



INSTITUTE OF FISHERIES MANAGEMENT

STILLWATER COARSE FISHERIES CODES OF PRACTICE

Introduction.

Coarse fisheries in the UK are many and varied and in recent years there has been a tremendous increase in the number of stillwater coarse fisheries, many being specifically built for the purpose. In a natural situation the habitat and other environmental factors will determine the species and numbers of fish that exist in a Stillwater, but truly natural stillwater coarse fisheries are rare and it is a fact that most are man-made and have been stocked or managed at some stage.

Many stillwater coarse fisheries support greater fish stocks than would occur in a natural situation, resulting from both stocking and from supplementary feed in the form of bait. Often termed commercial or intensive coarse fisheries these waters can provide consistently good sport for anglers and increased income for fishery owners. However these fisheries are not natural. High stock densities and the bait needed to sustain them can degrade the water environment. This in itself can have consequences for the welfare of the fish but in addition these coarse fisheries may be subject to intensive fishing pressure. Because of these factors, intensive coarse fisheries require careful management.

Within its evidence to the Salmon and Freshwater Fisheries Review the Institute of Fisheries Management and the Moran Committee proposed that intensive coarse fisheries should be subject to codes of practice for their management and exploitation and that the Institute was the appropriate body to take the idea forward. In its report the Salmon and Freshwater Fisheries Review recommended that fisheries byelaws be complemented by Codes of Practice.

These IFM Codes of Practice set out the fisheries management standards that are required to protect the welfare of fish. Owners and managers of intensive stillwater coarse fisheries are advised to follow the guidance set out in these codes.

In addition to the codes the institute has published a technical booklet that explains the fisheries management principles behind them. Further information can be found in the advisory booklet ***The Management of Intensively Stocked Stillwater Coarse Fisheries*** published by the Institute of Fisheries Management. (to purchase this booklet visit the IFM website www.ifm.org.uk under Advisory Booklets) The booklet was drawn up following a highly successful seminar held in Nottingham in 2001

Codes of Practice.

These codes aim to provide clear guidance and best practice for stillwater coarse fishery managers to protect the environment and guard the welfare of coarse fish in stillwaters. They have been drawn up in discussion with the Commercial Coarse Fisheries Association and have been endorsed by the organisations listed below :-

The Moran Committee, which comprises of:-

- Anglers Conservation Association (A.C.A.)
- Anglers Trade Association (A.T.A.)
- Association of Stillwater Game Fishery Managers (A.S.G.F.M.)

Atlantic Salmon Trust (A.S.T.)
Fisheries and Angling Conservation Trust (FACT)
National Association of Fisheries and Angling Consultatives (NAFAC)
National Federation of Anglers (NFA)
National Federation of Sea Anglers (NFSA)
Professional Coarse Fisheries Association (P.C.F.A.)
Salmon and Trout Association (STA)
Specialist Anglers Alliance (SAA)
Welsh Federation of Coarse Anglers Ltd.
Welsh Salmon and Trout Association
Brooksby Melton College

The Environment Agency fully endorses the codes

HABITAT

Varied depths make for more interesting fisheries and better habitats for fish and other wildlife. Islands and peninsulas add variety, provide more shallows for weed growth and increase bank length for the creation of interesting swims. Artificial floating islands can provide cover for fish and nesting sites for water birds. For the health and welfare of the fish, some provision should be made to allow spawning, regardless of the need for natural recruitment.

Deeper water is necessary to provide sanctuary for fish in hot or cold weather. If possible, create a deep even-bedded area that will allow easy netting of excess fish stocks when water levels are lowered for management work.

Too many tree leaves or decaying reeds/weeds or inputs from inlet streams can soon silt up a small lake. This can result in shallow water and encourage algal blooms and low dissolved oxygen conditions in summer or when covered with ice. Consider de-silting where these problems occur but take professional advice before embarking on an expensive project. When designing new stillwaters make sure that silt inputs are minimised.

Provide

- Fixed pegs at a minimum of 10m intervals, with paths set back from the water's edge to allow marginal plants to grow and provide some cover.
- Trees and bushes for overhanging cover
- Some water area of 2 metres deep or more.
- Silt traps and buffer zones to minimise silt and nutrient inputs.
- Spawning substrate - submerged and emergent plants and tree roots provide good spawning substrate for most stillwater species. If natural substrate is not available, artificial spawning substrate, such as bundles of twigs, should be placed in shallow margins at spawning time.
- Shallow (30-60cm) unfished areas with emergent/submergent plants where the water will warm up quickly and shelter will be provided.

NUTRITION

Some natural food will be present in all stillwaters, but it is important to understand that in intensively stocked waters, the natural food will be quickly depleted. Supplementary feeding, primarily anglers' bait and loosefeed, will therefore be needed to sustain a high level of fish stock. In intensively stocked waters, anglers' bait may provide the main food source.

Do

- Provide marginal or submerged aquatic plants to provide a natural larder.
- Encourage the use of a wide range of baits to provide a varied diet.

- Guard against overfeeding with loose feed/ground bait; introduce restrictions on quantity if necessary.
- Ensure that fish receive supplementary feed when the water temperature is above 10 deg. C, and other sources of food, including anglers' bait, is in short supply.

SPECIES SUITABILITY

In England and Wales legislation enforced by the Environment Agency regulates the species of fish that may be stocked into stillwaters, based on the potential risks to fisheries and the wider environment. In addition fishery managers should also consider the welfare and ethical issues and should adhere to the following principles:

Open (on-line) waters

- Native stillwater species only
- No ornamentals or exotics (e.g golden tench, catfish, goldfish)
- Riverine species (chub, barbel, grayling etc) – only if present in receiving catchment.

Enclosed Waters

- Native species
- Ornamentals acceptable.
- Riverine species (chub, barbel, grayling etc)

When stocking sensitive or riverine species into stillwaters, fishery owners should adopt the following approach:

- Stock a small number as a trial
- Monitor capture rates, growth and condition over a period of at least one year.
- Keep records
- Only continue to stock if it can be demonstrated that the fish have grown and maintained condition.
- Do not stock pike into waters of less than 1 acre or waters that are highly turbid.

MAINTENANCE OF WATER QUALITY

Water quality is of paramount importance to the welfare of fish stocks, and intensive stocking can have serious adverse effects on water quality. Therefore water quality parameters, especially dissolved oxygen (DO) and ammonia (NH₃) should be measured on a regular basis, and action taken if necessary. The lowest oxygen levels normally occur at dawn, and the highest at dusk.

Do

- Obtain a suitable oxygen meter and measure DO at dawn, dusk and 4 hours after dusk; also by day when hot and/or cloudy.
- Measure NH₃ – kits are best but this also requires temperature and pH measurements followed by simple calculations to obtain NH₃ figure.
- Watch out for algal blooms and oxygen sags
- Aim to keep DO above ?% (at dawn) and NH₃ below 0.1mg/l (*Ash to provide figures*)
- Provide aeration if:
 - Feed rate exceeds 35lb/acre/day
 - Stock density exceeds ? (*Ash to provide figure*)
 - Algal blooms present

STOCKING DENSITIES

No stock manipulation should be undertaken unless the true status of the resident stock is known. Only fish of known source and acceptable health status should be considered for introduction. Anglers' bait is an essential part of the diet of fish in intensive fisheries. Therefore the number of anglers using a fishery and the frequency with which they fish is important in determining the biomass of fish that will survive.

Management of water quality will be necessary in intensive fisheries to maintain fish stocks and avoid mortalities. Where biomass is in the range 1000-2000kg ha⁻¹, equipment to maintain water quality is desirable; biomass should not exceed 2000kg ha⁻¹

The following guidelines are suggested:

- ◆ Less than 10 anglers/ha/week <800kg ha⁻¹ (not an intensive fishery)
- ◆ 10-25 anglers/ha/week 800-1000kg ha⁻¹
- ◆ 25-50 anglers/ha/week 1000-2000kg ha⁻¹
- ◆ More than 50 anglers/ha/week 2000kg ha⁻¹

FISH HEALTH

Healthy fish are essential to the success of a fishery. While high stock densities can provide reliable sport, all fish introductions carry risks to the health of the existing stocks, and therefore stocking should only be carried out where absolutely necessary, and only after careful consideration and planning.

Do

- Ensure the conditions provided in the fishery are suitable for the resident species to not only survive, but thrive, grow and develop.
- Minimise the introduction of new disease agents. By far the greatest risk of disease introduction exists from direct fish introductions.
- Ensure new introductions are health-checked prior to stocking.
- Maintain optimal conditions within the fishery.

PREDATION

Predators are a part of all natural ecosystems and all fisheries will be subject to predation. Coarse fishery managers should recognise that artificially high stock densities will inevitably be attractive to predators and that steps should be taken to minimise the impacts.

Do

- Reduce risks to stocks by ensuring that fish have cover in which to hide from predators. If necessary provide artificial refuges (deadwood, pipework, reefs).
- Seek professional advice if excessive predation occurs.

COMPETITIONS

Large numbers of fish may be caught during competitions, and it will be necessary for these to be retained for weighing. Frequent competitions will place significant angling pressure on the fish stocks.

Do insist on

- Separate keepnets for carp and silver fish

The **Institute of Fisheries Management (IFM)** is an international organisation of people sharing a common interest in the sustainable and modern management of recreational and commercial fisheries.

- Careful playing and handling of fish
- Good quality weighing nets – never allow mesh baskets to be used. Preferably provide your own.
- Landing & keep nets meeting agreed trade standards
- Landing nets to be used for all fish of 0.5lb or more in weight.

EXPLOITATION RATES

You should know and understand the exploitation rate for your fishery; this will influence how the fishery should be managed.

Do

- Calculate exploitation rates – average frequency of capture
- Use stock density, angler visits and average catches to do this.

Acknowledgements

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A printed version of the codes and technical booklet has been funded by the Environment Agency, working in conjunction with the Fish Welfare Group and distributed by SAA Carp Unity Group.

The Fish Welfare Group hopes that this publication will improve further the performance of the nation's Stillwater fisheries and encourage fishery managers to manage the welfare of their fish stocks in a humane manner.

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