

Nursery Areas and Fisheries Management

Biological definition – a habitat having abundant prey species suitable for small fish and which provides protection from predators.

Management definition – an area in which juvenile fish predominate and may be particularly vulnerable to fishing.

Examples

Sole and bass in the Tamar Estuary and plaice and whiting in Lyme Bay.

Where are they?

Nursery areas can be identified by fishing surveys using small-meshed seines or trawls. They are also associated with high levels of discards in commercial catches. Most species of flatfish use shallow inshore waters as nurseries, whereas young roundfish such as haddock and hake are often most abundant in deeper water away from the coast.

First Year Bass



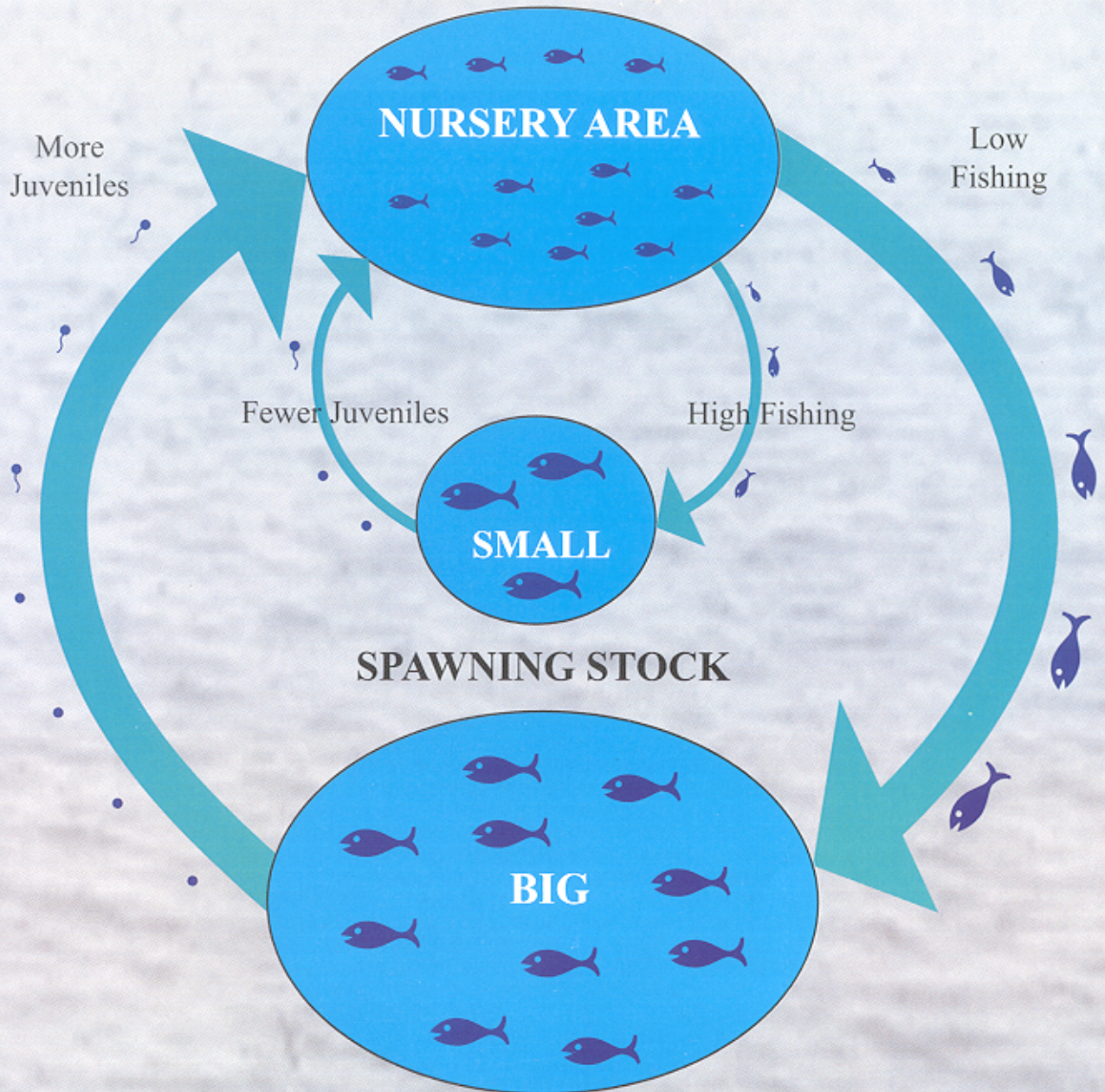
Management implications

If fishing in nursery areas is allowed unchecked, too many small fish will be killed and the average size of fish in catches is small. Many of those caught will have to be discarded because of landing size regulations or market requirements, and the overall yield to the fishery will be low. Because few fish will survive to grow larger and become adults, the reproductive capacity of the stock will also decline.

What to do about it

By increasing protection for small fish (see options overleaf), the average size of fish in catches increases, there is a better and more sustainable yield, and more fish survive to spawn, thus ensuring more juveniles in the future.

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Management options to protect small fish (in decreasing order of effectiveness)

Area closures, during the seasons when juveniles are most likely to be caught.

Gear restrictions, are used to prohibit the use of fishing methods which tend to catch juveniles of the more important species.

Mesh size controls, which must be large enough to avoid capture of juveniles (and avoid discarding), but which often have to take account of the need to retain valuable species of which even the adults are relatively small (e.g. sole).

Minimum Landing Size, which is only effective if undersized fish can be returned alive to the sea with a high chance of survival (good for shellfish).