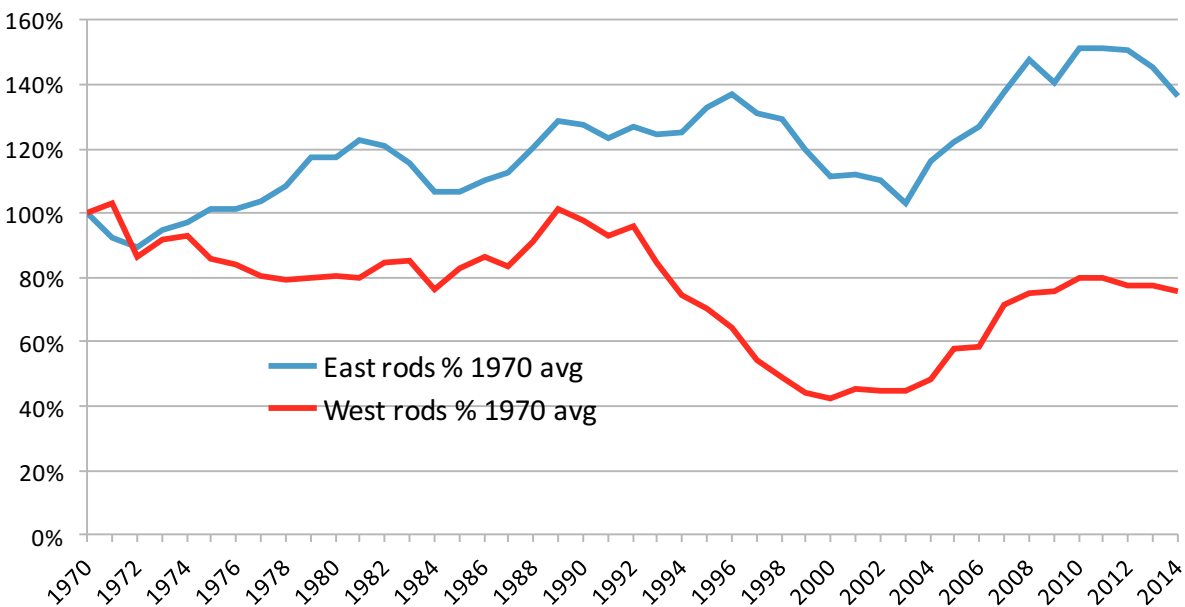
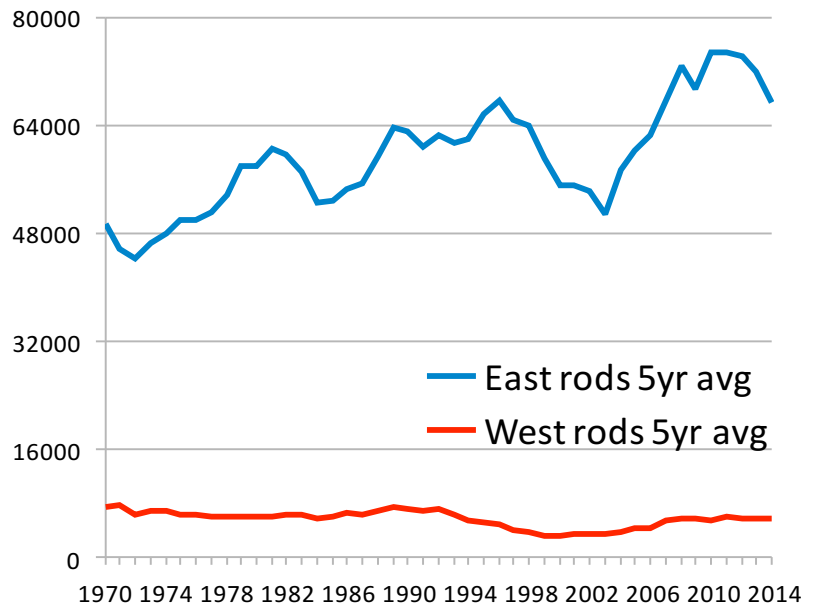


Comparison of Scottish East and West coast salmon fisheries – an analysis by

Since 1970 there have been three significant factors affecting the rod fishery for salmon in Scotland; the variation in sea survival in the North Atlantic, the decline in Scottish coastal netting and the advent of salmon aquaculture on the West coast.

Figure 1 (opposite) shows rod catch on the East coast (from Tweed to Cape Wrath) and West coast (from the Mull of Kintyre to Cape Wrath including the Hebrides). The numbers are 5 year averages from 1970 to 2014. The base date of 1970 was chosen by the aquaculture industry to compare catches before and after the industry started. During this period the coastal netting industry declined by 95% on the East



and 99% on the West. This reduction in netting of 350,000 fish would have led to increased rod catches if other factors were not involved.

In order to make comparisons clearer we have presented figures for the two coasts as a percentage of their 1970 level in Figure 2 (above).

It is clear in Figure 2 that, although the two lines diverge, the major peaks and troughs follow a similar pattern. This indicates that the two populations are affected by the same factors in the North Atlantic.

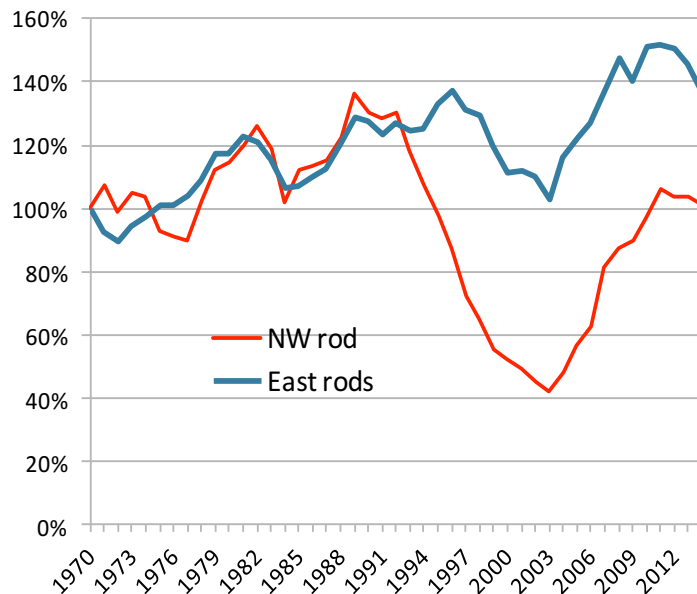
The East coast rod fishery shows an underlying increase. In 2014 the average was approximately 40% higher than in 1970. The decline in netting could account for much of this improvement.

The West coast rod catch declined during the same period to 76% of its 1970 value despite a similar reduction in coastal netting.

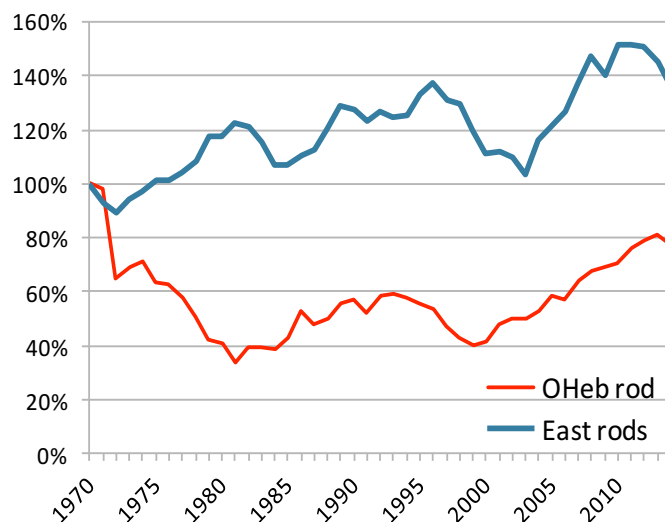
The only significant difference between the two coasts is the presence of aquaculture on the West.

The two curves diverged until around the year 2000 after which the gap has remained roughly constant. If the West coast catches had followed the pattern of the East, rod catches would be 80% higher in 2014.

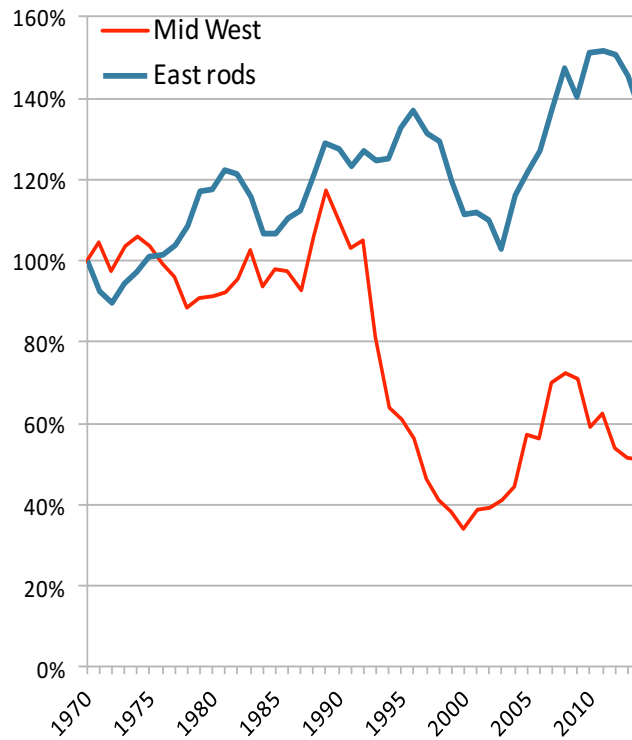
We can look in more detail at the West coast figures by splitting the coast into three regions and by showing the comparison with the Solway and Clyde coasts. The regions chosen are Ardnamurchan Point to Cape Wrath (NW), Outer Hebrides (OH) and Mull of Kintyre to Ardnamurchan Point (MW).



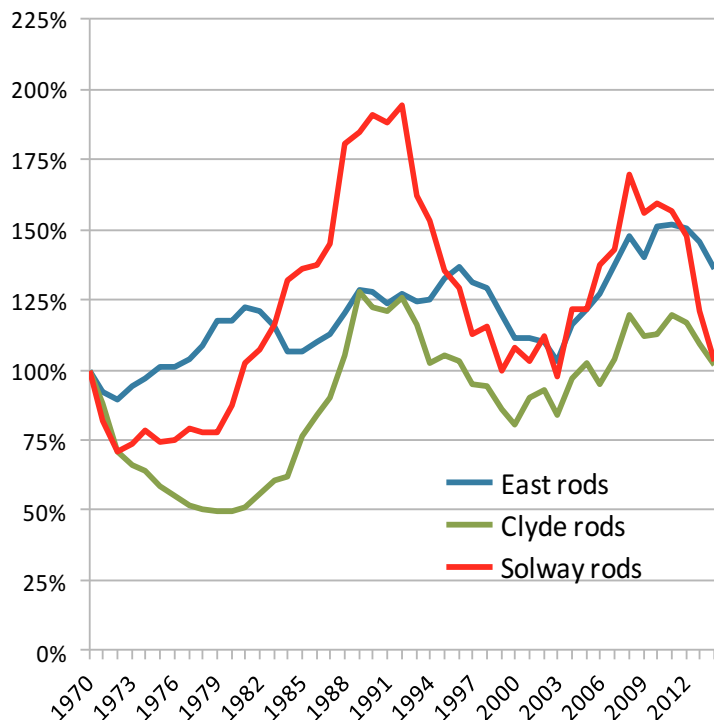
In the North West the rod catch tracked the East coast until 1990 after which it fell dramatically. From 2003 it follows the East coast again. The North West has recovered to its 1970 level but if it had tracked the East, rod catches would be 35% higher.



In the Outer Hebrides the rod catch fell quickly after 1970 until around 1980 after which it remained far below but tracked the East. If it had followed the East throughout, rod catches would be 75% higher.



In the Mid West, south of Ardnamurchan, catches were steady until the early 90s. After this there was a dramatic collapse. Although a recovery began around 2000 along with other regions this halted in 2008 and a decline started that is not mirrored elsewhere. It ends around 60% of its 1970 level. If it had followed the East throughout, rod catches would be almost three times higher than today.



Looking further south, the Solway rod catch declined after 1970 but recovered and was ahead of the East coast between the mid 80s to mid 90s. After that it followed the East coast but has had a more rapid decline in the last two years. There is no pattern to indicate that it is affected by factors causing the decline north of Mull of Kintyre.

The Clyde coast initially declined below its neighbours immediately to the north but it recovered by the late 80s to match the East coast. From then onwards it appears to decline increasingly compared with the East. This pattern is more similar but not as severe as the Mid West, its immediate neighbour to the north west. This indicates that it is suffering from some of the same problems.

Conclusions:

The East coast rod fishery has improved significantly since 1970. Part of this improvement is probably due to the decline in the net fishery.

The West coast has declined significantly in actual rod catches and particularly when compared with the East coast. The widening of the gap between the two coasts peaked around 2000 and appeared to be roughly constant since then. The decline is significantly worse further south down the coast.

The obvious conclusion is that the decline on the West coast is due to aquaculture. It appears that the overall decline has been halted, possibly due to improved operation of the farms in some areas, but there are no signs of an overall recovery. This is probably due to the increasing numbers of farms (and increased tonnages) which would explain the greater problem further south.

The improvements in wild salmon catches further north on the coast are likely to reflect the fact that wild salmon smolts from rivers in this area (Ardnamurchan to Cape Wrath), once they have run the gauntlet past the local farms, on some of which parasite control may have improved, are then clear of the aquaculture zone; they are exposed for a comparatively short time. In contrast wild salmon smolts migrating from rivers further south (Mull of Kintyre to Ardnamurchan Point) are exposed to fish-farm produced sea lice for much longer as they migrate up the coast.

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