

RSPB Briefing Note: Seals in The Wash

SMRU

The UK is home to two resident species of seal: the grey seal (*Halichoerus grypus*) and the harbour or common seal (*Phoca vitulina vitulina*). Both species are protected under national legislation (e.g. The UK Conservation of Seals Act 1970) and international regulations (i.e. EU Habitats Directive) and are considered indicators of marine ecosystem health under the Marine Strategy Framework Directive and the OSPAR Convention. The southeast England Seal Monitoring Unit (SMU), which encompasses The Wash and surrounding areas, is an important region for seals in England; hosting over 90% of the harbour seal population and around 80% of all the grey seals pups born.

Seal life-history

Seals spend much of their lives at sea, foraging on a diverse range of prey species including sandeels, gadids, flatfish and squid (Wilson & Hammond 2019). Grey seals forage further offshore than harbour seals, but the two species overlap in foraging areas at sea and in their use of inshore waters (Fig 1; Carter et al. 2022). Unlike other marine mammals, seals return to land to haul out between foraging trips to sea. Both species also haul out on land for extended periods of time to breed and moult. Grey seals breed in the autumn/winter (Bonner 1972) and undergo their annual moult the following spring (Schop et al. 2017), whereas harbour seals breed in the summer and undergo their moult at the end of the breeding season (Thompson & Wheeler 2008).

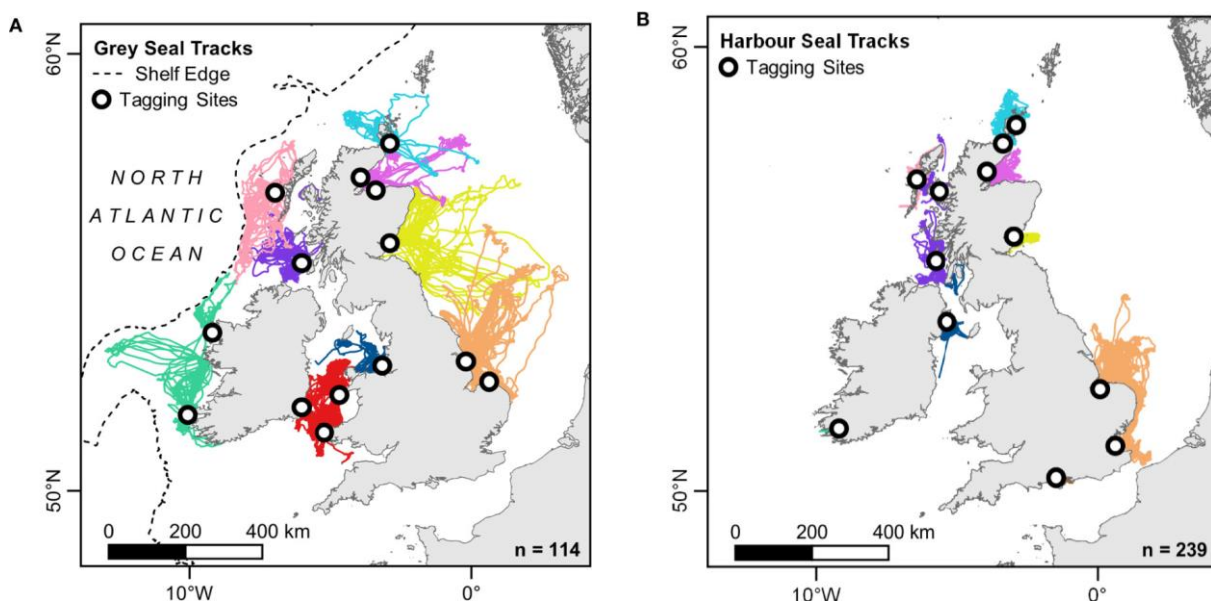


Fig 1 Satellite tracking data from 2005-2019 for a) 114 grey seals, and b) 239 harbour seals, highlighting the movement between on-land haulout sites and at-sea foraging areas (taken from Carter et al. 2022).

Grey seals are capital breeders, which means they fast during the breeding season. Females come ashore to give birth and suckle their pup for around 17 days, after which time they mate with attending males and return to sea to replenish their energy reserves before their annual moult the following spring (Fedak & Anderson 1982). Grey seal pups remain on breeding colonies unattended and relatively immobile for up to four weeks as they undergo a post-weaning fast (Reilly 1991). Conversely, harbour seals can swim from birth and have therefore filled a niche breeding on tidal sandbanks (Bonner 1972).

Seal population trajectories

Grey seals are globally rare, and 34% of the world's 220,000 pups are born at colonies around the UK, giving them global significance (SCOS 2024). An estimated 14,000 pups are born at Donna Nook, Horsey and Blakeney, meaning more pups are born in the southeast England SMU than anywhere else in the UK (Morris et al. 2024).

The grey seal population in the North Sea is increasing exponentially (Thomas et al. 2019), whereas harbour seal populations around the UK are in decline (Thompson et al. 2019). The Wash and North Norfolk SAC accounts for 75-85% of the southeast England SMU harbour seal abundance, which dropped between 2015 and 2019 indicating a decline of ~25% (Russell et al. 2024). Drivers behind this decline are likely complex, but could include reductions in prey availability, and/or increased adverse interactions with grey seals (i.e. competition and predation), biotoxin exposure, and disease (Hall et al. 2024; Langley 2024). Regardless of the initial drivers behind the decline, current trends suggest the harbour seal population in The Wash is particularly vulnerable and is showing no signs of recovery.

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