

Biosecurity for Fisheries

Protecting our fisheries from diseases and non-native species

Good biosecurity is one of the most important considerations for any fishery owner or manager. It is also vital that anglers 'check, clean and dry' their equipment after fishing to avoid the spread of diseases, parasites and invasive non-native species. It is everyone's responsibility to be mindful of these risks and to help protect our fisheries.

What is biosecurity?

Biosecurity is defined as the measures that can be taken to reduce the risk of diseases, parasites or invasive non-native species from entering a fishery or being transferred between waters. Although the principles of good biosecurity apply to a wide range of harmful organisms, the focus of this factsheet is on disease.

The introduction of disease and non-native species poses one of the greatest threats to a fishery. Every year fisheries across the country experience disease outbreaks following the introduction of harmful pathogens. These can have devastating impacts on our fisheries, with high economic losses and irreversible changes to the ecology of a water. These risks can be greatly reduced by some simple biosecurity measures.

Hidden dangers

Many disease causing organisms are extremely small and can easily enter a fishery unnoticed. Most parasites, bacteria, and particularly viruses are invisible to the naked eye and can be hidden within the tissues of otherwise healthy looking fish, and even on fishing equipment. Once established, these organisms can be very difficult to control and often impossible to remove, leading to poor growth, loss of condition, reduced fishery performance and even mortality. Preventing the introduction of these organisms is far easier than trying to control or cure a problem once it arises.



Understanding the risks

There are many fishery management practices that carry a risk to biosecurity. By far the greatest risk of introducing disease or unwanted species is through the act of stocking fish. Fishery performance can often be improved without needing to restock, but if absolutely necessary there are measures that can be taken to reduce the risk of disease transfer. Always know exactly where the fish are coming from, make sure they are covered by a

health check and be there at the time of introduction. If in doubt, don't stock and never move fish illegally or from an unknown source.

Check, clean, dry!

Diseases and invasive non-native species can also be spread rapidly with wet nets, muddy boots and fishing equipment. Anything that has come into contact with fish and contaminated water has the potential to transfer unwanted organisms. The golden rule of biosecurity is to always 'check, clean, dry' equipment before moving between sites. Pathogens and invasive non-native species can survive in damp conditions, but will die when thoroughly dried, particularly when exposed to sunlight. This is an important message for anyone entering a fishery, including fishery workers or contractors and is also essential advice for anglers after fishing.

Using disinfectants

If drying is not possible due to the weather, practical limitations or time constraints, disinfection can provide an effective means of biosecurity. Disinfectants can take many different forms, but some of the most effective are Virkon® or iodine-based solutions known as iodophors. These are widely available, easy to use and are quick to kill all types of diseases. Manufacturer's instructions should be followed carefully to ensure they are used correctly.

Disinfectants can be sprayed onto nets, boots, waders, mats and vehicle tyres etc., but may also be used in a net dip. When used correctly a well maintained net dip can be an effective way to protect a fishery. However, poorly maintained dips will be ineffective and can increase the risk of transferring unwanted organisms. Net dips should be covered to prevent dilution from rain and always maintain dose rates and contact times.



Awareness and good practice

Awareness is a key element of good biosecurity. Clear signs and guidance will help promote good practices so that everyone shares responsibility for maintaining healthy fisheries. Providing a designated cleaning area upon entry and leaving a fishery will also help instil good behaviours. Supplying nets and unhooking mats at a fishery can also reduce risk of disease transfer from equipment leaving a site. Investing in good biosecurity will provide a solid foundation for a healthy fishery and help avoid introduction of many disease problems.

For advice on biosecurity, or fish health and disease, please contact; **National Fisheries Services**, Environment Agency, Bromholme Lane, Brampton, Huntingdon, PE28 4NE.

Tel: 02084 745244 or 07825 111723 **Email:** fish.health@environment-agency.gov.uk