

Kolarctic CBC – Project KO4178; Conserving our Atlantic salmon as a sustainable resource for people in the North; fisheries and conservation in the context of growing threats and a changing environment.

Report VII. Long-term salmon catch variations at sea between and within the municipalities in Finnmark; 57 year's variation in reported catches, since 1993 size group proportions in bag net and bend net fisheries

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<p>Report VII. Long-term salmon catch variations at sea between and within the municipalities in Finnmark; 57 year's variation in reported catches, since 1993 size group proportions in bag net and bend net fisheries</p> <p>Niemelä ^{1,2}, E., Hassinen^{1,2}, E., Høstmark, M.S., Kalske³, T.H</p> <p><i>¹⁾ Biodiversity Unit, University of Turku; Turku, Finland</i> <i>²⁾ Firm Olli van der Meer; Oulu; Finland</i> <i>³⁾ County Governor of Troms and Finnmark; Vadsø, Norway</i></p>	
<p>Abstract</p> <p>Salmon catch data from sea fishing since the year 1966 indicate remarkable annual variations for all the municipalities in Finnmark. One important reason to this variation is the method used to collect annual catch data. Nowadays, all salmon fishermen must report their daily catches divided in numbers and weights for small, medium and large salmon. The fishing method used, bag net or bend net, must also be informed about. This improvement in catch reporting took place in the year 1993. Before 1993, fishermen had to inform catches in two size groups namely below 4 and above 4 kilos.</p> <p>Salmon catches were exceptionally large in the period from the last years of the 1970's to the middle of 1980's in the municipalities Loppa, Hasvik, Hammerfest, Kvalsund, Måsøy and Nordkapp. A reason for that was the high salmon catches caught with driftnet fishing in the outer coast, west from Nordkapp. After driftnet fishery was prohibited in 1988 total catches declined.</p> <p>Salmon catches have been clearly better in some municipality areas than in other areas. Good catches in some areas indicate high numbers of fishers combined with good fishing sites in the outer coastal areas. In general, salmon catches have in the long-term declined in most of the municipalities.</p>	
<p>Key words:</p> <p>Long-term catch data, sea salmon fishery, Atlantic salmon, <i>Salmo salar</i>, Finnmark, bag bet, bend, net</p>	
<p>Front page photo:</p> <p>Eero Niemelä</p>	

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1. Salmon catches at sea in the years 1966-2021

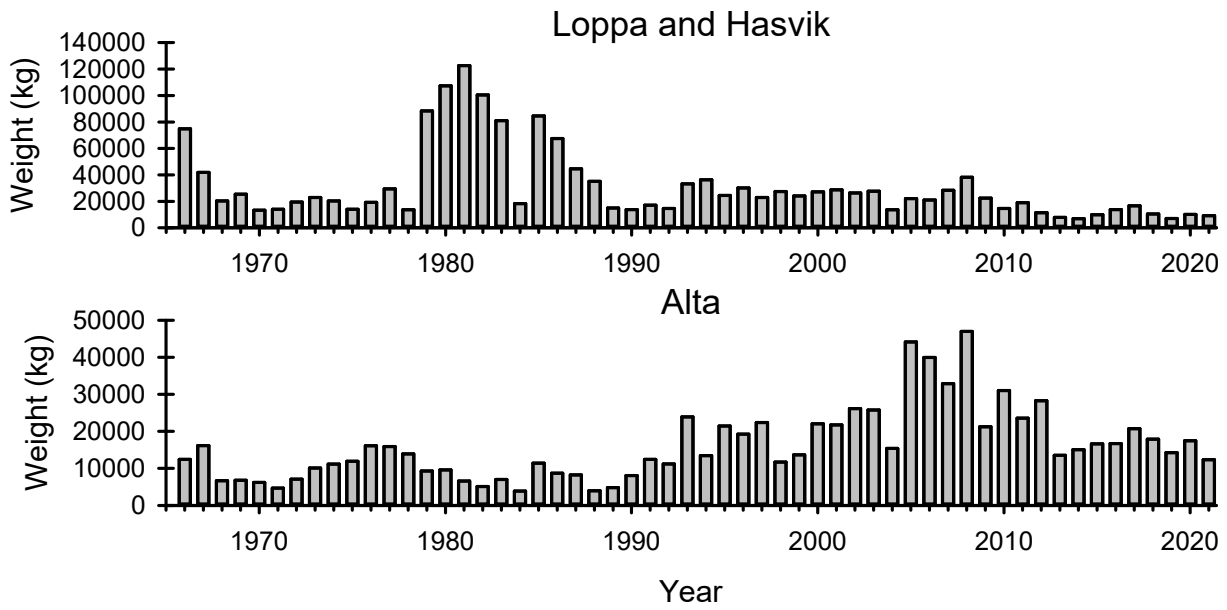


Figure 1. Long-term salmon catches at sea in the municipalities of Alta salmon district. Source; SSB (Norway).

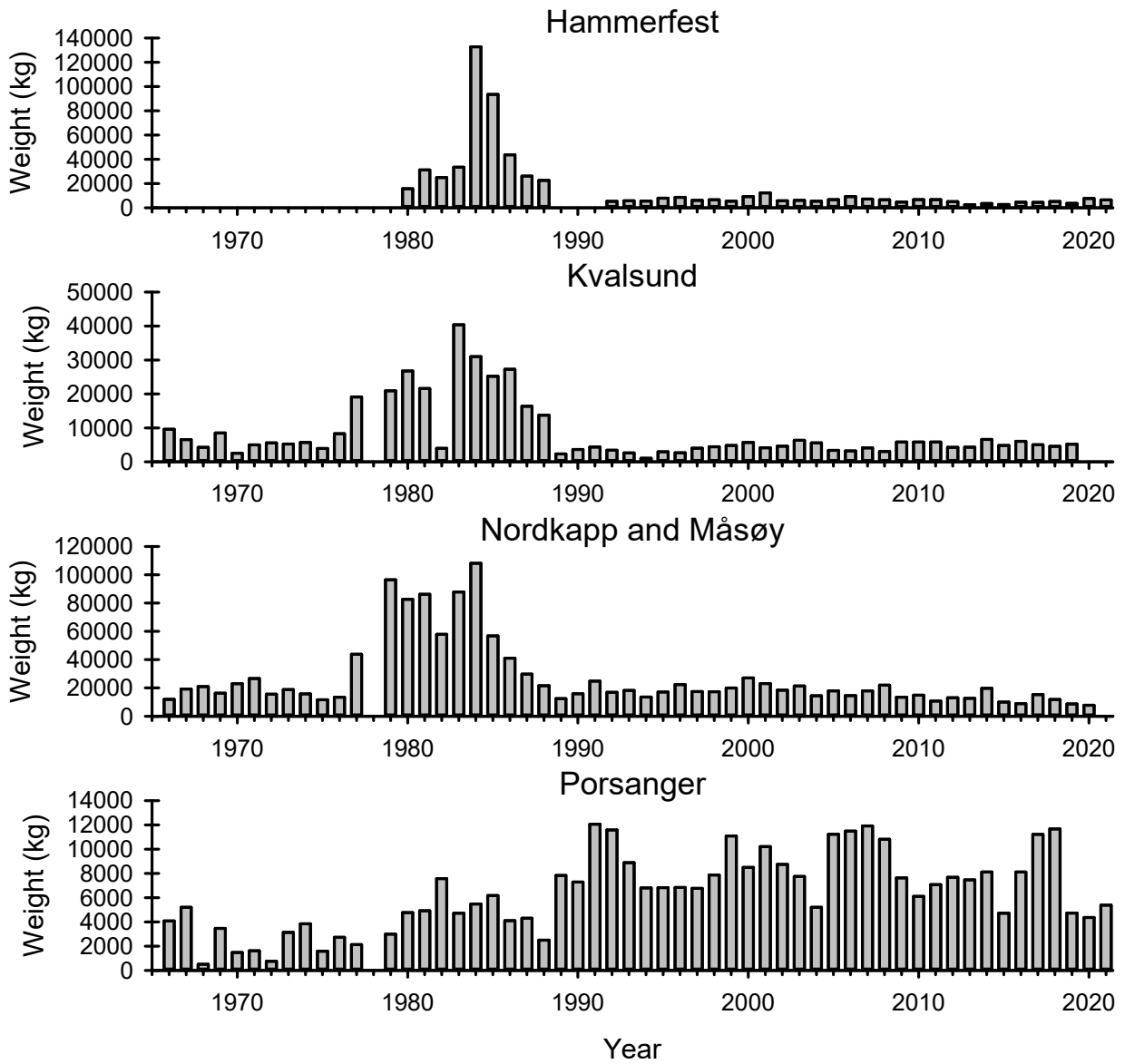


Figure 2. Long-term salmon catches at sea in the municipalities of Hammerfest salmon district. Source; SSB (Norway).

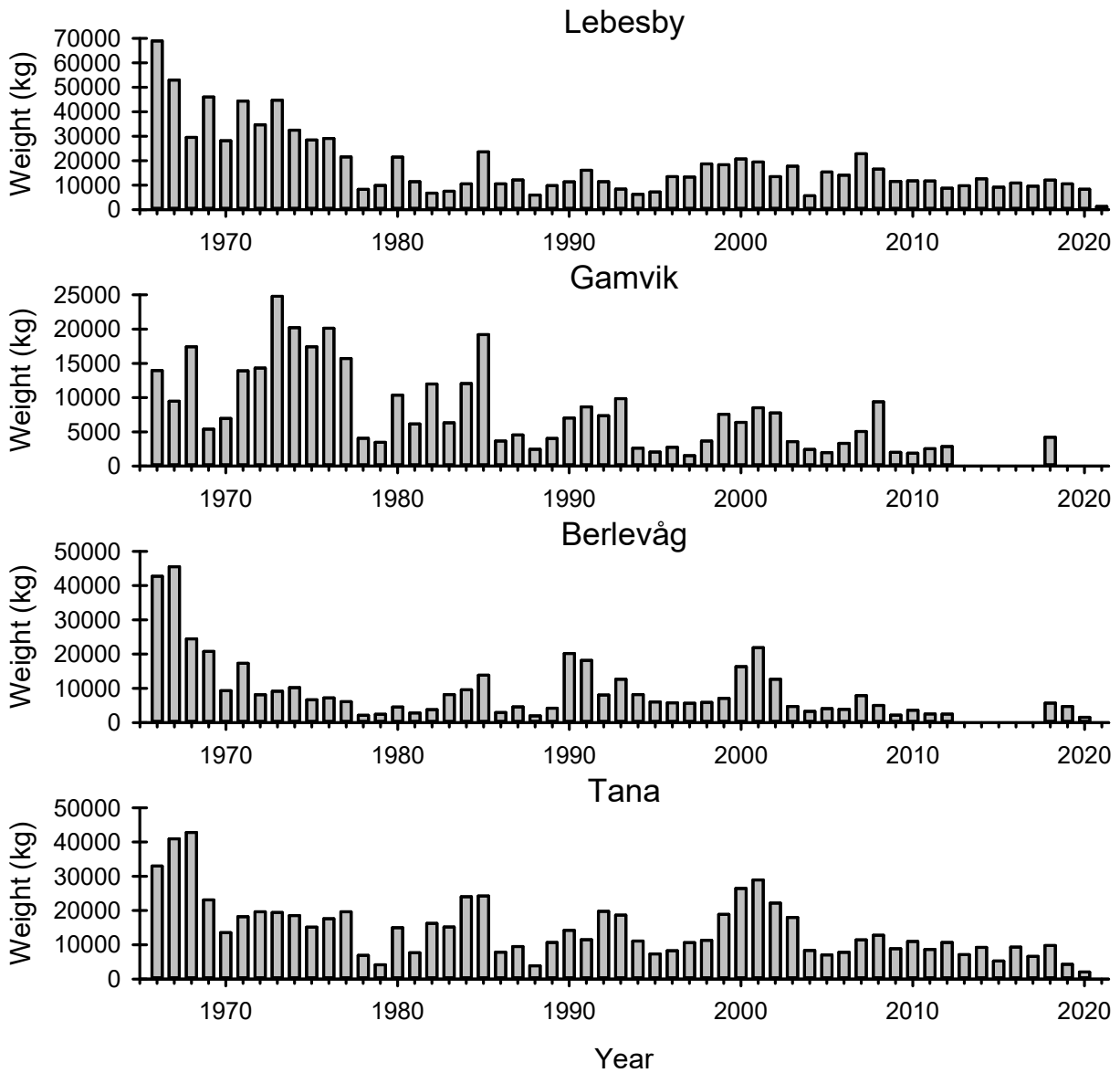


Figure 3. Long-term salmon catches at sea in the municipalities of Tana salmon district. Source; SSB (Norway).

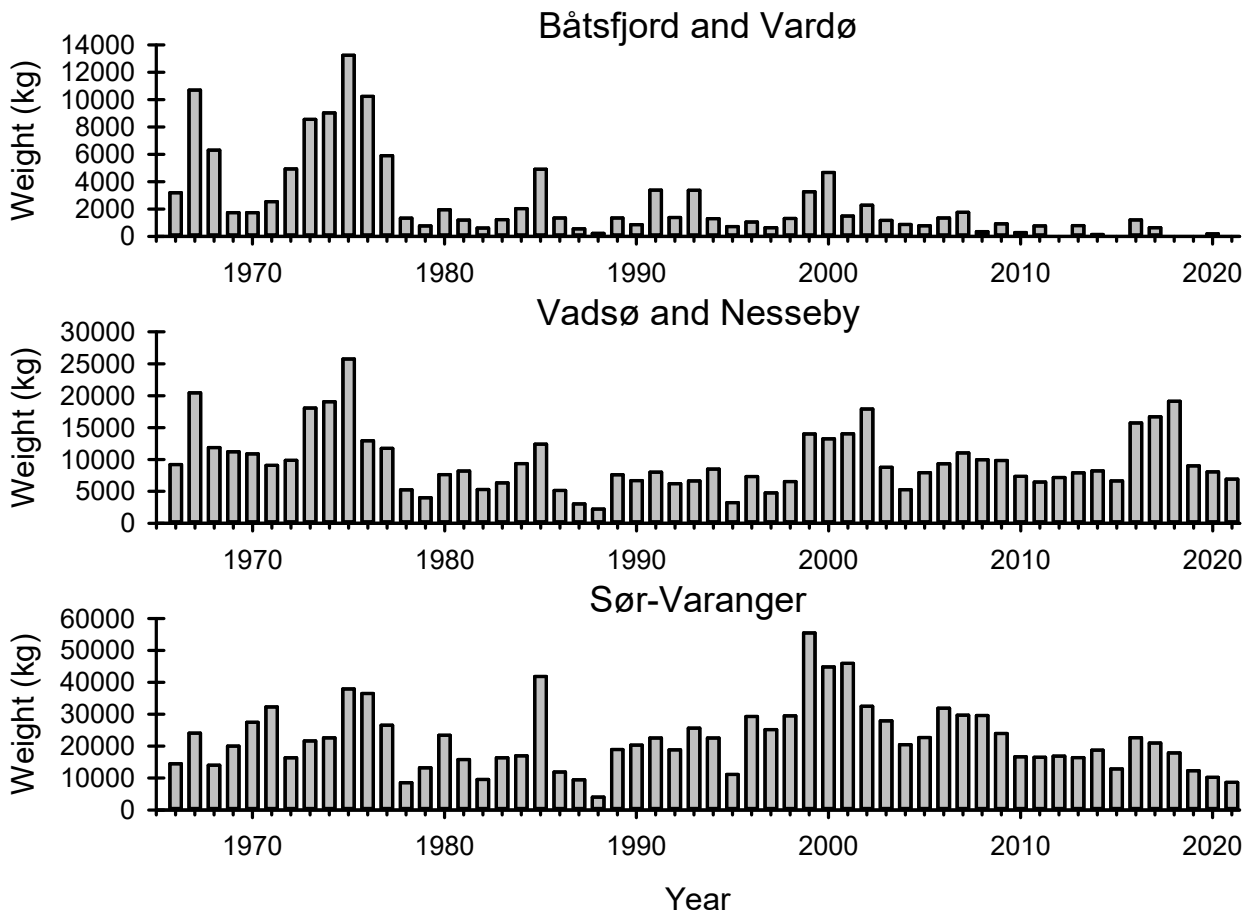


Figure 4. Long-term salmon catches at sea in the municipalities of Varanger salmon district. Source; SSB (Norway).

2. Annual variations in salmon catches in numbers and in kilos between the municipalities since 1993

Since 1993, it has been mandatory to provide detailed information about the salmon catches at sea.

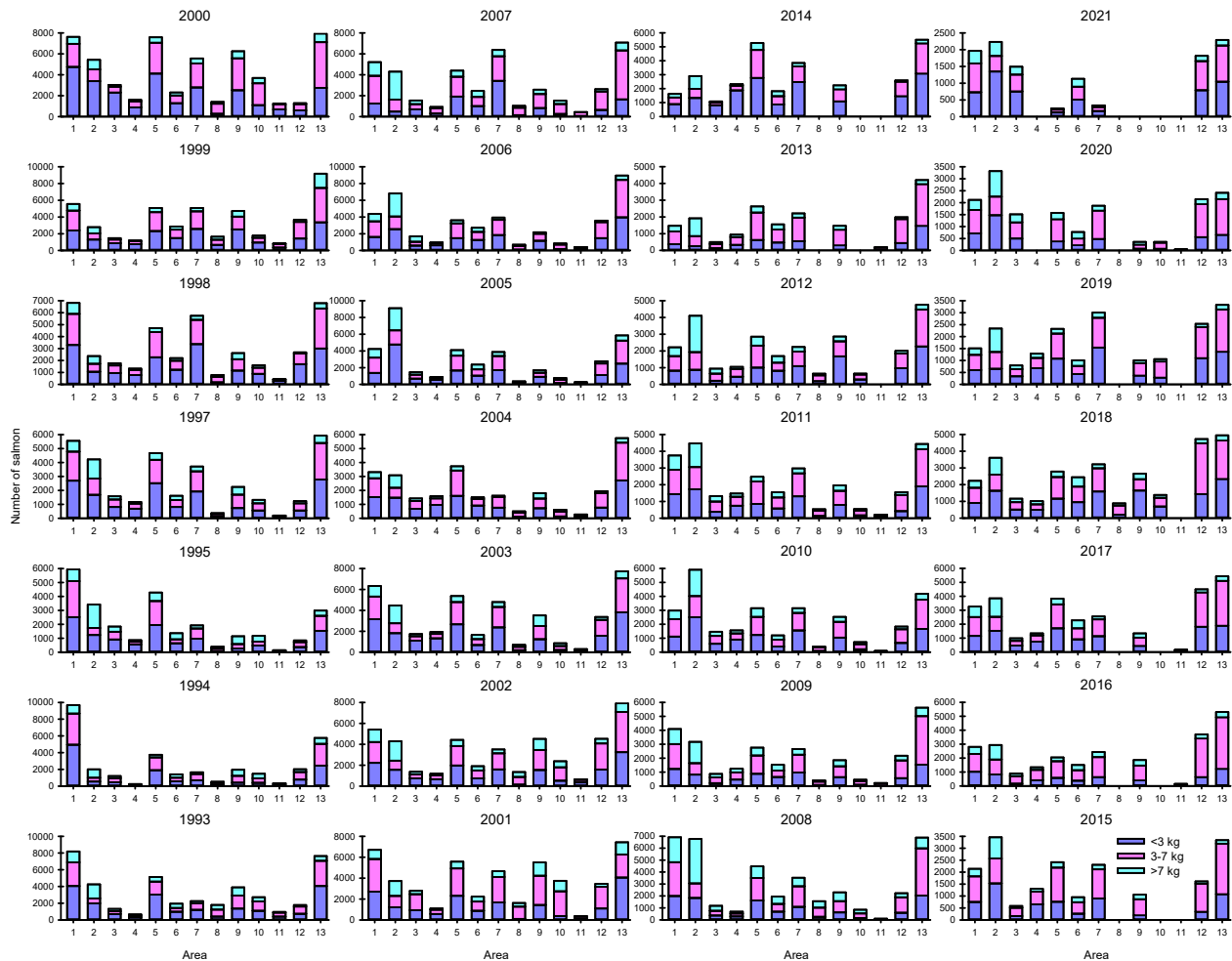


Figure 5. Annual catches in numbers, bag net and bend net catches combined, for municipalities in Finnmark in size groups <3kg, 3-7 kg and >7 kg salmon. The municipalities are; Loppa-Hasvik 1, Alta 2, Hammerfest 3, Kvalsund 4, Måsøy-Nordkapp 5, Porsanger 6, Lebesby 7, Gamvik 8, Tana 9, Berlevåg 10, Båtsfjord-Vardø 11, Vadsø-Nesseby 12, Sør-Varanger 13. Source; SSB (Norway). The lack of catch data indicates that there was three or less fishers in the given municipality. In the year 2021 salmon fishery was prohibited in Tana, Gamvik, Berlevåg and partly in Lebesby and in Porsanger municipalities.



Figure 6. Annual variations in the size distributions of salmon catches for all the municipalities in Finnmark, bag net and bend net catches combined. Source; SSB (Norway). Area numbers are referring to the name of municipalities; See figure 4.

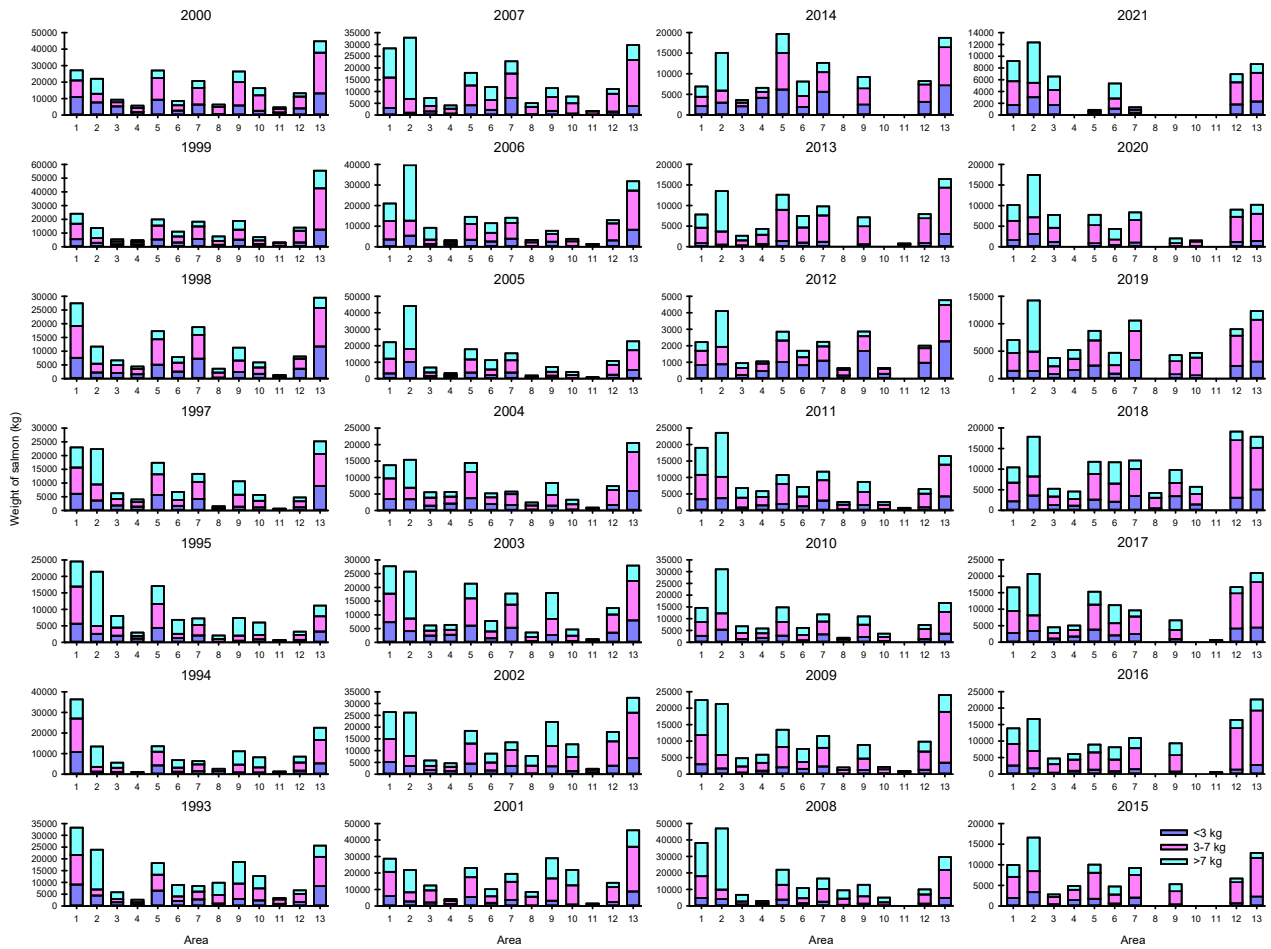


Figure 7. Annual catches in kilos, bagnet and bendnet catches combined, for municipalities in Finnmark in the size groups <3kg, 3-7 kg and >7 kg salmon. Source; SSB (Norway). Area numbers are referring to the name of municipalities; See figure 4.



Figure 8. Annual variations in the size distributions of salmon catches in kilos, for the municipalities in Finnmark, bag net and bend net catches combined. Source; SSB (Norway). Area numbers are referring to the name of municipalities; See figure 4.

3. Long-term development in the salmon catches, divided into three size groups for municipalities in Finnmark; bag net and bend net catches combined

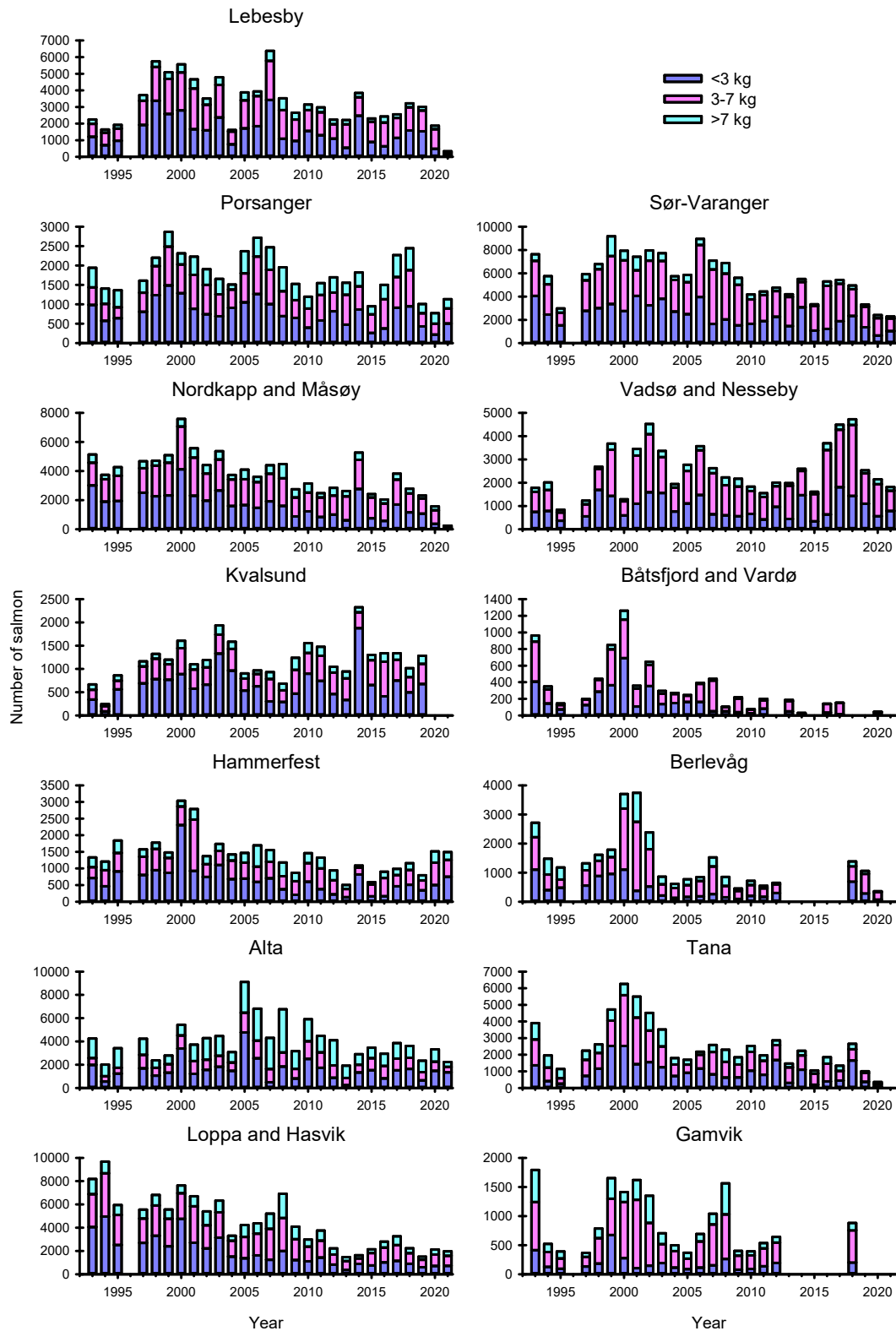


Figure 9. Reported salmon catches (numbers of salmon for three size groups) in combined bag net and bend net fishery in Finnmark's municipalities after catch reporting has been improved in the year 1993. Source; SSB (Norway).

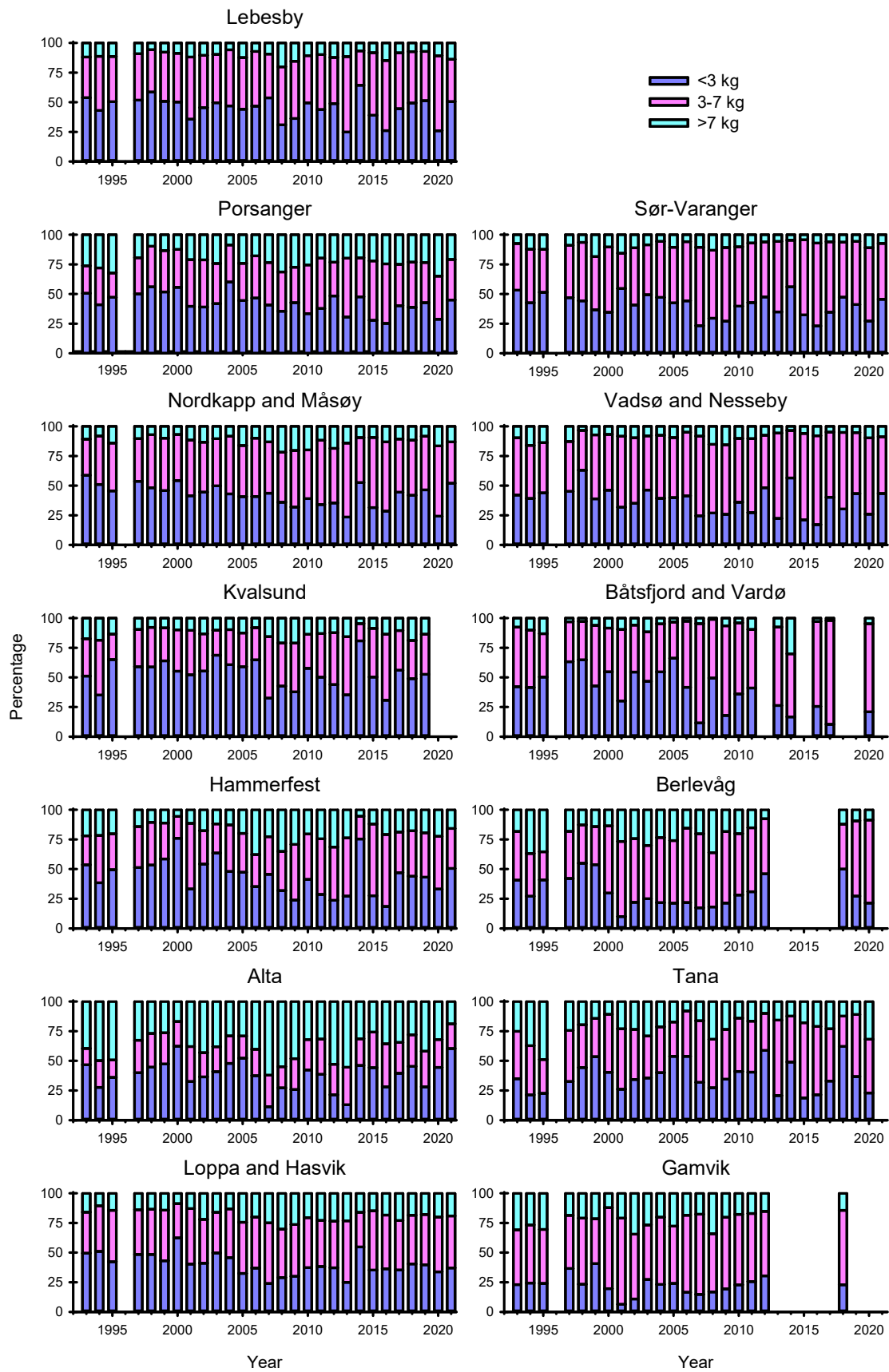


Figure 10. Reported salmon catches (percentages calculated from salmon numbers), combining bag net and bend net fishery in Finnmark's municipalities. The data is from after the catch reporting was improved in the year 1993. Source; SSB (Norway).

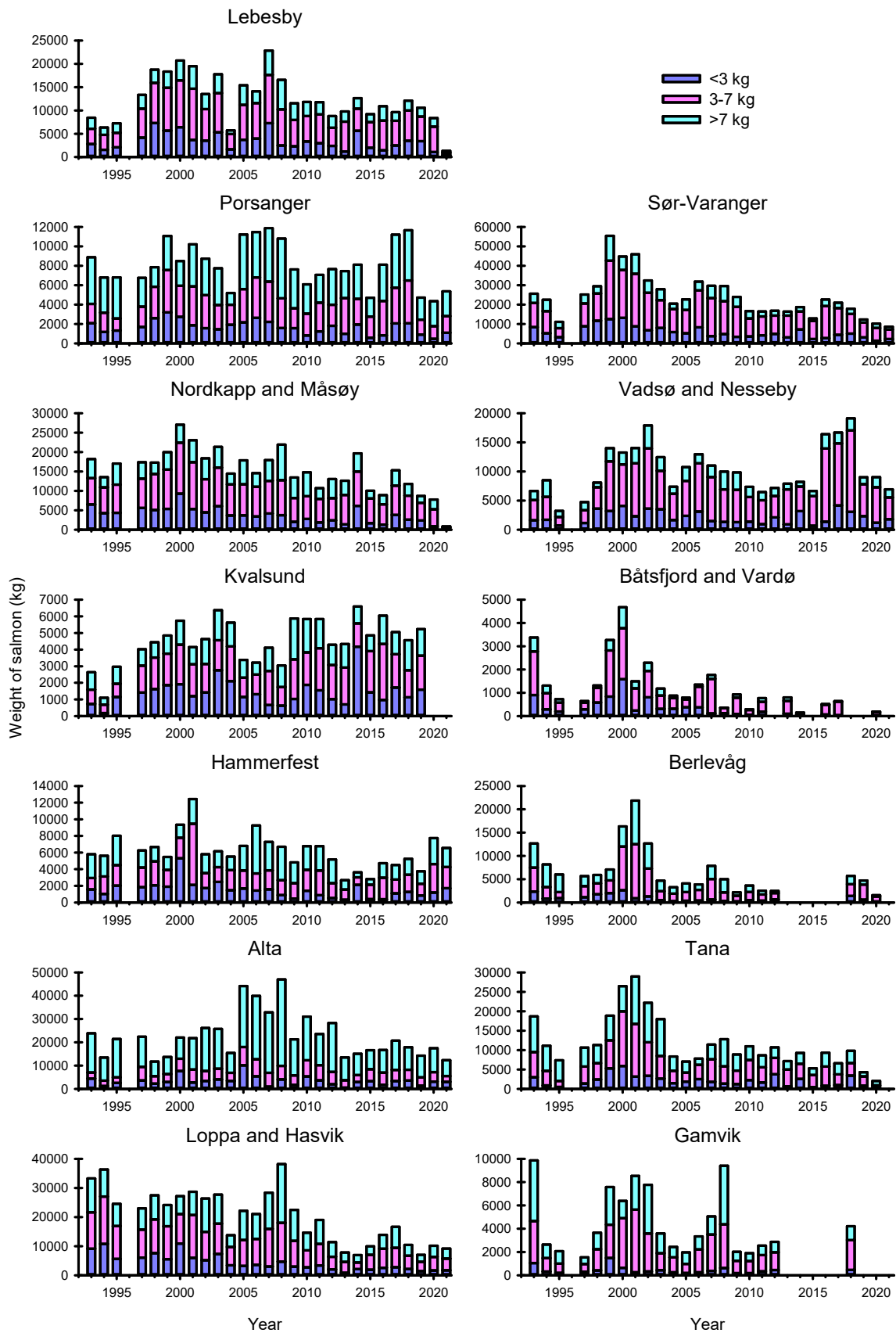


Figure 11. Reported salmon catches (kg of salmon for three size groups), combining bag net and bend net fishery in Finnmark's municipalities. The data is from after the catch reporting was improved in the year 1993. Source; SSB (Norway).

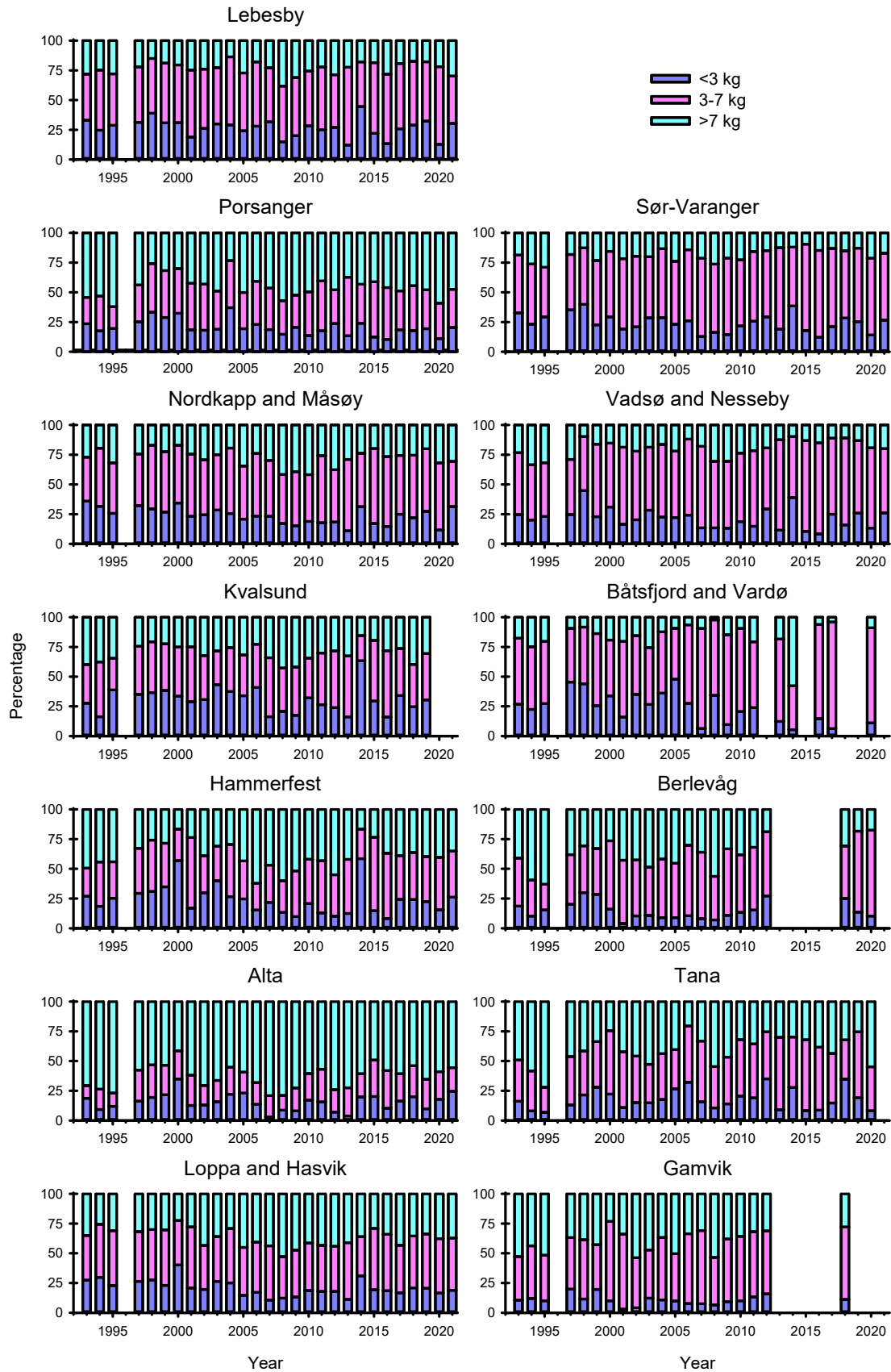


Figure 12. Reported salmon catches (percentages calculated from salmon weight) in combined bag net and bend net fishery in Finnmark's municipalities. The data is from after the catch reporting was improved in the year 1993. Source; SSB (Norway).

4. Long-term development in the salmon bag net catches divided into three size groups for municipalities in Finnmark

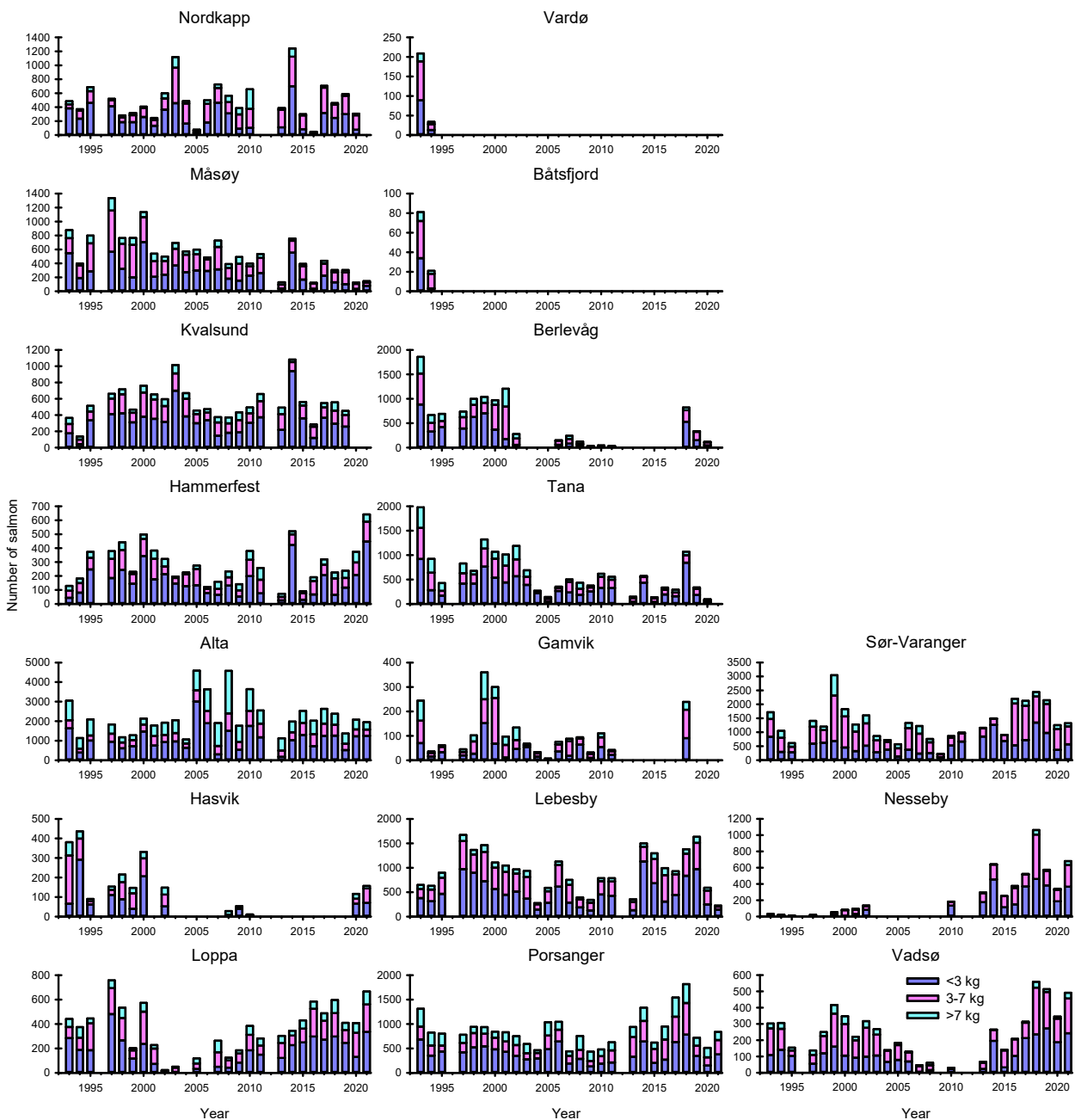


Figure 13. Reported salmon catches (numbers of salmon for three size groups) in bag net fishery in Finnmark's municipalities. Source; SSB (Norway).

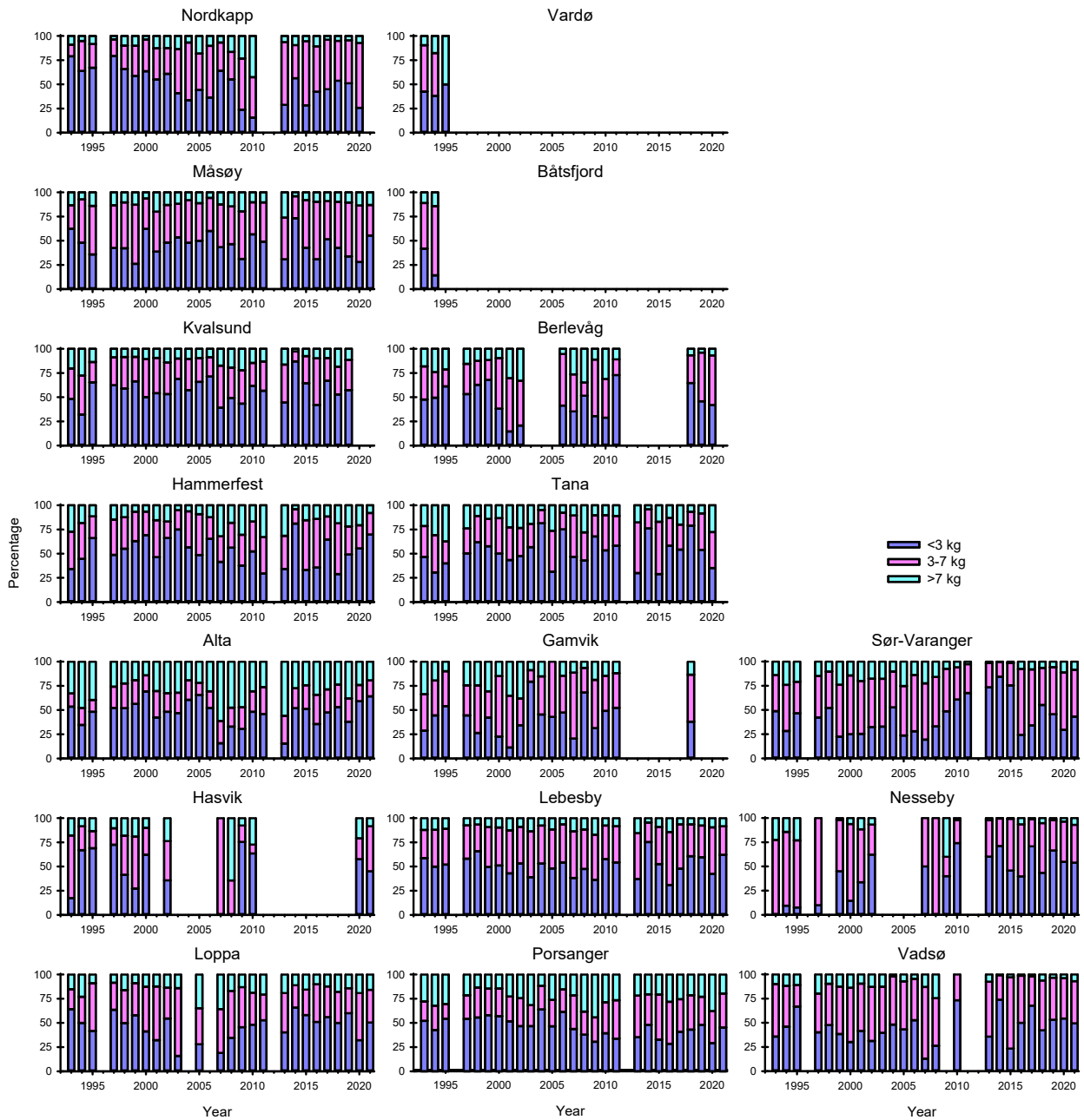


Figure 14. Reported salmon catches (percentages from the numbers) in bagnet fishery in Finnmark's municipalities. Source; SSB (Norway).



Figure 15. Reported salmon catches (kg for three size groups) in bagnet in Finnmark's municipalities. Source; SSB (Norway).

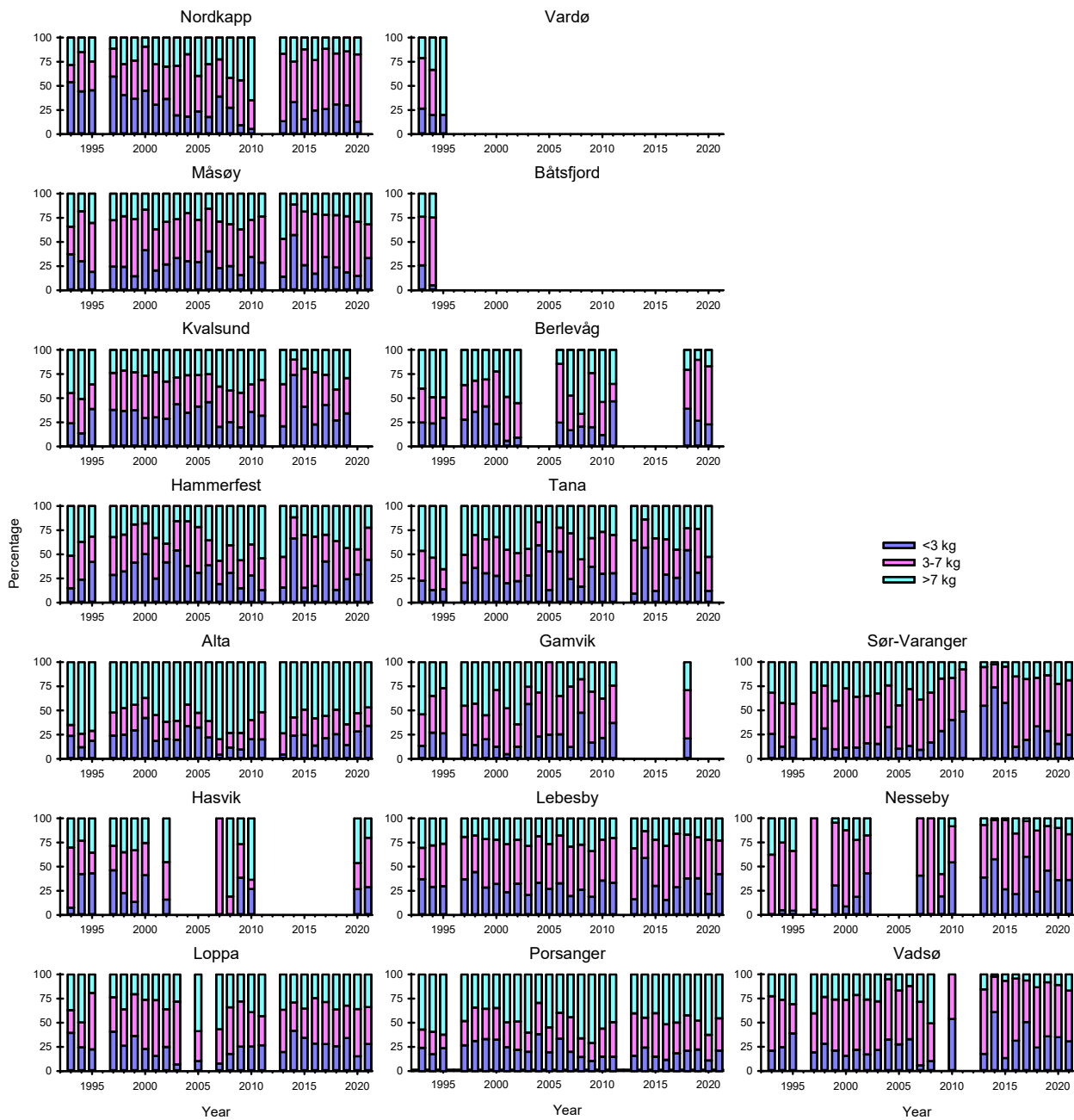


Figure 16. Reported salmon catches (percentages of salmon from the kg) in bagnet fishery in Finnmark's municipalities. Source; SSB (Norway).

5. Long-term development in the salmon bendnet catches divided into three size groups for municipalities in Finnmark



Figure 17. Reported salmon catches (numbers of salmon for three size groups) in bendnet fishery in Finnmark's municipalities. Source; SSB (Norway).

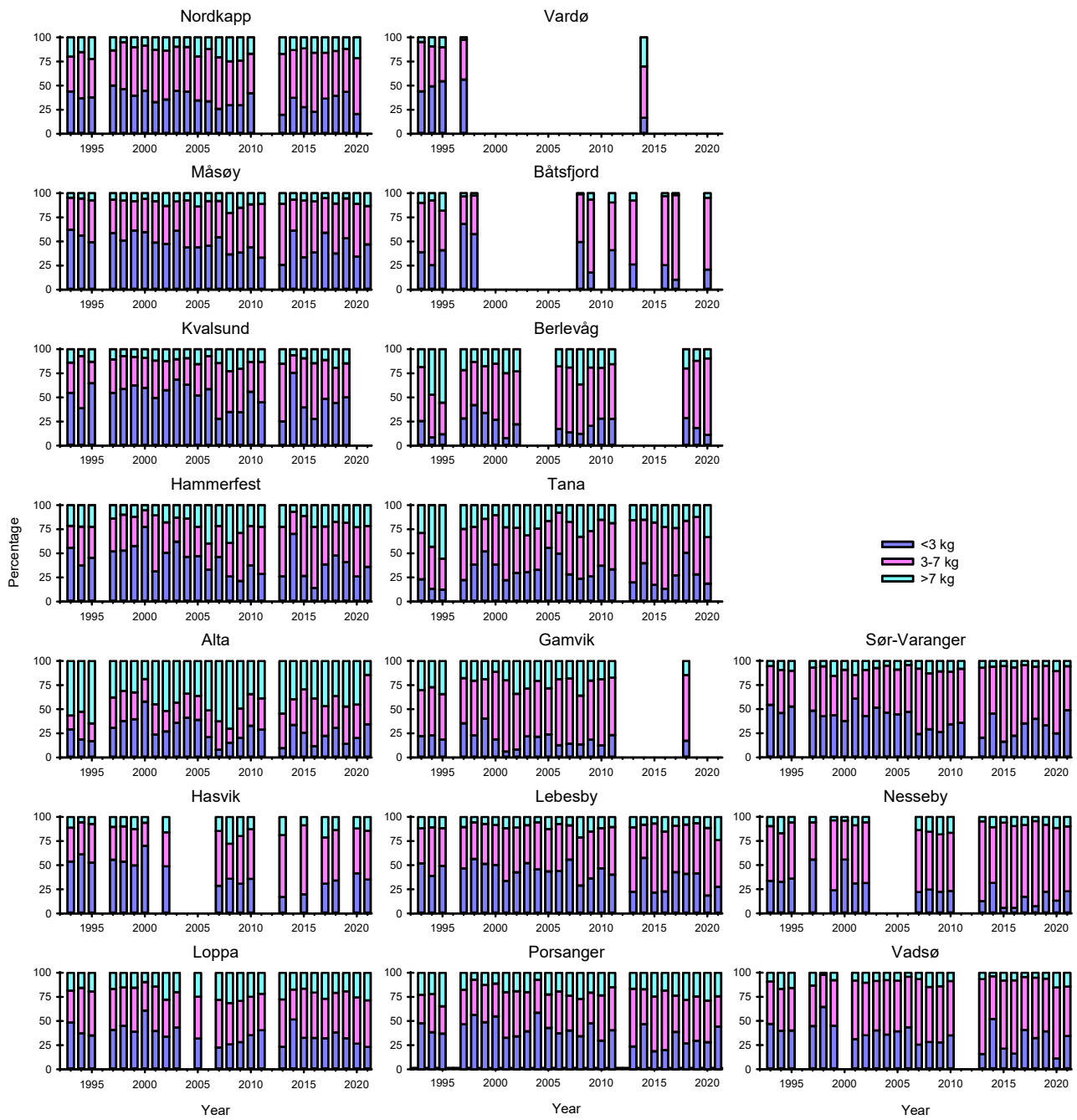


Figure 18. Reported salmon catches (percentages of salmon from the numbers) in bendnet fishery in Finnmark's municipalities. Source; SSB (Norway).



Figure 19. Reported salmon catches (kg of salmon for three size groups) in bendnet fishery in Finnmark's municipalities. Source; SSB (Norway).

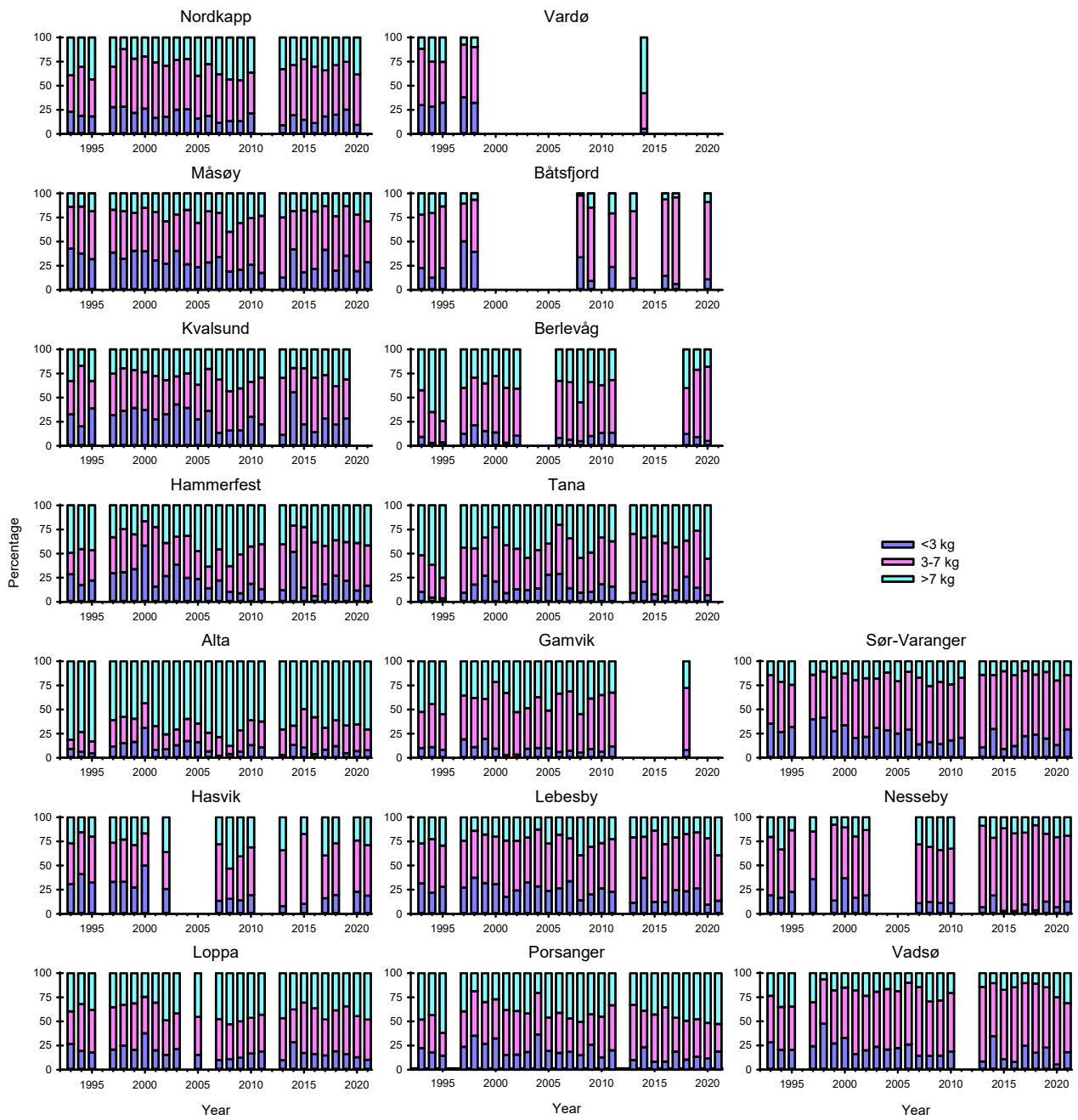


Figure 20. Reported salmon catches (percentages of salmon from kg) in bendnet fishery in Finnmark's municipalities. Source; SSB (Norway).