



DiscardLess

# Is a discard ban good for the ecosystem?

WP1 – Marie Savina-Rolland

# Discarding and fishing mortality

Discarding => solve the by-catch issue



Death due to:

- fishing process
- time on deck
- predation
- incapacity to reach a suitable habitat once released

=> Increase the fishing mortality

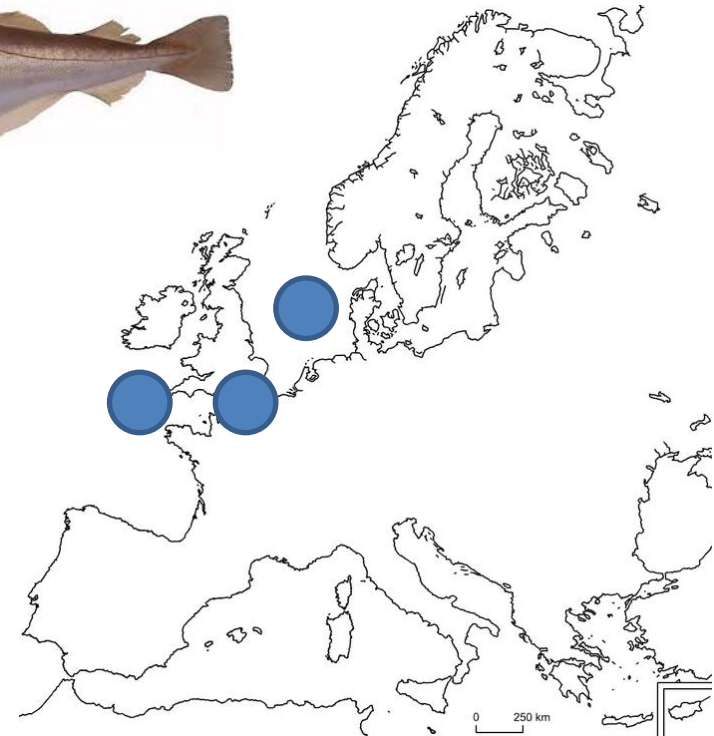


# Discarding and fishing mortality



## Discard rates

	<b>Plaice</b>	<b>Dab</b>	<b>Whiting</b>
North Sea	42%	93%	35%
Eastern Channel	32%	53%	47%
Celtic Sea	73%		43%



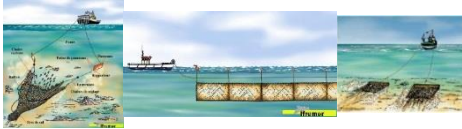
**DiscardLess**

# Effects of the LO on stocks

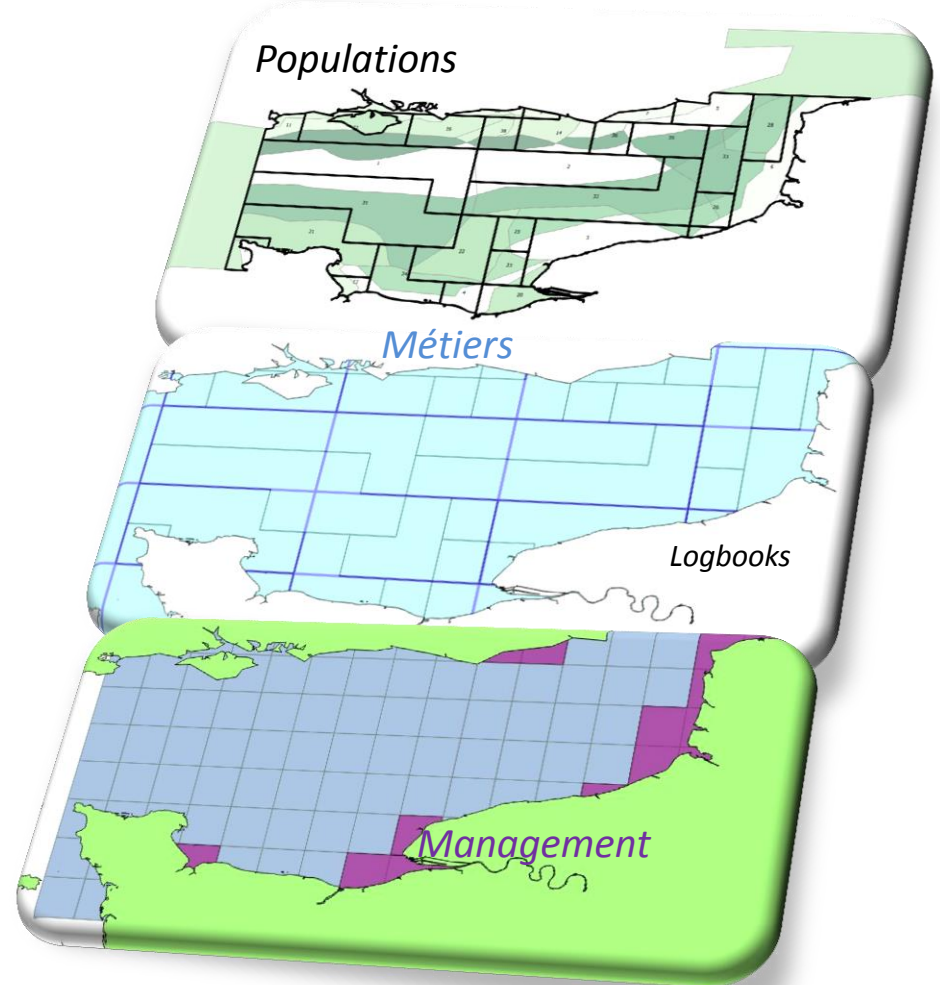
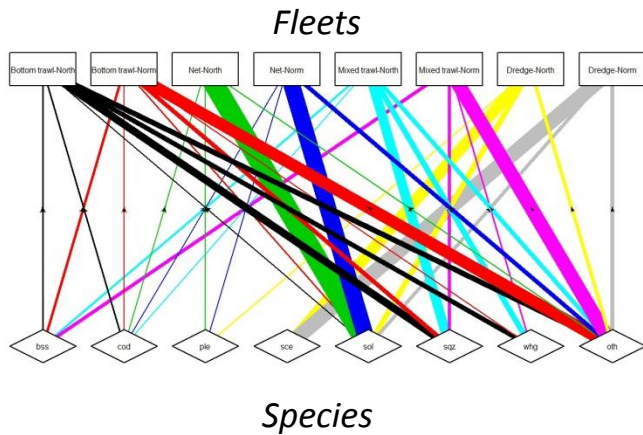
Sole, Plaice, Red Mullet, Scallops, Squid, Cuttlefish, Cod and Whiting



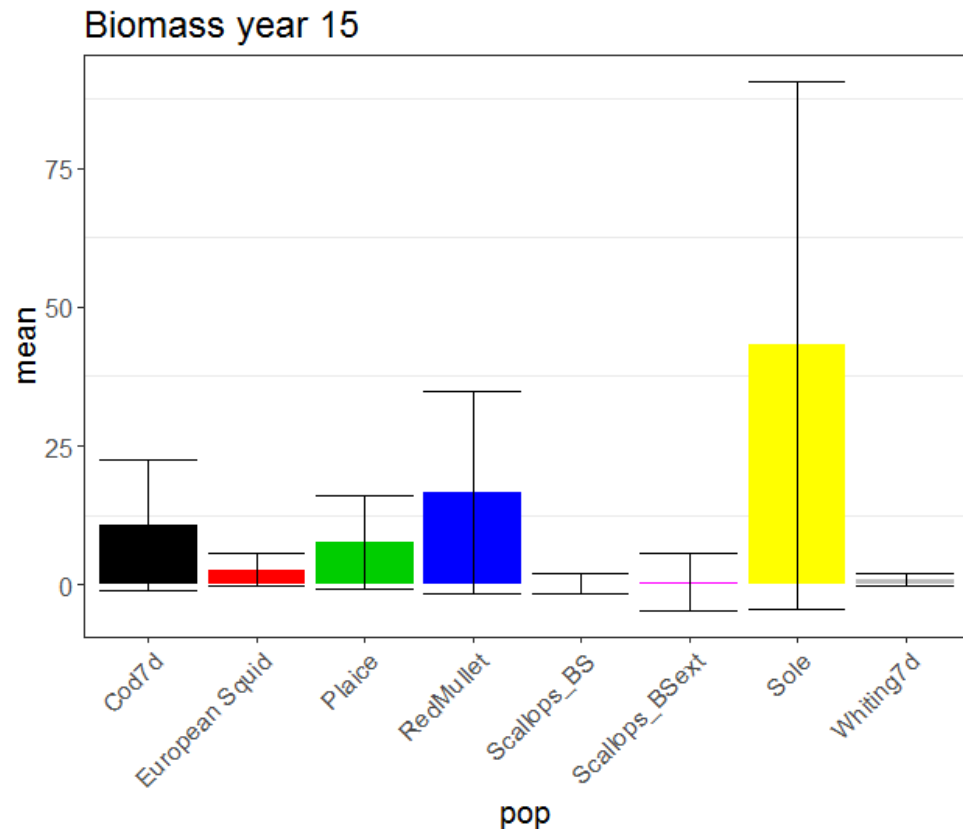
French trawlers, dredgers, netters, and others



- **Technical interactions between species**

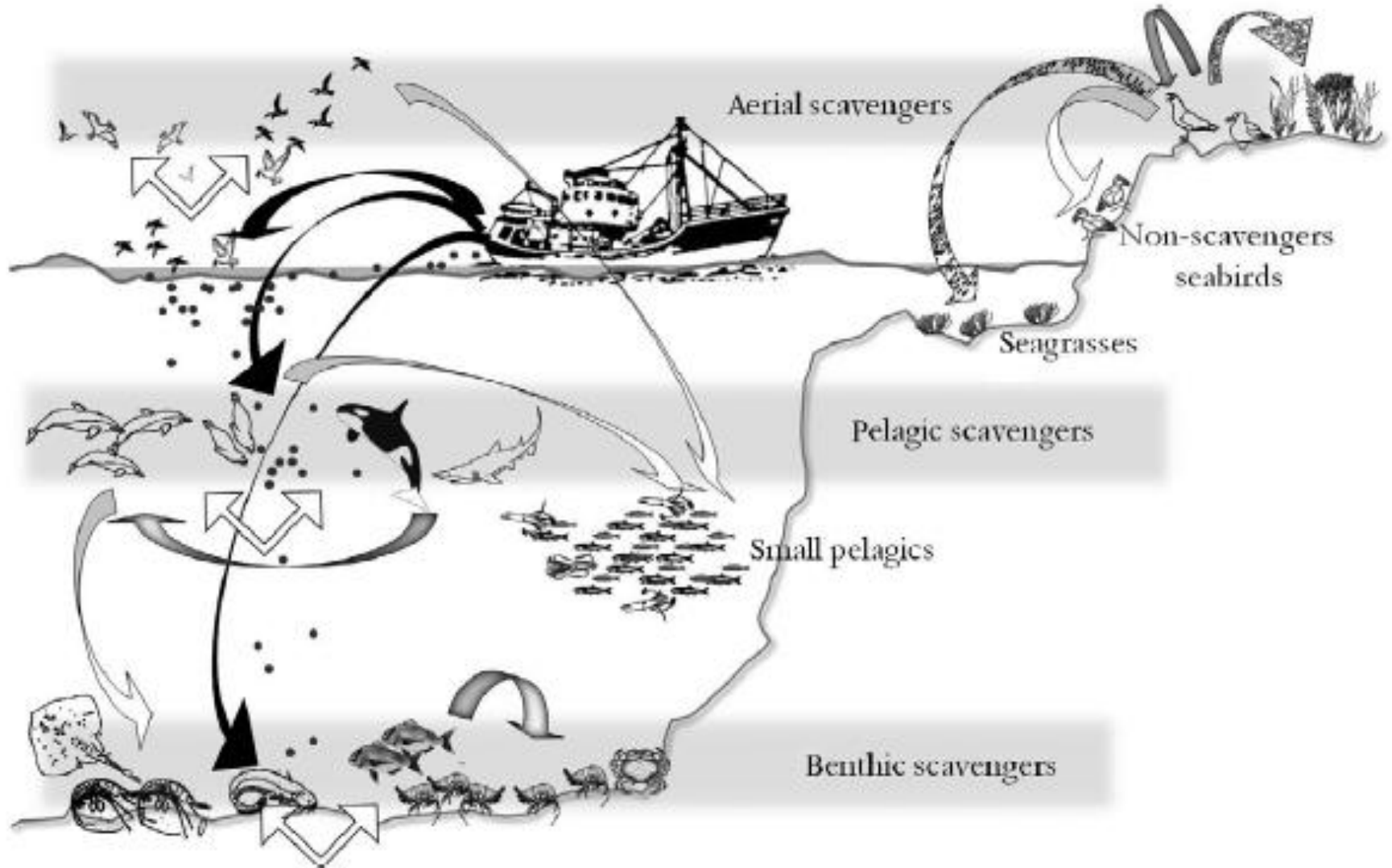


# Effects of the LO on stocks



- Due to the decrease in catch
- A decrease in the catch in excess of MSY level is beneficial for stocks, whatever happens to it

# Fate of discards in the ecosystem



# Aerial scavengers



Fishing patterns => scavenging seabirds  
=> seabirds communities



Reduced discards => altered seabirds communities, with direct effects on scavengers population and indirect through increased competition for live prey, and predation on other seabirds

# Benthic scavengers



Benthic scavengers such as starfish, whelks, crabs, amphipods are known to consume discards



Contribution of discards to their requirements remain unclear

Possibility of population enhancement at a local level are mentioned

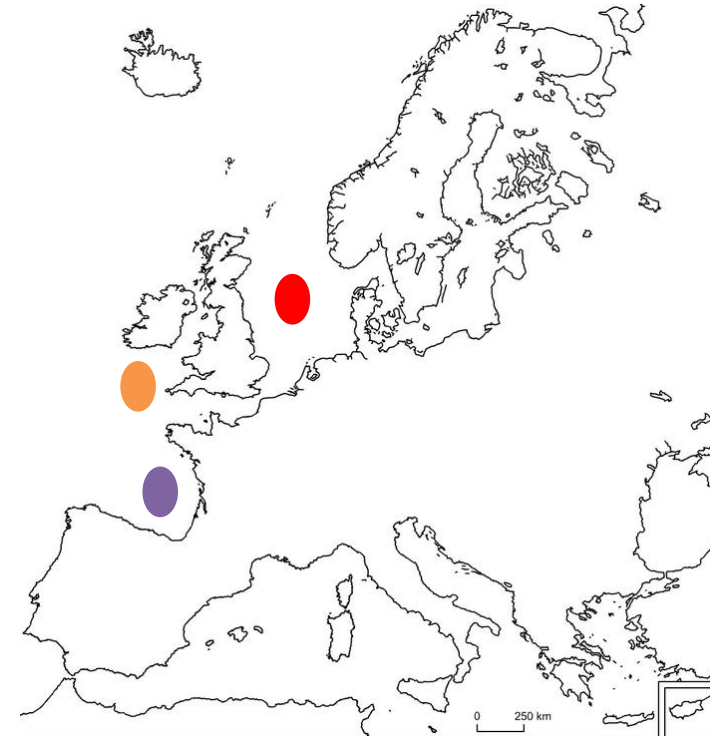
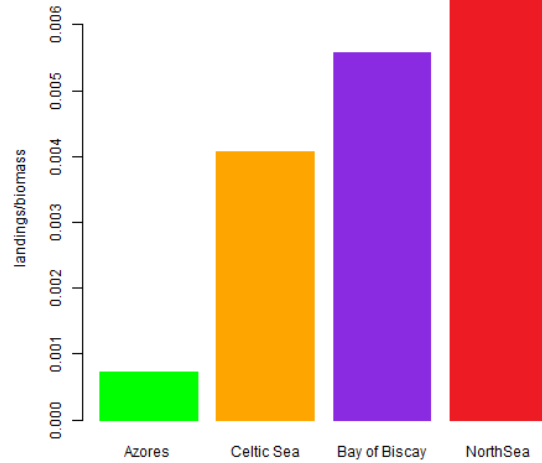


Recent work on comparing benthic scavengers and discards distribution in the North Sea show no links

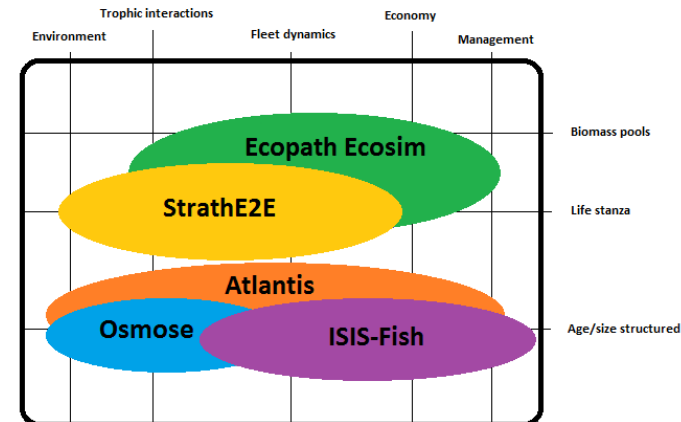
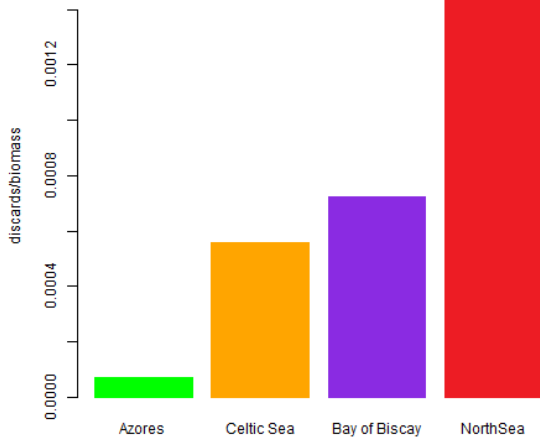


# Effect of the LO on various ecosystems

## Fishing pressure



## Amount of discards



# Landing Obligation vs Discards As Usual

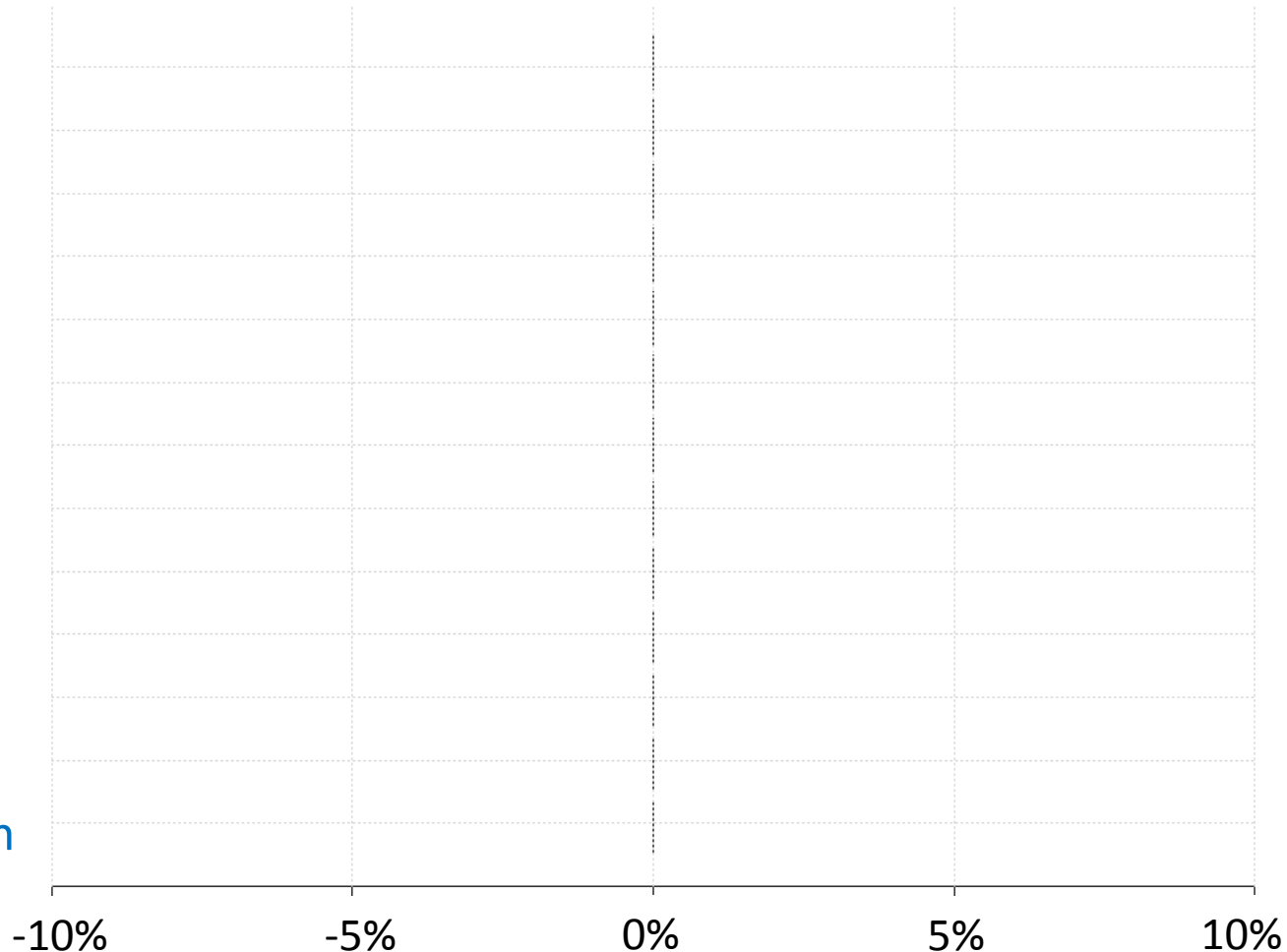
F same – Q Discards = 0



## The Azores

Changes in biomass

- Zooplankton
- Turtles
- B susp-dep
- Phytoplankton
- Pelagic inverts
- Pelagic fish
- Mammals
- Detritus
- Demersal fish
- B car – scav
- Benthic plants
- Birds
- Bentho-pel fish



EWE

# Landing Obligation vs Discards As Usual

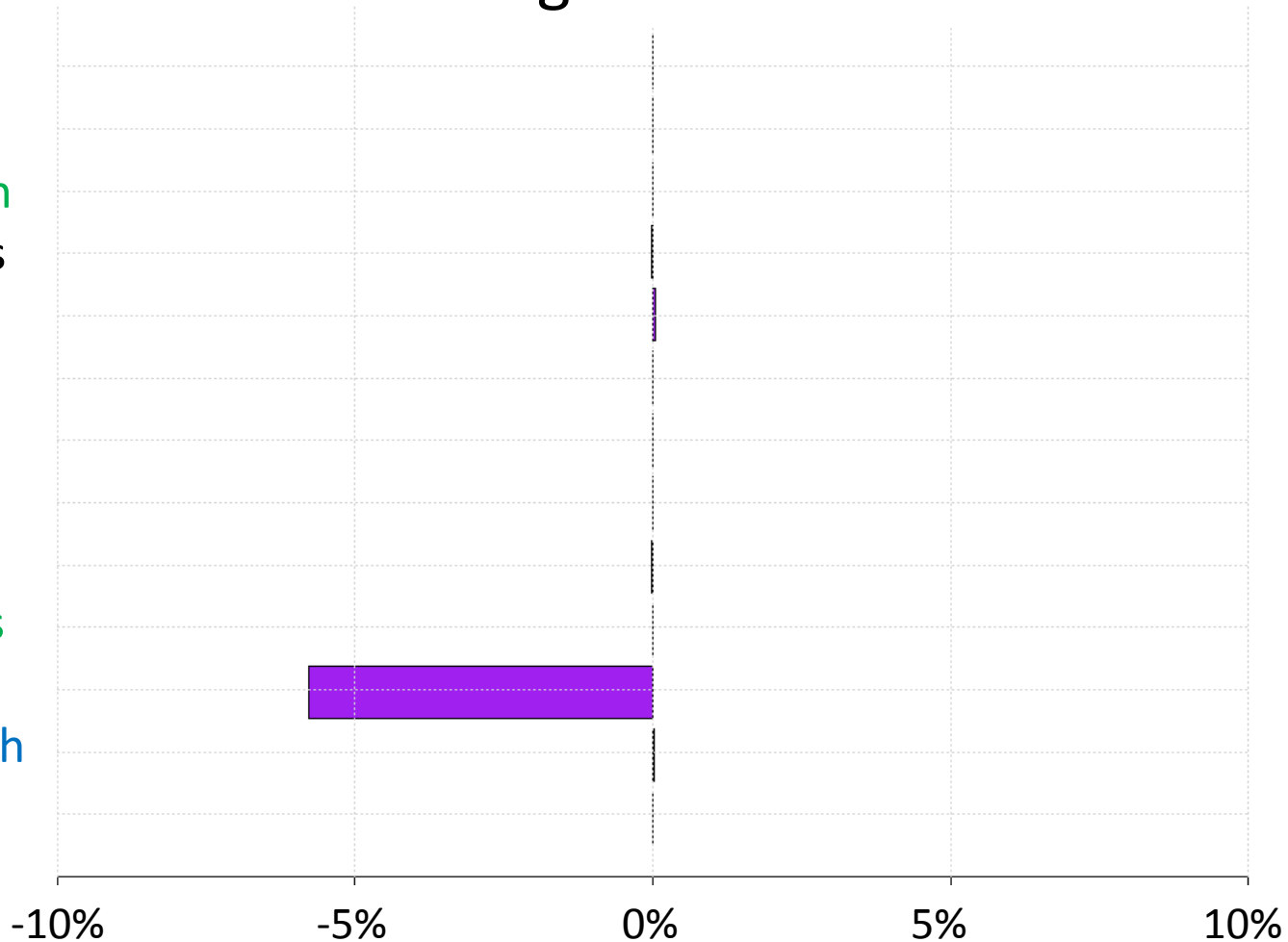


The Bay of Biscay

F same – Q Discards = 0

## Changes in biomass

- Zooplankton
- B susp-dep
- Phytoplankton
- Pelagic inverts
- Pelagic fish
- Mammals
- Detritus
- Demersal fish
- B car – scav
- Benthic plants
- Birds
- Bentho-pel fish
- Bacteria



EwE

# Landing Obligation vs Discards As Usual



F same – Q Discards = 0

## The North Sea

### Changes in biomass

Zooplankton

B susp-dep

Phytoplankton

Pelagic fish

Nutrients

Detritus

Demersal fish

B car – scav

Birds and mammals

