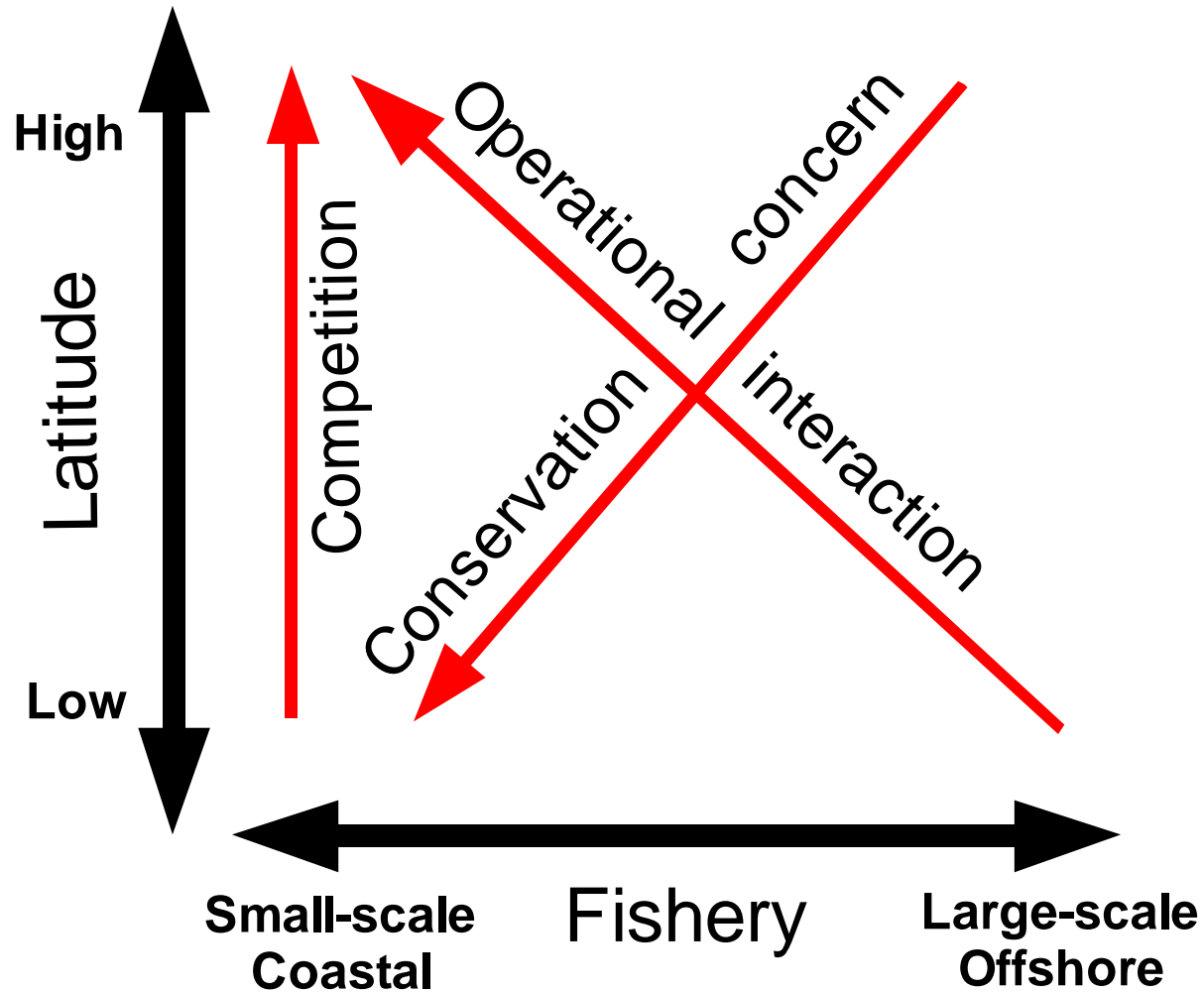
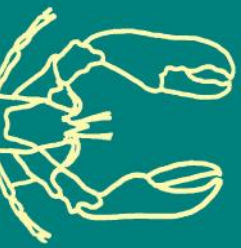


Seals and Fisheries: Reducing the conflict with alternative fishing gear

Sara Königson

Project Seals and Fisheries, Coastal Laboratory, Swedish Board of Fisheries





Seals → Fisheries

Direct interference

Competition for fish

Dispersal of parasites

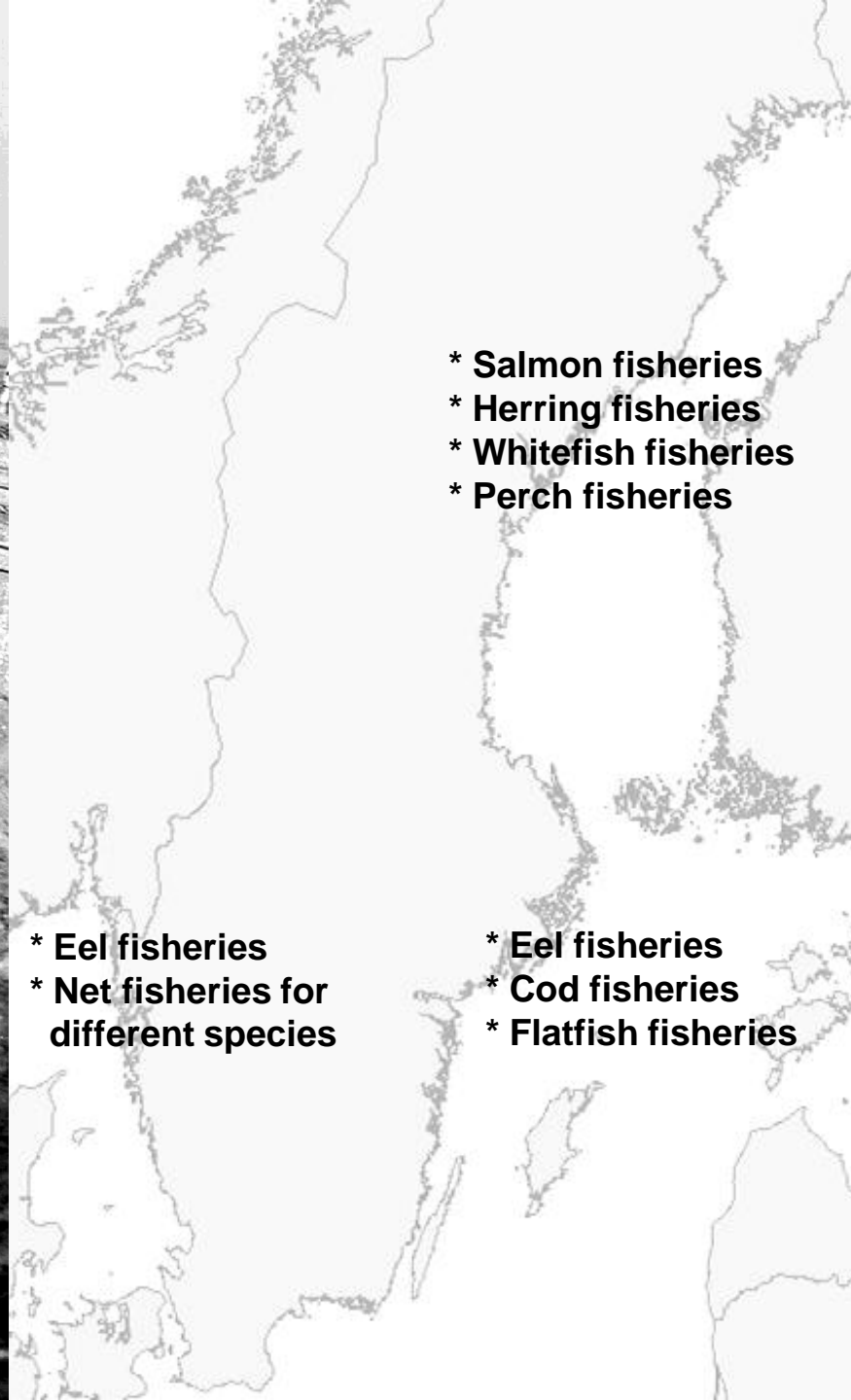


Fisheries → seals

Accidental by-catch

Food-depletion through over-fishing





- * Salmon fisheries
- * Herring fisheries
- * Whitefish fisheries
- * Perch fisheries

- * Eel fisheries
- * Net fisheries for different species

- * Eel fisheries
- * Cod fisheries
- * Flatfish fisheries



Management tools

- Economic compensation
- Lethal removal of seals
- Technical mitigation methods

Seal-safe gear

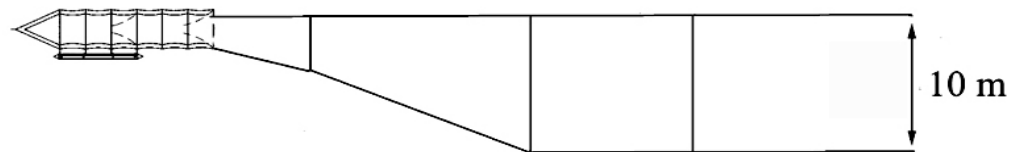
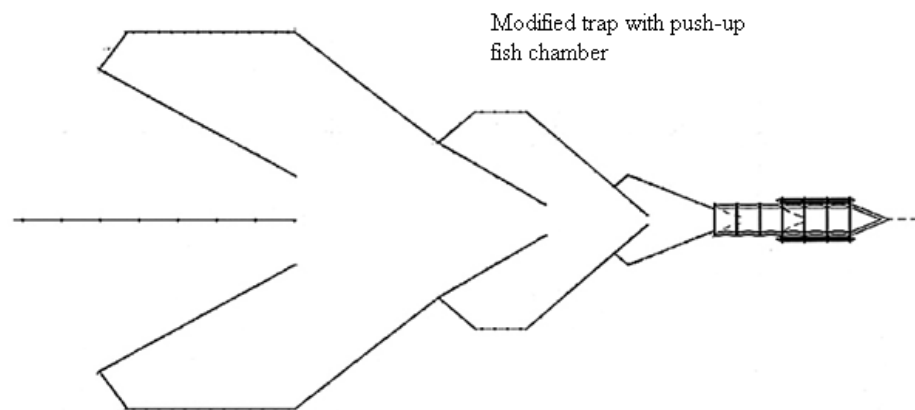
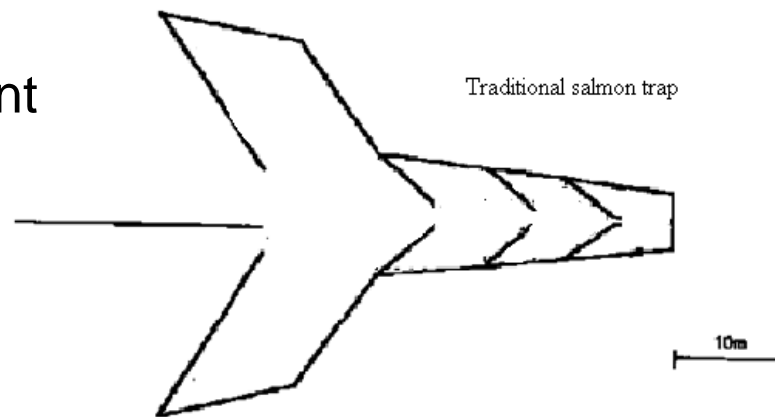
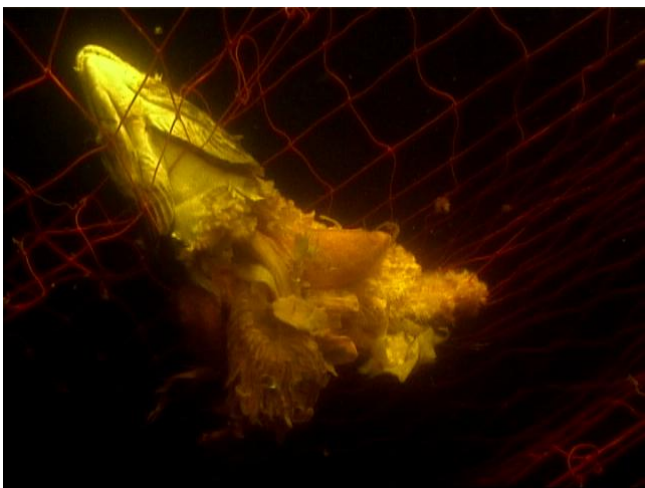
- Protecting catch
- Minimizing reward



The Push-up trap

Avoiding positive reinforcement

- Protect fish in fish bag
- No sharp corners
- Mesh allow fish trough









Small Push-up trap for pike-perch

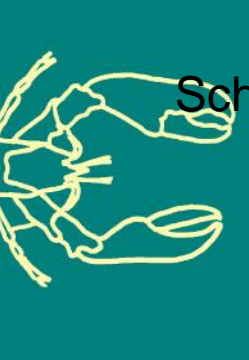


Push-up trap for herring

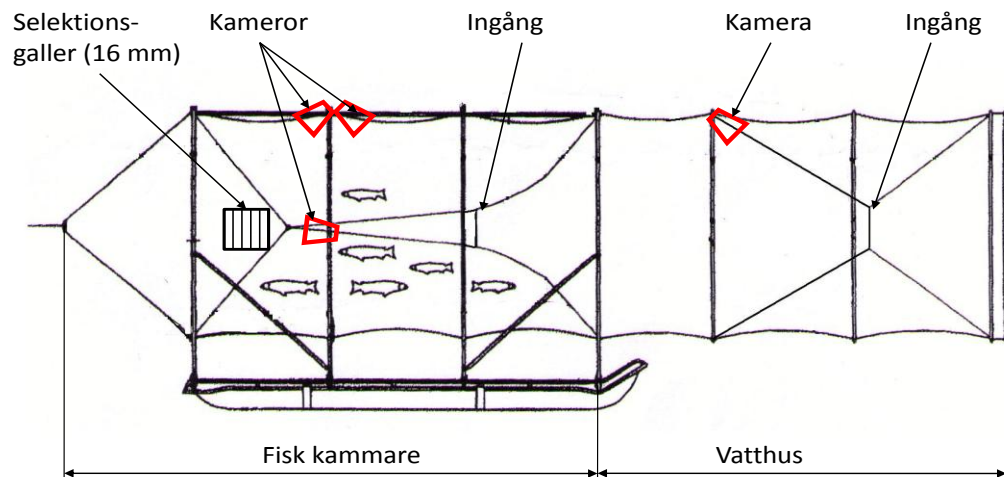
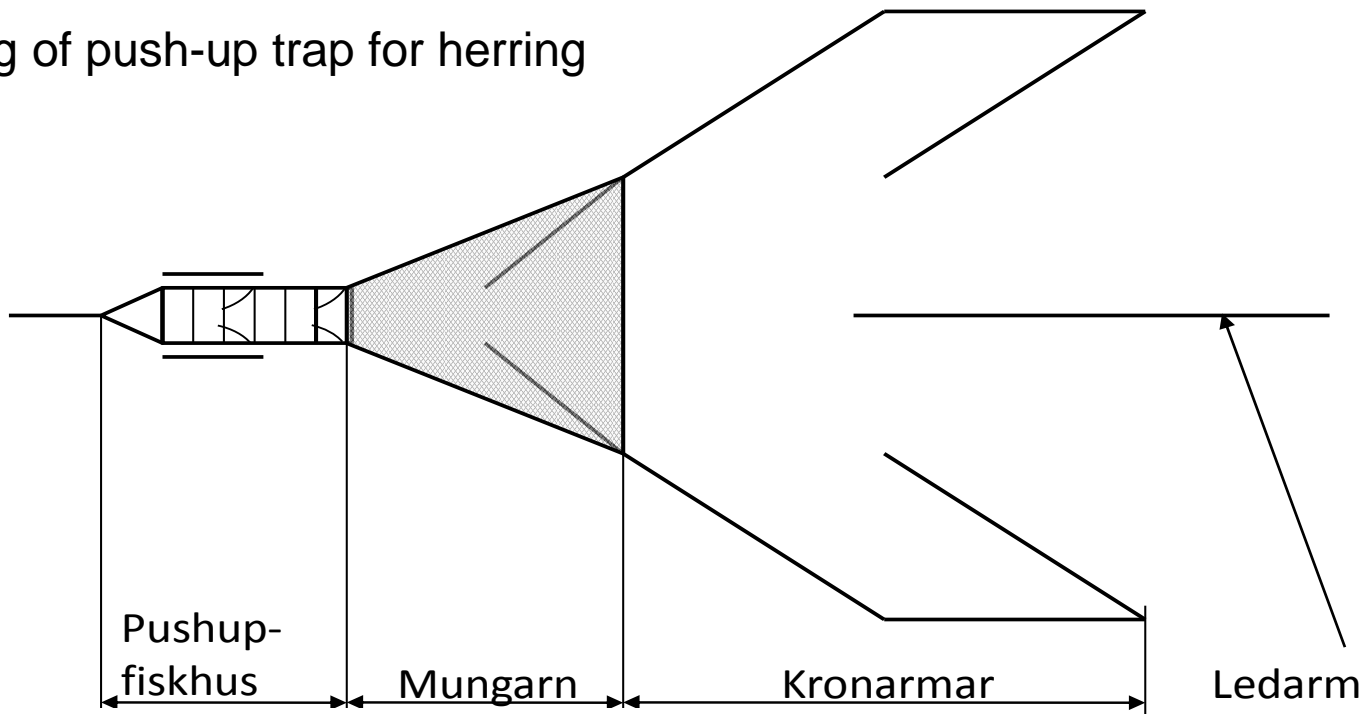
Coastal Laboratory



SWEDISH BOARD
OF FISHERIES



Schematic drawing of push-up trap for herring







Advantages

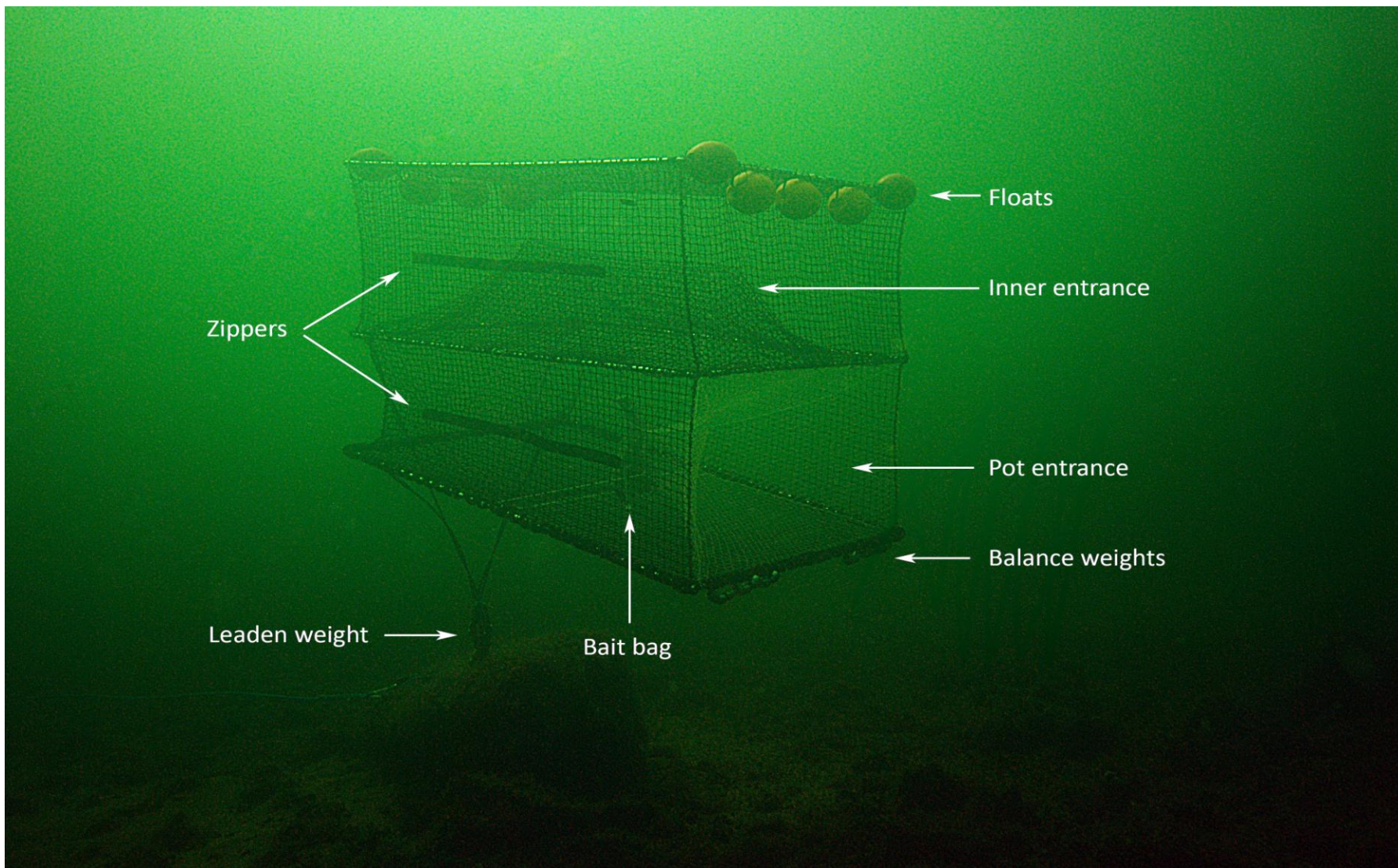
- Size selective
- Easy to handle
- No effect on sea floor
- Traps do not need to be emptied every day
- Seal Safe
- Live catch
- Sea-farming opportunity
- No by-catch of marine mammals and birds
- No ghost fishing impact

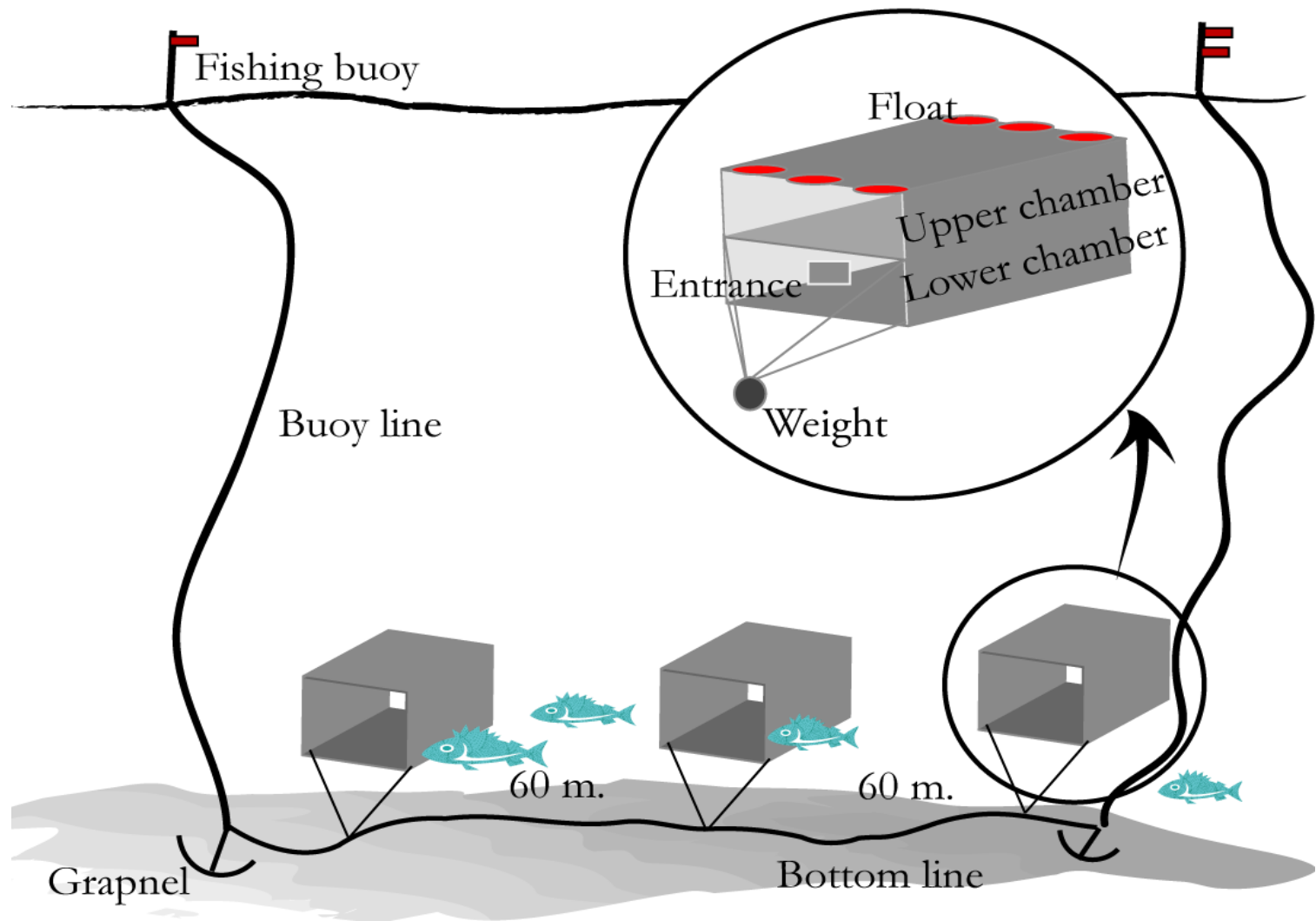
and disadvantages.....

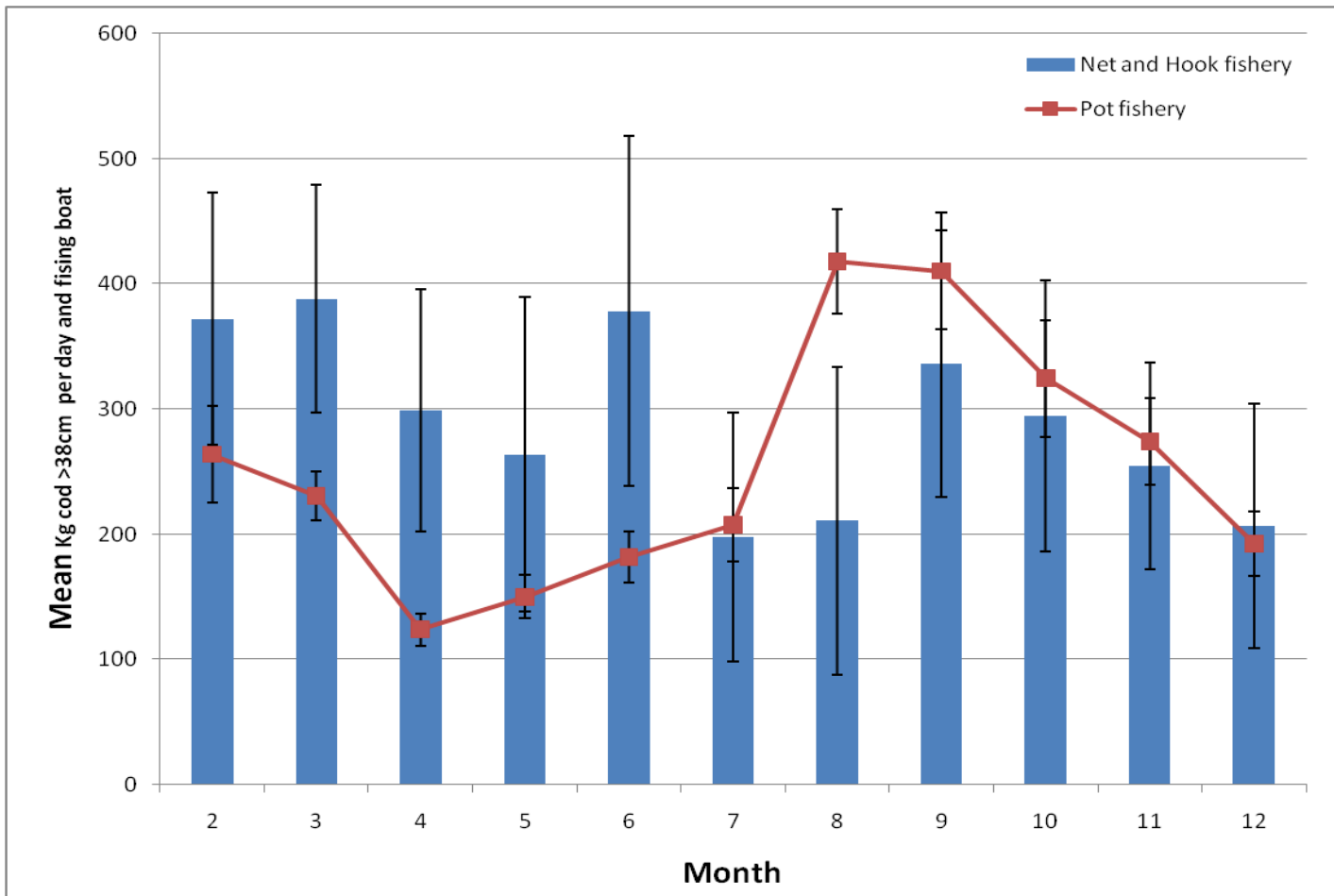
- Not efficient all season (dependent of target species)
- By-catch of seals
- Expensive fishing gear



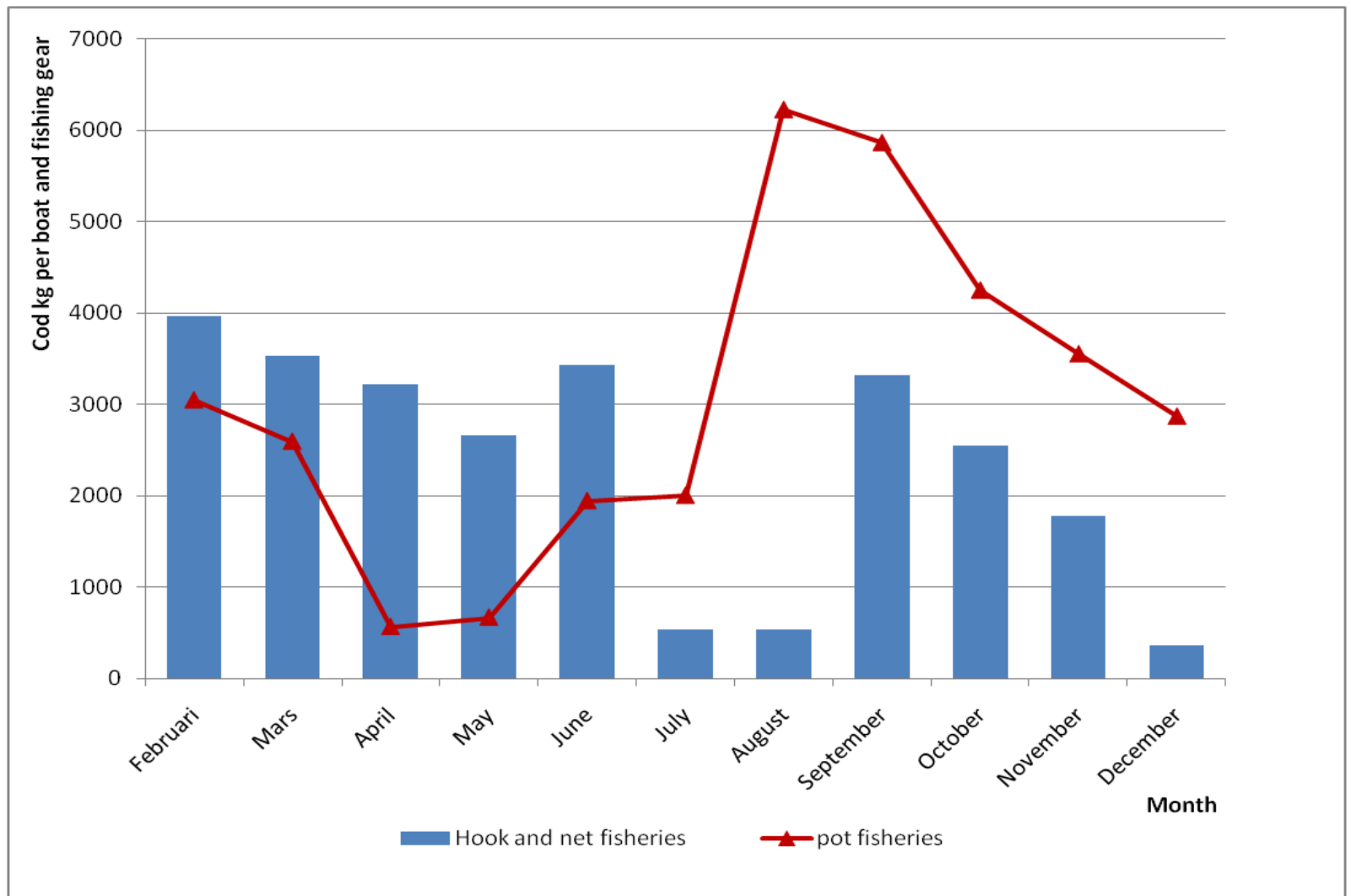
Cod pots, main focus 2009 and 2010







Daily catch per day for cod pot fisheries sv net and hook fisheries



Net and Hook fishery: 25 800 kg per year

Pot fishery: 33 600 kg per year



The pots selectivity

By placing a 45mm selection panel, only cod larger than 38 cm are caught





Advantages

- Species selective
- Size selective
- No effect on sea floor
- Pots can stay long in the water
- "Seal Safe"
- Live catch
- Sea-farming opportunity
- No by-catch of marine mammals and birds
- Low ghost fishing impact

and disadvantages.....

- Not easy to handle
- Not efficient all season
- By-catch of seals
- Ghostfishing
- Conflict with other gear types
- Investment in the fishing fleet
- Bait needed



New "seal-safe" model of cod pot





Finally.....

Key to implementation.....

Live catch, high quality + An sustainable and ecological fishery



Higher catch value



