you choose the type you are most likely to encounter.

Types of questionnaires:

- A) Narrow Boat Owners (page 6):** For expeditions on inland canal routes. It is aimed at people who own their own narrow boat. Consists of 18 questions.
- B) Hired Narrow Boat (page 8):** For expeditions on inland canal routes. It is aimed at people who have hired a narrow boat out from a company. Consists of 16 questions.
- C) Motor Boat Owners (page 10):** For inland and coastal expeditions. It is aimed at owners of motor boats. This consists of 17 questions.

Important: Participants must inform those they question that all answers to the questionnaire will be kept confidential and their names will not be required.

The Green Blue is here to explain any boating or environmental terminology, so please contact Kate Fortnam, the Environmental Outreach Officer when needed on kate.fortnam@thegreenblue.org.uk or 02380604227.



A) NARROW BOAT OWNER

A) NARROW BOAT OWNER			Boaters Answers							
Focus	No.	Question	Person 1	2	3	4	5	6	7	8
Level of Concern	1	How concerned are you about your impact on the surrounding environment when you're boating (on a scale of 1-4)? 1 = Not concerned 4 = Very concerned								
Oil and Fuel	2	Do you use a funnel or/and spout when refuelling the engine?								
	3	Does the boat have a bilge sock fitted to absorb any oil from the engine?								
	4	Do you have a Spill Kit on-board to clear up any oil or fuel spills that may occur?								
	5	Have you ever accidentally spilt oil or fuel near or on the water?								
Waste	6	Do you recycle your waste on-board?								
	7	Are there enough recycling facilities along this water way?								
	8	Where do you dispose of paint, oil and oily rags?								
Energy	9	Do you use energy saving devices on-board? E.g. LED lights (80% less energy used). If so what are these?								
	10	Do you use alternative energy sources to supply your boat with power? E.g. solar panels or a wind turbine.								



Water Use	11	If you wash your boat do you use a trigger nozzle on the hose to reduce water loss?								
	12	Does your shower have an aerating shower head to reduce water use?								
Grey Water Discharge	13	Where do you discharge your grey water (shower and sinks)? E.g. directly into the water								
	14	When cleaning on-board do you try to use eco-friendly cleaning products? E.g. products that do not contain phosphates, bleach and chlorine.								
The Spread of INNS	15	Do you wash and remove animal or plant matter from your boat and equipment to reduce the spread of Invasive Non-Native Species?								
Sewage discharge	16	Do you use pump out facilities and are there enough pump out facilities along this stretch of water?								
Painting	17	If painting your boat, what measures do you take to ensure that paint drops do not spill on the ground or water?								
Awareness of The Green Blue	18	Have you heard of the environmental initiative called The Green Blue which was set up by the Royal Yachting Association (RYA) and British Marine to help the UK recreational boating community become more sustainable?								



B) HIRED NARROW BOAT

B) HIRED NARROW BOAT			Boaters Answers							
Focus	No.	Question	Person 1	2	3	4	5	6	7	8
Level of Concern	1	How concerned are you about your impact on the surrounding environment when you're boating (on a scale of 1-4)? 1 = Not concerned 4 = Very concerned								
Oil and Fuel	2	If you refuel your engine do you use a funnel or spout to reduce fuel spills?								
	3	Does the boat have a bilge sock fitted to absorb any oil from the engine?								
	4	Is there a Spill Kit on-board to clear up any oil or fuel spills that may occur?								
	5	Have you ever accidentally spilt oil or fuel near or on the water?								
Waste	6	Do you recycle your waste on-board?								
	7	Are there enough recycling facilities along this water way?								
Energy	8	Are there energy saving devices on-board? E.g. LED lights (80% less energy used). If so what are these?								
	9	Does your boat have alternative energy sources to supply your boat with power? E.g. solar panels or a wind turbine.								



Water Use	10	Do you shower less often on the boat to reduce water use?								
	11	Do the shower have an aerating shower head to reduce water use?								
Grey Water Discharge	12	Do you know where your grey water (shower and sinks) drains to? E.g. directly into the water								
	13	When cleaning on-board do you use eco-friendly cleaning products? E.g. products that do not contain phosphates, bleach and chlorine that can harm wildlife.								
The Spread of INNS	14	Do you wash and remove animal or plant matter from the boat and equipment to reduce the spread of Invasive Non-Native Species along canal routes?								
Sewage Discharge	15	Do you use pump out facilities and are there enough pump out facilities along this stretch of water?								
Awareness of The Green Blue	16	Have you heard of the environmental initiative called The Green Blue which was set up by the Royal Yachting Association (RYA) and British Marine to help the UK recreational boating community become more sustainable?								



C) Motor Boat Owners

C) Motor Boat Owners			Boaters Answers							
Focus	No.	Question	Person 9	10	11	12	13	14	15	16
Type of craft	1	Do you own or rent your boat?								
Level of Concern	2	How concerned are you about your impact on the surrounding environment when you're boating (on a scale of 1-4)? 1 = Not concerned 4 = Very concerned								
Oil and Fuel	3	Do you use a funnel or/and spout when refuelling your engine or outboard?								
	4	Do you have a bilge sock fitted in your boat to absorb any oil from the engine?								
	5	Do you have a Spill Kit on-board to clear up any oil or fuel spills that may occur?								
Waste	6	Do you recycle your waste on-board?								
	7	Do you dispose of oil, fuel and paint in hazardous waste bins?								
Energy	8	Do you use energy saving devices on-board? E.g. LED lights (80% less energy used)								
	9	Do you use alternative energy sources to supply your boat with battery power? E.g. solar panels or a wind turbine.								



Water Use	10	If and when you wash your boat do you use a trigger nozzle on the hose to reduce water loss?								
Grey Water Discharge	11	Where do you discharge your grey water (shower and sinks)? E.g. directly into the water								
	12	When cleaning on-board do you try to use eco-friendly cleaning products? E.g. products that do not contain phosphates, bleach and chlorine.								
The Spread of INNS	13	Do you wash and remove animal or plant matter from your boat + equipment before leaving a mooring to reduce the spread of Invasive Non-Native Species around UK waterways?								
Sewage Discharge	14	Do you have a holding tank? If no, skip Q.17.								
	15	Do you use pump out facilities and are there enough pump out facilities along this stretch of water?								
Painting	16	If painting your boat, what measures do you take to ensure that paint drops do not spill on the ground or water?								
Awareness of The Green Blue	17	Have you heard of the environmental initiative called The Green Blue which was set up by the Royal Yachting Association (RYA) and British Marine to help the UK recreational boating community become more sustainable?								



How to Present Your Findings

What you could include:

- **What was the aim of the expedition?**
 - Explain why you chose the expedition aim - why is it important to find out how sustainable the boating community is?
- **How does boating impact the environment?**

Use [‘The Green Guide to Inland Boating’](#) for more information on impacts.
- **What did you find out from the questionnaire results?**
 - Which 3 environmental best practices are done by most of the people you questioned?
Why do you think this is?
 - Which 3 environmental best practices are least actioned by those you questioned?
Why do you think this is?
- **Provide examples of environmental best practice for boaters**

Based on your results what can be done to encourage more inland or coastal boaters to be more sustainable based on your expedition route?

 - What can the local waterways authority or local authority do?
 - What can boating clubs and marinas do?
 - What can boat hire companies do?
 - What can the individual boater do?

Use Table 1 in this document or **‘The Green Guide to Inland Boating’** and **‘The Green Guide to Coastal Boating’** for examples of best practice.

The Green Blue Contact Details

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**The Green Blue is a joint environment programme
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Marine.**

The Green Blue helps the UK recreational boating
sector to minimise its impact on the
environment.



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