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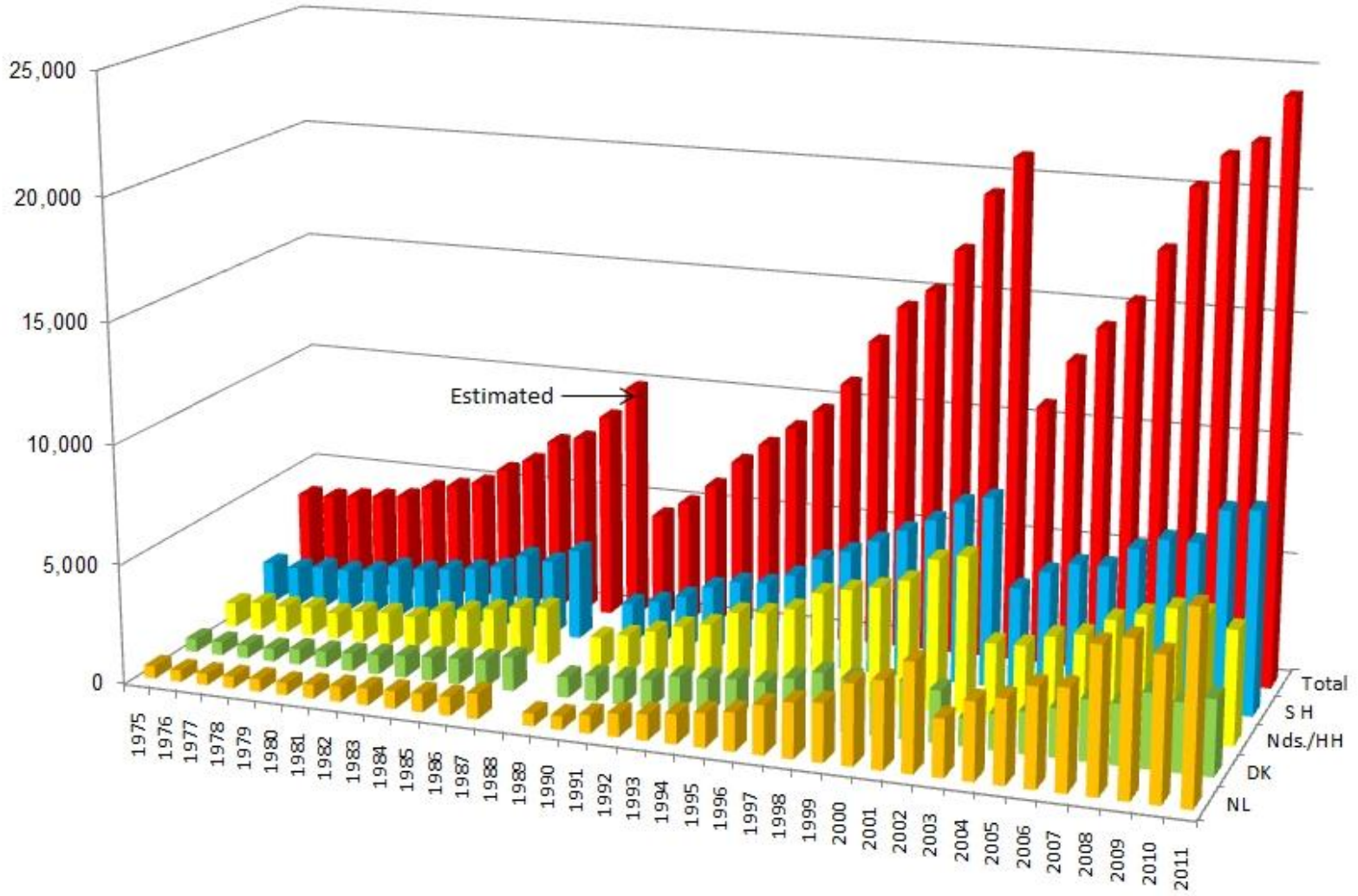
Overview of population growth and health status of the harbour seal population in the southern North Sea

The total Wadden Sea population at the turn of the 19th century has been estimated at c. 37,000, including about 11,500 in the Dutch Delta area, but was severely depleted by hunting until 1962 (Wolff, 2005) and then due to PCB contamination levels during the 1960s-1980s, particularly in Dutch waters (Reijnders, 1982; 1986).

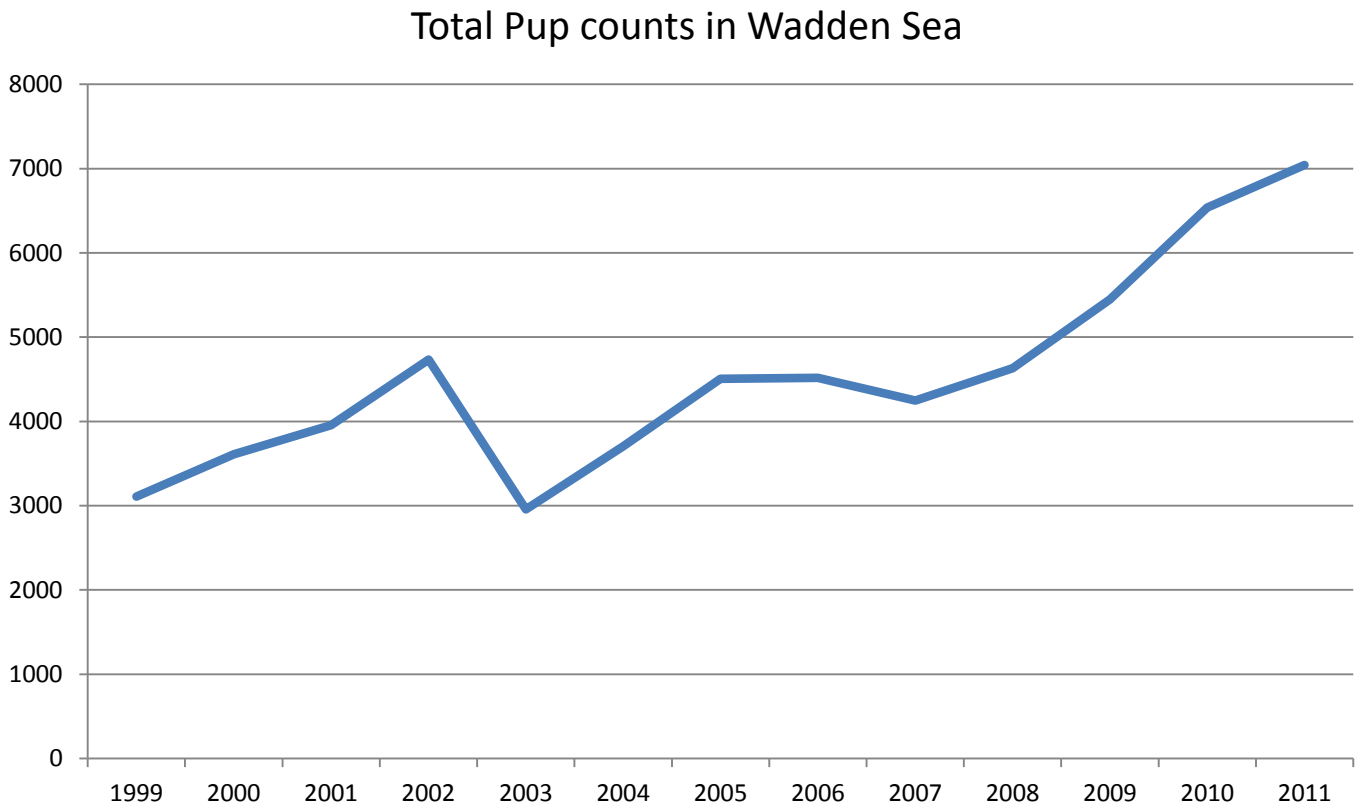
Further large-scale mortalities occurred due to the 1988 and 2002 PDV epizootics (Harkonen et al, 2006) and by 1989 there were estimated to be only c.500 seals left in the Dutch Wadden Sea (Toorn, 1996) and fewer than 10 in the Dutch delta area (Witte et al., 1998). The harbour seals are now legally protected under the 1990 International Wadden Sea Agreement, the principle aim of which is to achieve and maintain a favourable conservation status for the harbour seal population in the Wadden Sea.

Following the 1988 epizootic the average annual rate of increase 1989-94 was 16%, which was highest in the Netherlands (21%). The estimated total Wadden Sea population was estimated at c. 8,800 seals in 1994 (Reijnders et al., 1998), of which c. 25% were in Dutch waters (Ries et al., 1998). The pre-2002 epizootic population level was 19,383 seals, but the population count in 2003 was only 10,800. Since then numbers have increased annually by 12% p.a. to 21,571 seals in 2009 (Reijnders et al., 2009) and 24,118 in 2011 (Brasseur et al, 2011).

Number of Counted Harbour Seals in the Wadden Sea since 1975

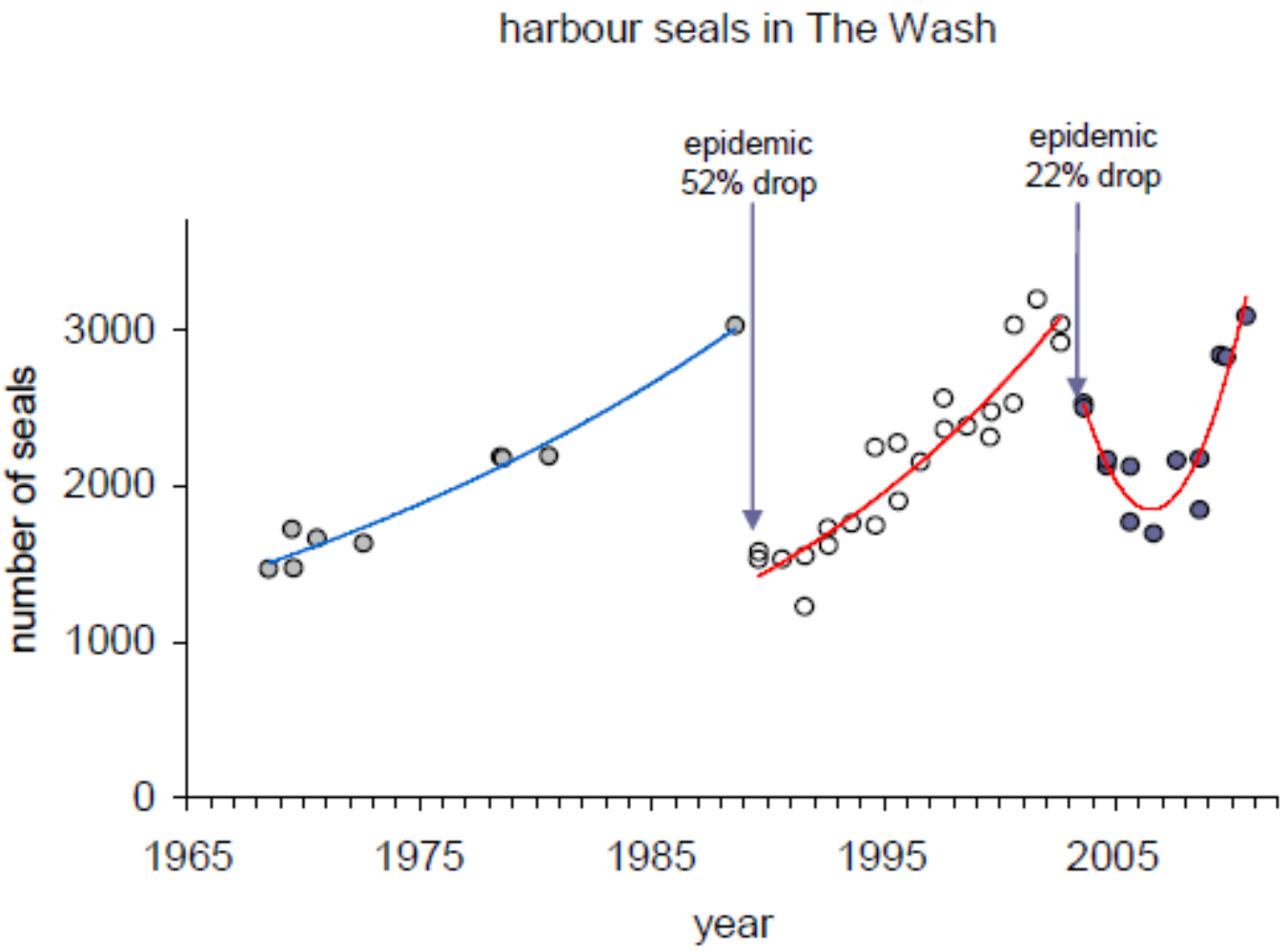


Pup counts fell in 2003 following the 2002 PDV epizootic, but increased since

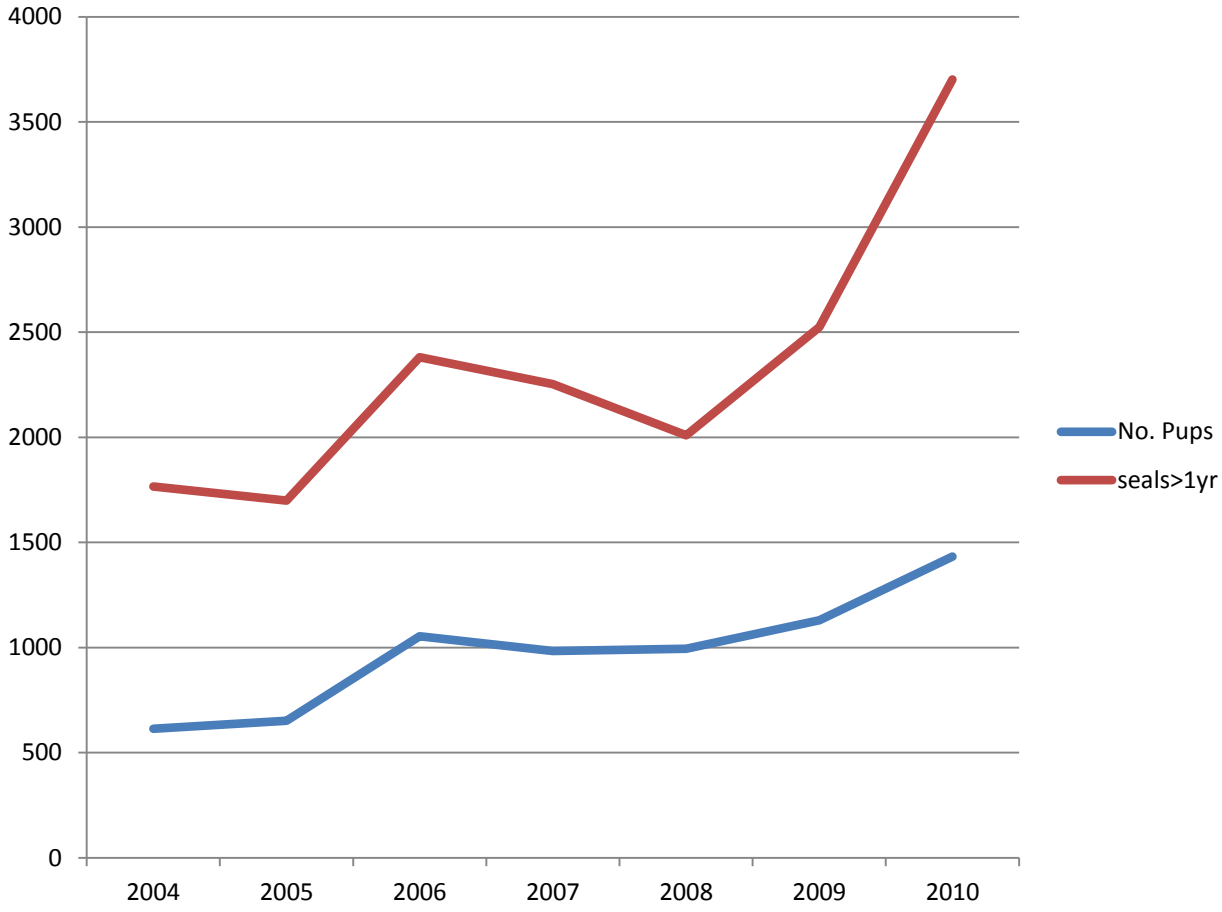


Pup count data from TSEG reports on Common Seals in the Wadden Sea

http://www.waddensea-secretariat.org/news/news/Seals/Annual-reports/

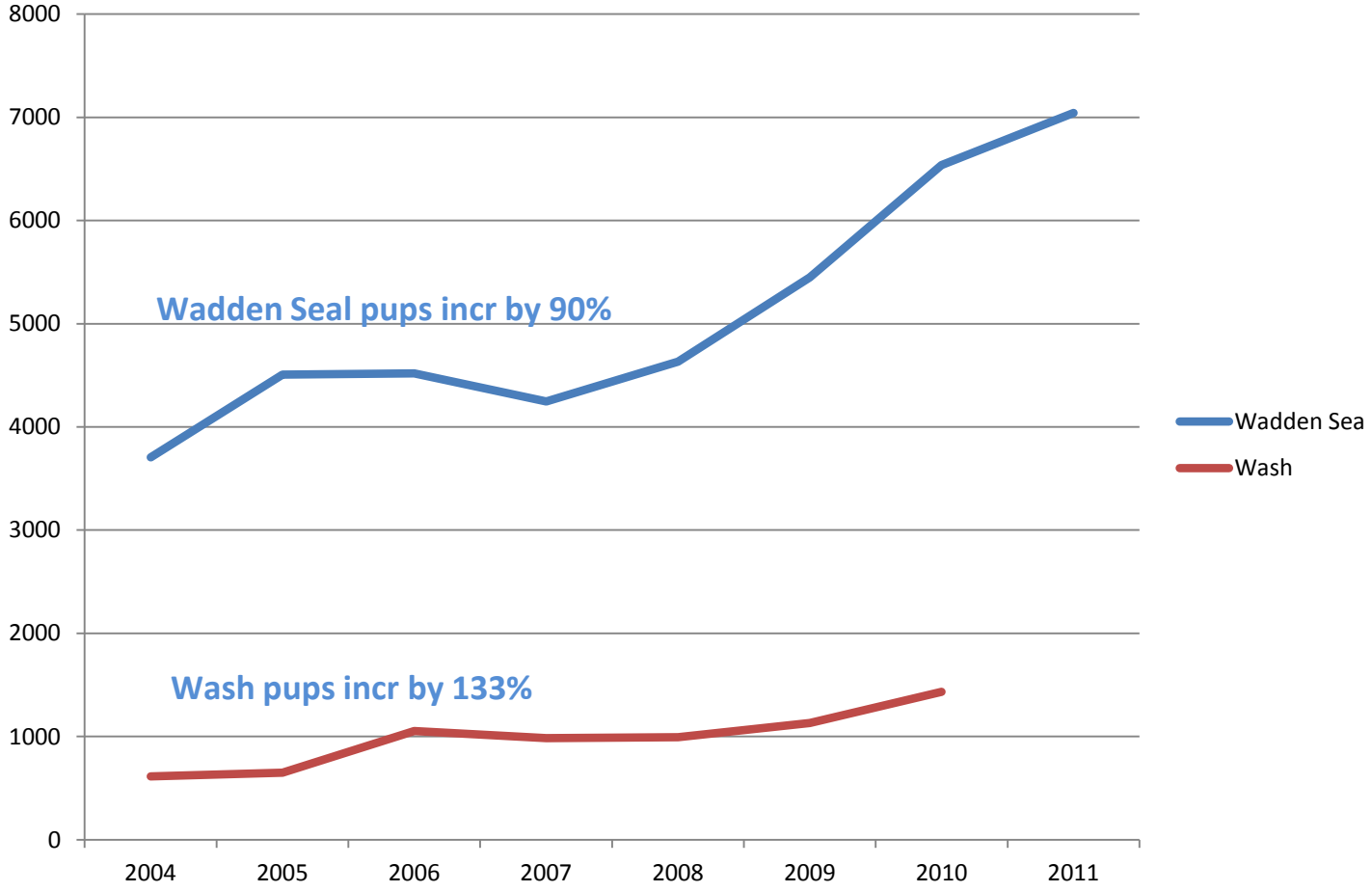

harbour seals in The Wash
epidemic
52% drop
epidemic
22% drop
number of seals
3000
2000
1000
0
1965
1975
1985
1995
2005
year

Counts in the Wash – early July – Thompson, 2011)



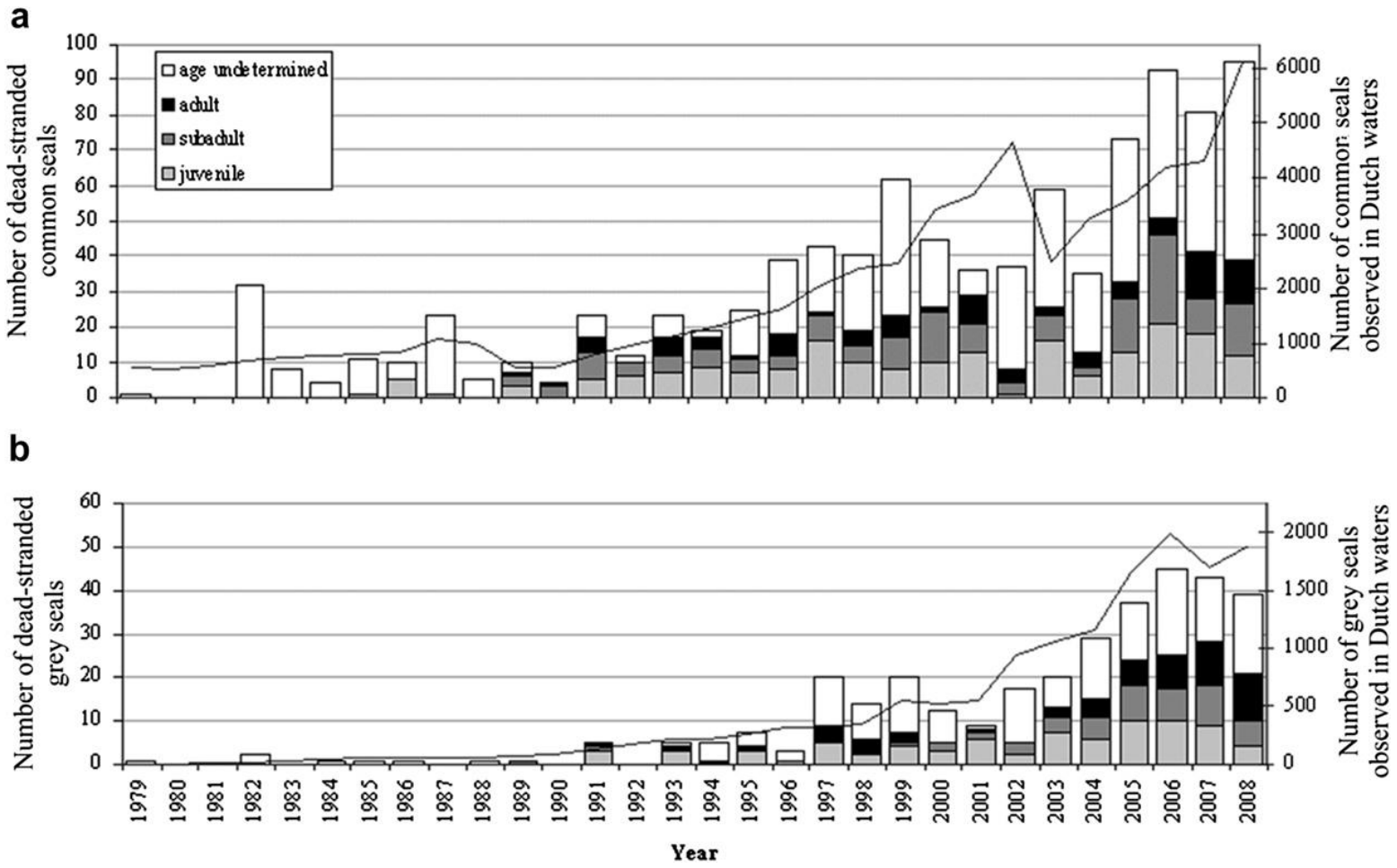
Pups were widely distributed – present at all occupied sites in 2010.
Pup production not increasing as rapidly as seen in Wadden Sea

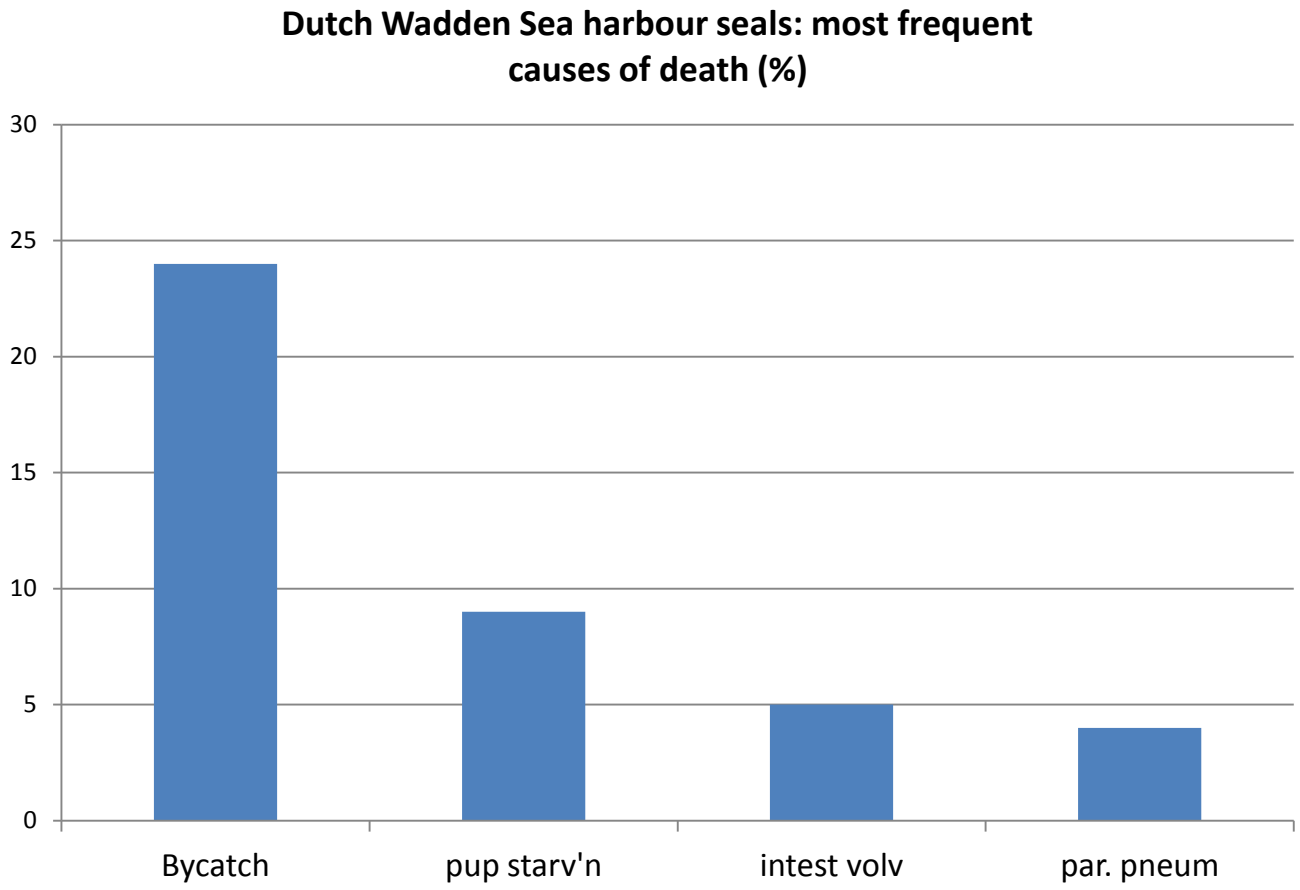
Comparison of pup counts in the Wadden Sea and the Wash



HEALTH STATUS OF HARBOUR SEALS IN WADDEN SEA

No. dead-stranded seals in the Dutch Wadden Sea (1979-2008) (Osinga et al, 2012)





From Osinga et al (2012)

No significant changes over time detected.

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The proportion of causes of live seal strandings differ from dead-seal strandings, being principally orphan pups and post-weaning pups with parasitic bronchopneumonia.

For live-stranded pups there was an apparent increase in parasitic pneumonia: 0-30/year for 1971-97, 30-160/year for 1998-2009 and 400 for 2009/10.

Osinga et al, 2012

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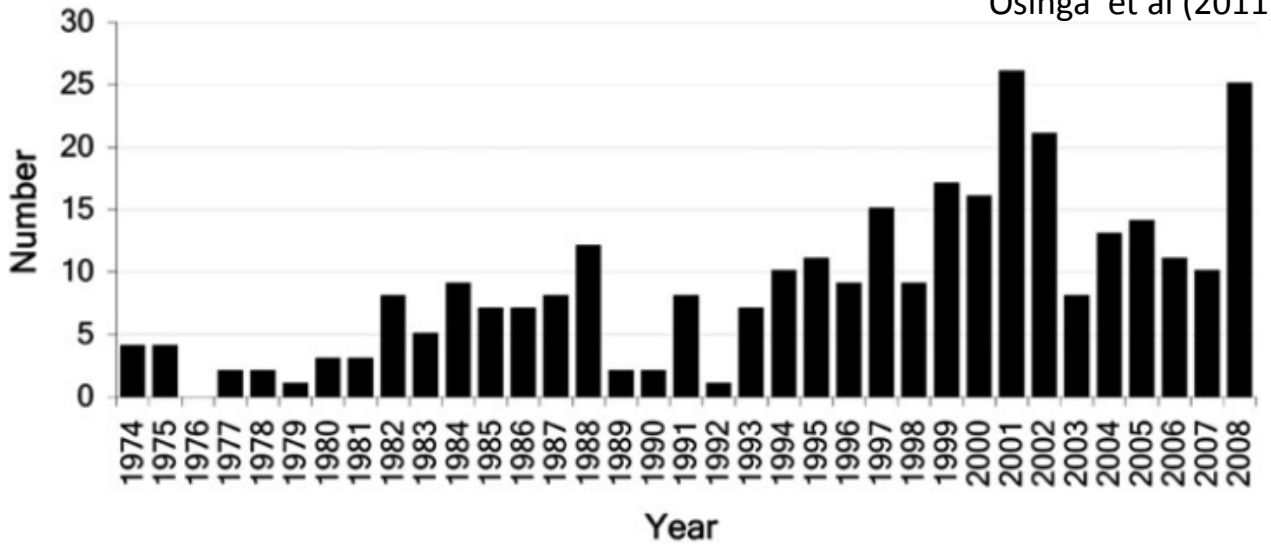
The 1990 Wadden Sea agreement allows for institutions to be designated to ‘take’ ‘diseased or weakened or evidently abandoned suckling seals’ for either euthanasia or rehabilitation and subsequent release. The ‘Leeuwarden Declaration’ (LD s. 60) 1994 agreed ‘to reduce the taking of seals to the lowest level possible’, since it was considered that such taking was not necessary to maintain the population and could even have negative effects on seal population ecology.

No. pups with umbilical stub reported stranded in SSRC database

Osinga et al (2011)



Even so, numbers of newborn harbour seal pups taken into human care in recent years, appears to have been increasing, especially since about 1994 (Osinga et al. 2011), with substantial numbers of post-neonatal pups also being taken. Over the 5-year period 2000–2005, a total of 2033 seals (mostly pups) were taken for rehabilitation, including 792 (15% total pup production) in the Netherlands (Reijnders et al., 2009). These numbers have since risen in the Netherlands to over 200-300 in some years. The reason for this extremely high stranding rate of pups is not clear, but is a matter of grave concern. It is coincidental with the increase in pupping rate but also with apparent increased food availability resulting in earlier pupping. Disturbance has been suggested as a possible contributory cause of the strandings (Osinga et al., 2012), although this has not been confirmed.

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