



Balancing the Conservation of Seals and Salmon in Scotland



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Introduction

Atlantic salmon and both grey and common seals are protected under national and European conservation legislation. However, some seals are known to eat salmon and sea trout, and there is considerable debate about the effects of this predation on fish stocks and fisheries. Concerns about the contribution of seals to declines in salmon populations have led to calls for seal predation to be controlled. Balancing the Scottish Government's obligations to conserve salmon and seals while maintaining fisheries is a considerable challenge, particularly at a time when both spring-running salmon and common seals on the East Coast of Scotland are declining.

Scientific background

Some seals spend time feeding on fish within rivers, and it is these animals that are most often observed feeding directly on salmon. There is considerable uncertainty as to how frequently seals consume adult salmon at sea.

The best available information, obtained from studies of the diet of seals and by following individual salmon, shows that predation does occur at low levels in estuaries. Further work is required to understand more fully whether or not seal predation has a significant effect on the different life stages of salmon and sea trout (smolts, finnock, adults and kelts). However, it is clear that not all seals consume salmonids when in estuaries, and most forage at sea where they consume other marine species.

Fishery catches and fish counts from monitored rivers are used to provide information on the stocks of salmon and sea trout in Scotland. At present, it appears that many stocks are at historically low levels, particularly spring running salmon and sea trout on the west coast. Knowledge of seal numbers is based on counts of seals hauled out onto land. These counts indicate that grey seal numbers are increasing, or stable throughout Scotland. In contrast, counts of common seals have declined substantially along the east coast of Scotland, and in Shetland and Orkney over recent years.



Management options

In the past, seal management has focussed on populations of seals around the coastline, particularly in the estuaries of salmon rivers. A variety of control measures has been used, primarily lethal shooting and acoustic scaring devices. In view of the decline in numbers of common seals and the need to conserve their stocks, it is becoming increasingly important to control only those seals which are causing actual damage to salmonid stocks.

Indiscriminate control of seals in estuaries is unlikely to have any significant impact on returning adult salmon or subsequent stocks, as only a small fraction of the seals in the estuaries are actively feeding on salmon. Furthermore, it is more effective to use non-lethal techniques, such as acoustic scarers, in enclosed areas such as rivers. For these reasons, schemes such as the Moray Firth Seal Management Plan concentrate seal management in rivers and river mouths, where there is the highest chance of removing those seals consuming salmon.

Impact of seal control

The possible increase to salmon populations and fisheries due to the removal of seals from rivers depends on the numbers of fish returning to the river (and the number of seals). Removing a single seal from a large river on the

east coast of Scotland during summer is likely to have a negligible effect on either the stock or fishery catch. In contrast, removing a seal from a small west coast river, or from a larger river during the return of a small spring stock, is likely to bring more significant benefits to salmonid stocks

Ideally, seal management should concentrate on seals preying on salmonids in rivers and at times of the year where fish stocks are low and in the greatest need of protection. Further, control of predation should be part of a larger management scheme aimed at helping these fragile salmonid stocks, and should include other conservation measures, such as catch and release.

Careful monitoring of the number of seals removed from the population is required to ensure the seals' favourable conservation status. This is particularly important in those areas where seal populations are in decline. Attempts should be made to assess the results of any management action, in terms of both a reduction in seals killed, and an increase in salmonid populations and catches.

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FW33|06|08