

Biosecurity in Fisheries – how to reduce the risk posed by fish disease and invasive non-native species

Introduction

Diseases and invasive non-native species pose a huge threat to fisheries and aquatic systems. Prevention of introduction is clearly better (and cheaper) than cure and maintaining good biosecurity is essential in reducing the risk of disease and invasive species introduction.

These guidelines are designed to help you, the fishery owner, to identify biosecurity measures that might be applicable to your site. They describe biosecurity measures that can be implemented and include a template to help develop and operate a meaningful plan.

1. Appoint a Biosecurity Manager/Champion

Identify an individual with the responsibility to ensure biosecurity measures are implemented. The biosecurity manager is responsible for producing and maintaining a biosecurity plan. This involves steps 2 and 3 below – to identify potential risks and then to decide on appropriate systems and procedures to control or reduce these risks.

2. Identify the risks of introducing disease or INNS

(a) Movement of people on and off the fishery

Where anglers visit the site you should consider the following:

- Anglers visiting the water body with damp fishing gear or clothing that may unintentionally contain fish diseases or INNS from other sites.

Where the general public have access to, or near, the water body

- Be aware of the potential for dumping of unwanted plant material or pets such as goldfish.

(b) Movement of vehicles and other equipment such as trailers

- Particular attention should be given to work being undertaken in multiple sites in one day.
- Be aware of mud within the tread of vehicle wheels which may contain plant seeds or fragments.

- Be aware of plant fragments that may have become attached to the trailer and/or boat equipment.

(c) *Movements of fish*

Where fish or eggs have to be introduced from outside sources you should:

- Be aware of the provenance of the fish when buying from any supplier.
- Be aware of contaminants or hitch hikers on the fish and in the water brought in with the fish delivery.

(d) *Habitat management*

- Where plants are being introduced to the site be aware of mislabelled plants and contaminants within the plants and any associated soil.
- Be aware of INNS being spread into adjacent areas during the removal or disposal of vegetation as part of habitat management.

3. Identify risk limitation (enhanced biosecurity) measures

Once risks have been identified the fishery biosecurity manager/champion should decide on appropriate systems and procedures to control or reduce these risks. Such measures may include:

- Training staff to recognise clinical signs of disease and enabling them to identify high risk INNS.
- Providing advice on biosecurity to anglers and other visitors to the fishery.
- Introducing biosecurity protocols and facilities for site visitors.

Suggestions for other more specific measures are outlined in the Fishery Biosecurity Plan template – below.

FISHERY BIOSECURITY PLAN Template

This Fishery Biosecurity Plan template has been produced to outline measures that could be implemented to reduce the risk of invasive non-native species being introduced into, or spread from, your fishery. It should be noted that the template outlines a variety of measures to account for different fisheries, so may include measures that do not apply to your site. As a result, you do not have to adopt all of the measures listed under each section.

Check, Clean Dry materials such as leaflets, posters are available to download [here](#).

If you would like free *Check, Clean, Dry* signs then please contact the Angling Trust [here](#).

Risk of introduction of disease/INNS	Risk limiting measures that are available	Measure(s) implemented (✓)
Access to Site	<ol style="list-style-type: none"> 1. Place <i>Check, Clean, Dry</i> (CCD) signs at key entry points 	
Anglers arriving on site	<ol style="list-style-type: none"> 1. Place CCD messaging along the access point to make anglers and other public users aware of the risk of INNS. Suitable locations could include the car park, public footpath etc. 2. Provide wash down facilities so anglers can wash fishing gear and boots prior to fishing 3. Provide anglers with nets to use on site. These nets remain at the fishery 4. Encourage members to undertake the biosecurity e-learning available here 	
Angling competitions/ events	<ol style="list-style-type: none"> 1. Provide CCD materials to anglers before the event 2. Restrict site access to one entry point to ensure participants walk past biosecurity information points and the wash down station if there is one available 3. Provide keep and landing nets to the competitors during the event 4. During registration ask competing anglers to clean nets and boots at the wash down facilities or dip net 5. Where a wash down facility is available, place signage at facility to tell competitors what equipment to wash, and areas for close inspection 6. Sanctions could be imposed by the organiser to encourage competitors to uptake biosecurity measures before, or upon arrival at, the event. 	
Vehicle movements onto site	<ol style="list-style-type: none"> 1. Produce a biosecurity protocol for vehicles visiting the site 2. Ensure vehicles have been checked, cleaned and dried before use 	

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	<ol style="list-style-type: none"> 3. Ensure wheels are clean before entering the site 4. Ensure trailers and pumps are free from mud and plant material before entering onto site. 5. Plan work to ensure it is undertaken starting upstream and working downwards. 6. If work is being undertaken in several sites in one day ensure you leave sites that are known to contain an invasive non-native species to the end of the day 	
Fish stock management	<p>Audit of fish</p> <ol style="list-style-type: none"> 1. Undertake an audit of the invasive fish present in your fishery <p>Fish stock introduced to the fishery</p> <ol style="list-style-type: none"> 1. Train staff to recognise clinical signs of disease and enable them to identify high risk INNS 2. Ensure nets have been cleaned and dried before being used to transfer fish 3. Minimise transfer of water into the lake 	
Habitat management	<p>Audit of plants</p> <ol style="list-style-type: none"> 1. Undertake an audit of the invasive plants present in your fishery <p>Planting</p> <ol style="list-style-type: none"> 1. Where possible use native British plant species. <p>Vegetation control</p> <ol style="list-style-type: none"> 1. If the fishery is connected to other sites, where possible, close the outflow, use a boom or put netting across to capture material whilst the work is being undertaken to minimise the risk of material leaving the site 2. Ensure boots have been cleaned and dried before arrival at the site 3. Where machinery is being used, ensure that the machinery has been cleaned including wheel treads, boat trailers prior to use 4. Leave the plant material on the bank to allow it to dry/ rot down completely. Ensure that the material is not near other nearby waters including ditches, streams or other lakes 	

Risk of spreading disease/INNS	Risk limiting measures	Measure(s) implemented
Anglers leaving the site	<ol style="list-style-type: none"> 1. Place CCD signs in car parks and/or exit points to remind anglers to undertake CCD before fishing elsewhere 2. Provide wash down facilities to enable anglers to clean fishing gear and boots after fishing at the site 	

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	<ol style="list-style-type: none"> Where wash down facilities are not available, encourage anglers to inspect equipment and boots and remove visible material before leaving the site 	
Angling competitions	<ol style="list-style-type: none"> Remind competitors after the event that they should undertake CCD before using their angling gear and boots elsewhere Place CCD signs at exit points to remind anglers to undertake the CCD before fishing elsewhere 	
Vehicle movements off site	<ol style="list-style-type: none"> Check vehicles for plant material and mud and remove before the vehicle leaves the site. Wash down trailers and vehicles before leaving the site 	
Fish movements off site	<ol style="list-style-type: none"> Comply with the guidance on fish movement: In England follow the EA guidance here In Scotland the Marine Scotland guidance here In Wales the NRW guidance here 	
Habitat management	<ol style="list-style-type: none"> CCD tools and personal protection gear before re-use 	