

MARINE MAMMALS & FISHERIES

Impacts, trade-offs and the case for science-based population management

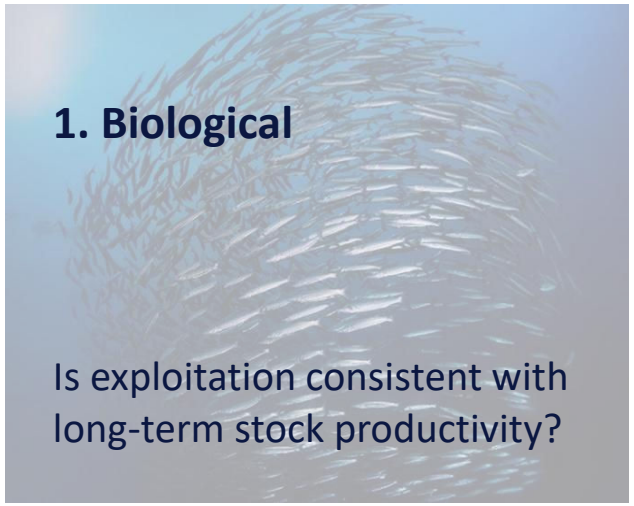
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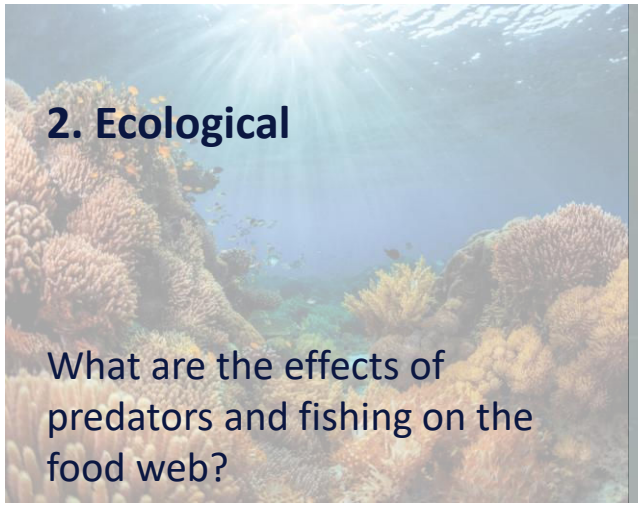
Sustainability is more than a healthy fish stock

Management must consider four connected outcomes—not treat any single indicator as the whole picture.



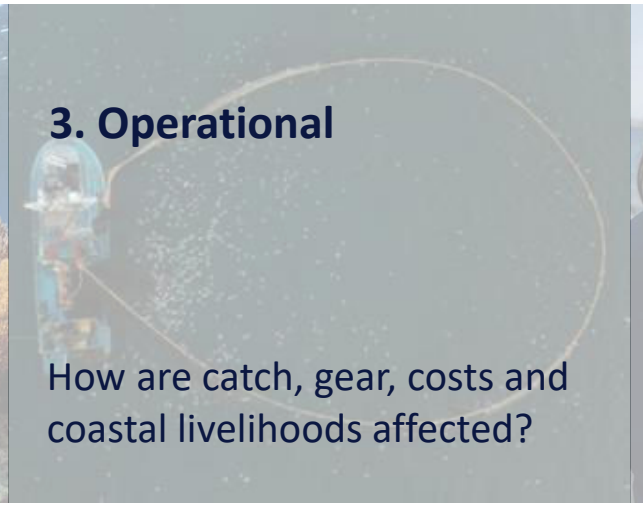
1. Biological

Is exploitation consistent with long-term stock productivity?



2. Ecological

What are the effects of predators and fishing on the food web?



3. Operational

How are catch, gear, costs and coastal livelihoods affected?



4. Institutional

Does governance translate evidence into proportionate action?

We already manage fishing mortality. Predator–fishery interactions need comparable scientific scrutiny

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How marine mammals affect—and are affected by—fisheries

1. Predation

Consumption of fish in the wild; stock-level effects vary with diet, size and overlap

In the Barents Sea, marine mammals are estimated to consume approximately 535,000 tonnes of gadoid fish annually (Mauritzen *et al.,* 2022)

2. Depredation

Fish removed directly from ents and traps, often without visible evidence

Studies show that seals can remove or damage a sigfnciant portion of catch, averaging 25% in some inshore net and handline fisheries (Tanner *et al.,* 2026)

3. Gear and quality

Damage to static gear, injury to landed fish and parasite related quality costs

Repeated seal encounters permanently warp and degrade synthetic meshes, forcing fishers into premature and expensive long-term gear replacements

4. Bycatch and disturbance

Accidental seal and can threaten vulnerable populations

The clearest documented economic conflicts are often in coastal, static-gear fisheries

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Consumption in FAO 27

36.5 MILLION TONNES

Theoretical annual prey consumption by the seal groups assessed across the North Atlantic & Arctic

The questions:

How do we improve this estimation?
How much does predation change specific fish stocks and fishery outcomes?

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For coastal fisheries, the losses can be tangible

EVIDENCE FROM PARTICULAR FISHERIES

~45%

Estimated daily cod losses to grey seals in a gillnet fishery off Bornholm (2021–22).

Glemarec et al. (2024)
Fisheries Research 277, 107070

11 seals

Eleven identified seals accounted for 426 of 600 filmed visits to two Baltic salmon traps.

Königson et al. (2013)
Fisheries Research 148, 117–123

€3.5m

Historical estimate of annual seal-related catch losses in Swedish fisheries (SwAM, 2014).

SwAM (2015 report)
2014 estimate · Swedish agency

Losses can be concentrated in specific fleets—and even around a small number of individual animals.

Sources: Matís Nordic Seals (2024), pp. 17–19; Fisheries Research 277 (2024), 107070.

Protect viable populations.
Protect viable fisheries.

01

MEASURE

Independent monitoring of populations, bycatch, depredation and costs

02

MODEL

Bring predator–prey relationships into regional assessments where material

03

MANAGE

Allow proportionate, locally tailored interventions

04

EVALUATE

Track results and adapt the approach when the evidence changes

The test of good policy is measurable ecological, economic and social outcomes—not a preconceived ideological basis for predator numbers alone.

Sweden instructs agencies to reduce seal populations

1. **Species and purpose:** Grey + harbour seals

Reduce both populations to help protect vulnerable coastal fish stocks. With focus especially on areas with sensitive coastal fish populations.

2. **The instruction:** Population-regulating hunting

Work jointly to enable hunting intended to regulate population size. Reduce numbers, prevent further growth and remove unjustified barriers.

3. **Oversight:** Evaluation of effects

Act is within Swedish law and EU legal obligations. Report by 1 April in 2027, 2028 and 2029—including estimated effects on fish stocks.

Government assignment from the Ministry of Rural Affairs and Infrastructure

Assignment to the Swedish Agency for Marine and Water Management and the Swedish Environmental Protection Agency to reduce the populations of seals to protect vulnerable fish stocks and to achieve sustainable ecosystem-based management

Reference number: LI2025/01868 (in part), LI2026/01592

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Sweden is making seal population management part of ecosystem-based fisheries policy.

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