


# Aktualno stanje ribolovnih resursa u Jadranu

A sunset over the sea with a fishing boat silhouette. The sun is a large, bright orange-red orb in the center of the sky. The sea is a calm, golden-brown color. In the foreground, the silhouette of a fishing boat is visible on the right side. The background shows a dark, silhouetted coastline on the left and a small island in the distance.

Dr.sc. Igor Isajlović, Institut za oceanografiju i ribarstvo  
KONFERENCIJA O PROSTORNOM PLANIRANJU MORSKOG PODRUČJA  
Kampus Sveučilišta u Dubrovniku, Branitelja Dubrovnika 41,  
Dubrovnik 08.05.2024.

# JABUČKA KOTLINA

*Merluccius merluccius*



Oslić

Fig. A

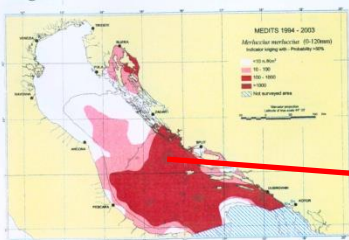
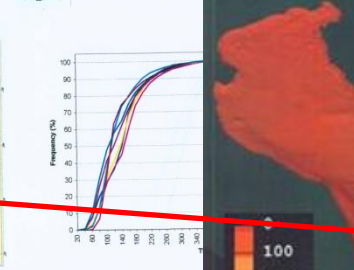
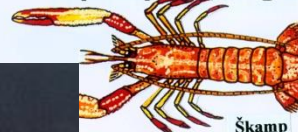


Fig. B

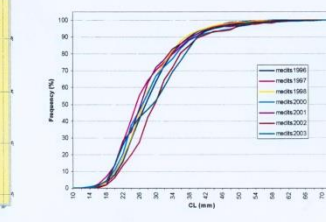
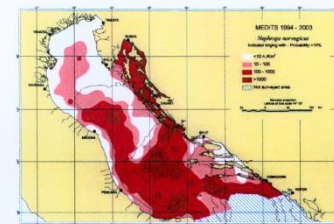


*Nephrops norvegicus*



Škamp

Fig. B



*Eledone cirrhosa*



Bijeli muzgavac

Fig. A

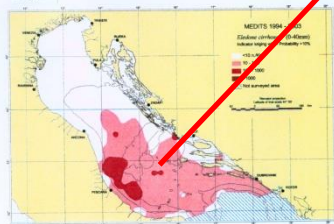
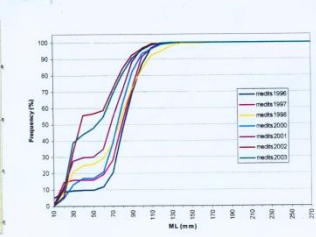


Fig. B

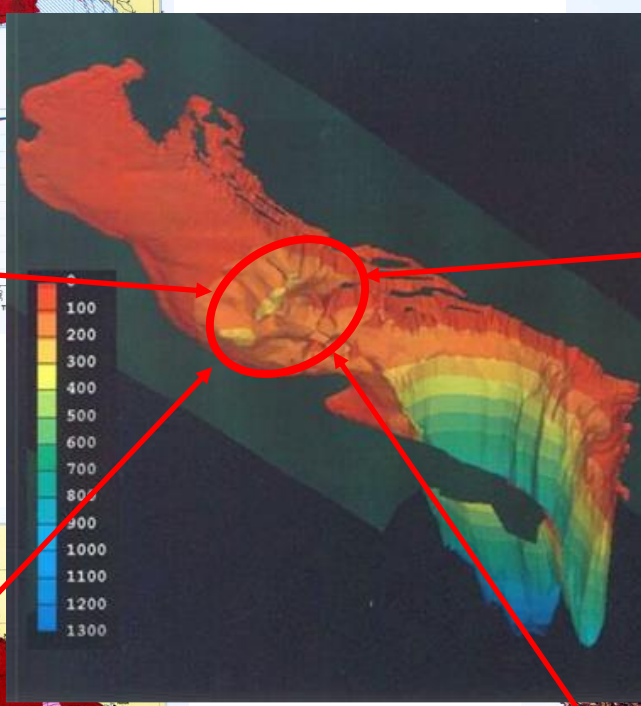
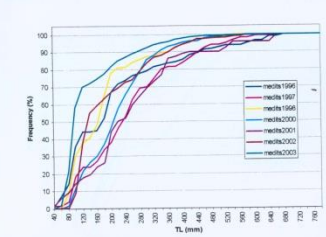


*Lepomis budegassa*

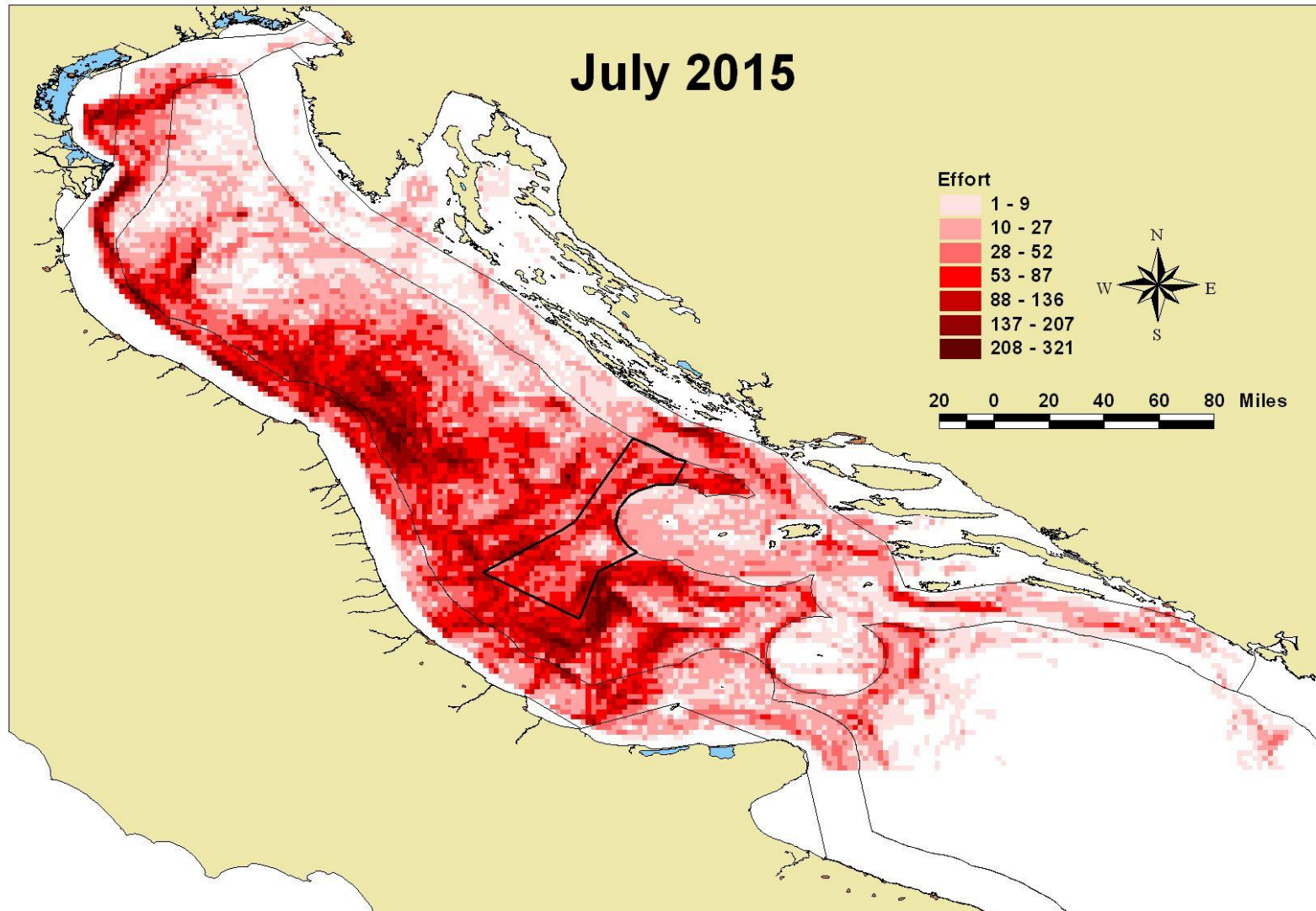


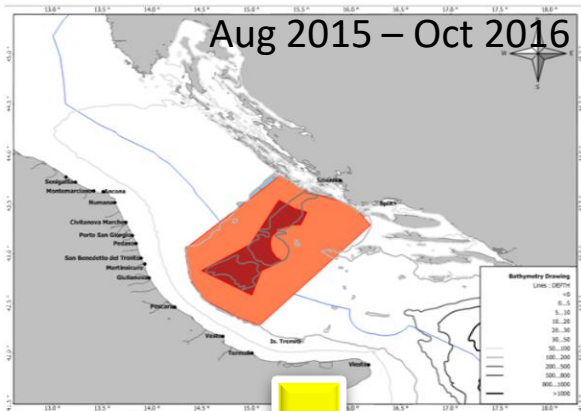
Grdobina

Fig. B



# Fishing effort – bottom trawl fleet





**GSA 17 ≈ 94.000 km<sup>2</sup>**

**Jabuka/Pommo area ≈ 14.000 m<sup>2</sup>**  
**(15% GSA 17)**

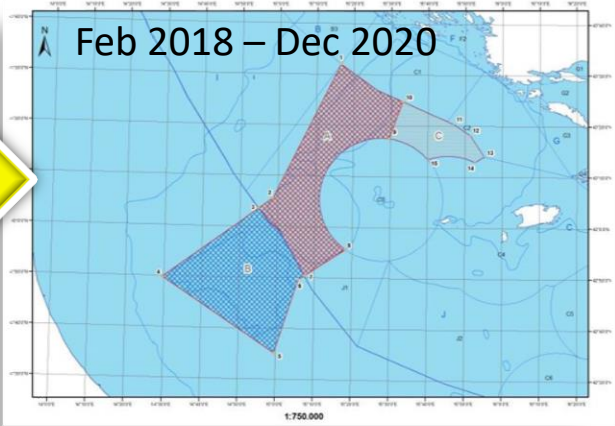
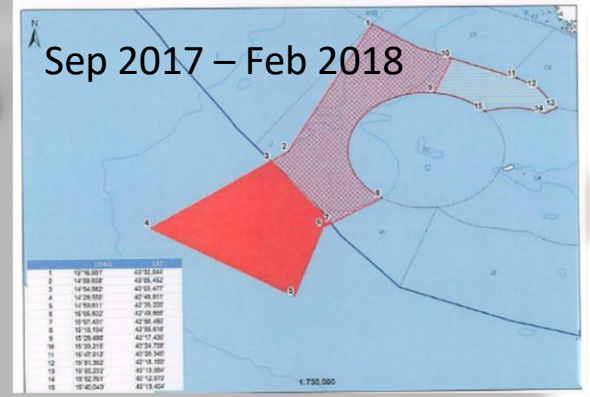
**FRA ≈ 3.300 km<sup>2</sup>**

**No take zona ≈ 1.500 km<sup>2</sup>**  
**(1,5% GSA 17)**



**Recommendation GFCM/41/2017/3 on the establishment of a fisheries restricted area in the Jabuka/Pomo Pit in the Adriatic Sea**

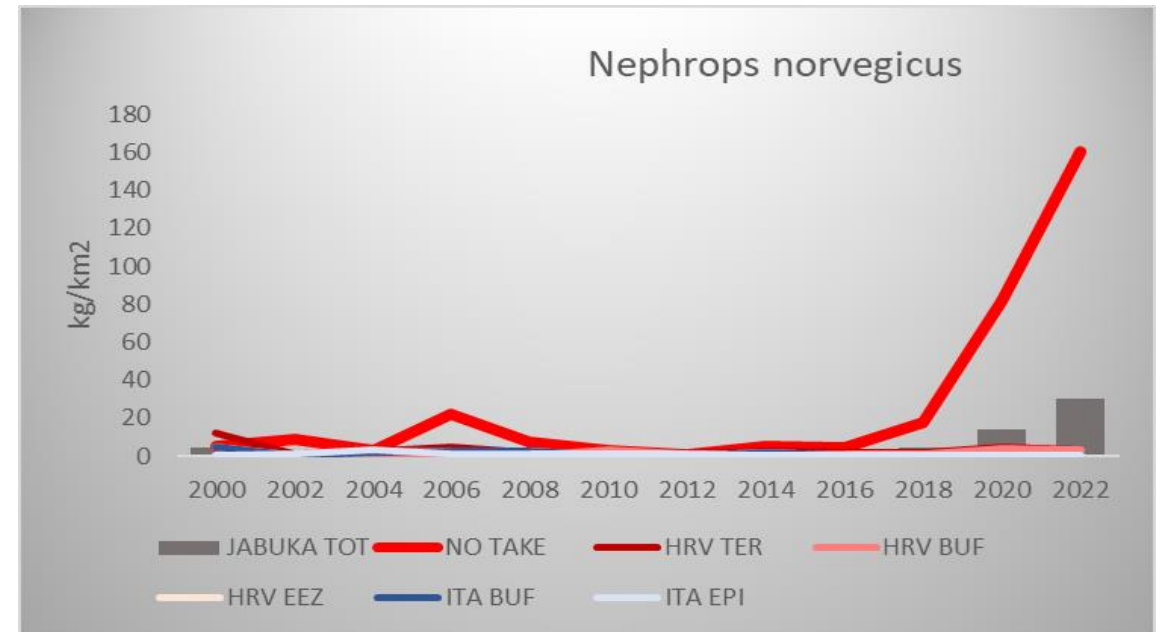
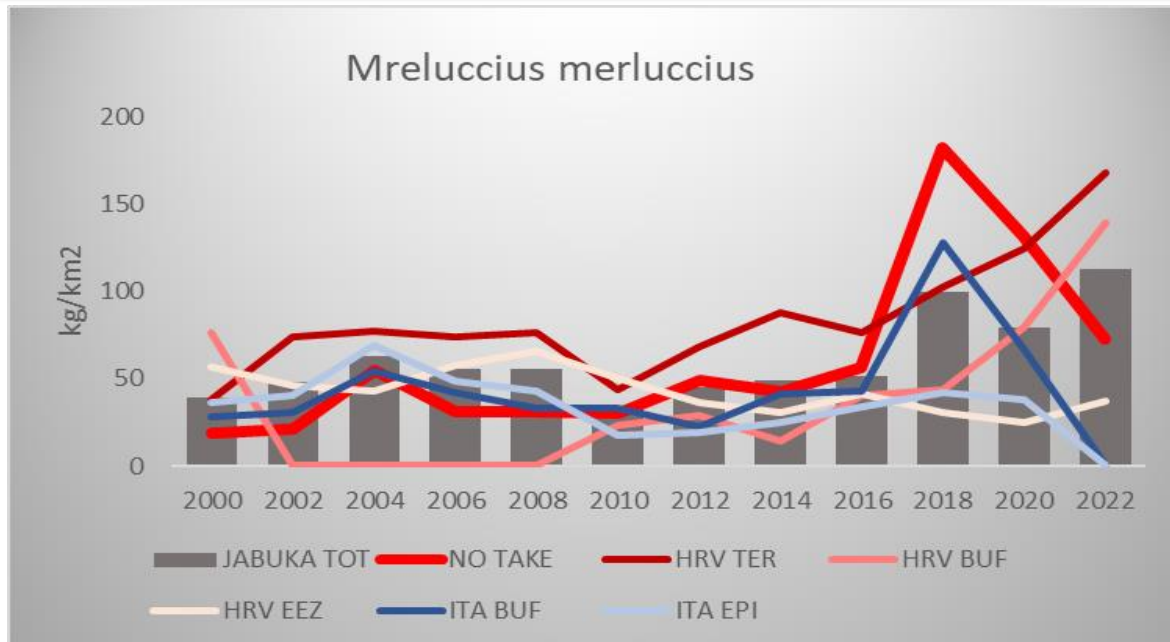
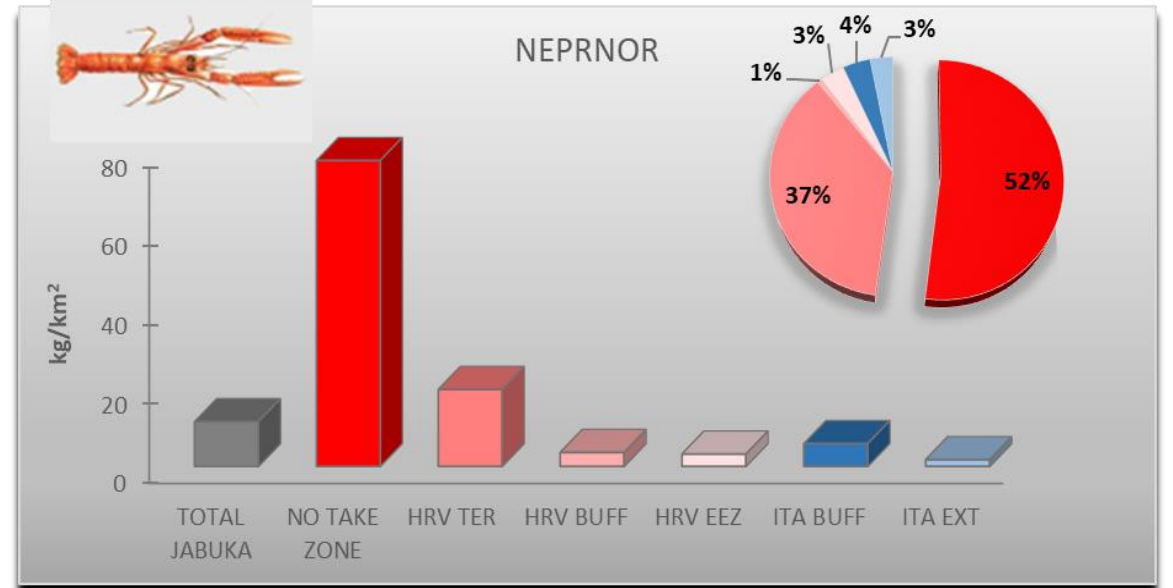
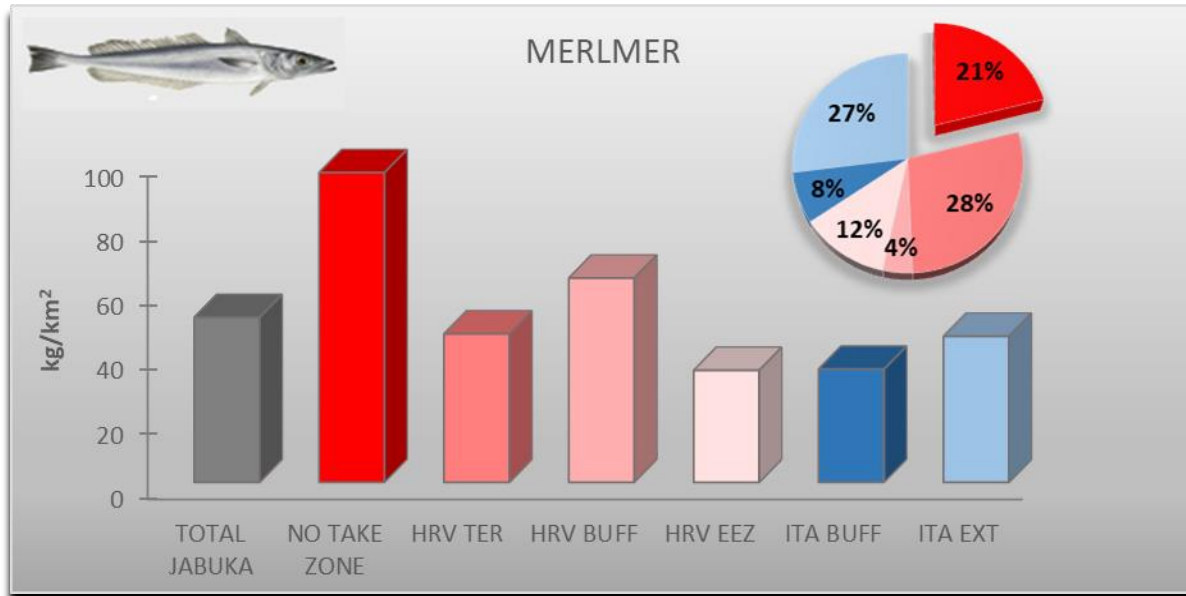
**Recommendation GFCM/43/2019/5 on a multiannual management plan for sustainable demersal fisheries in the Adriatic Sea (geographical subareas 17 and 18)**



**Nov 2019 GFCM Demersal MAP Adriatic Sea**

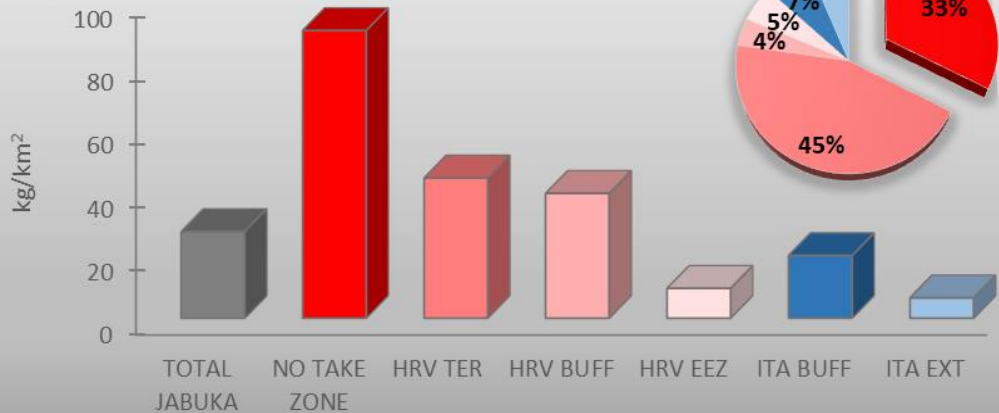
**Nov 2021 GFCM FRA – Permanent closure**

# STANJE U JABUČKOJ KOTLINI

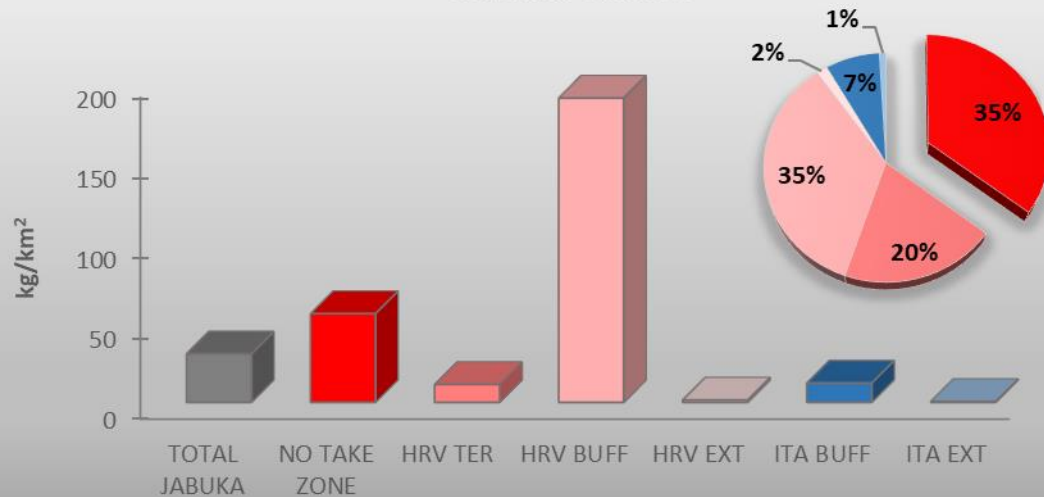




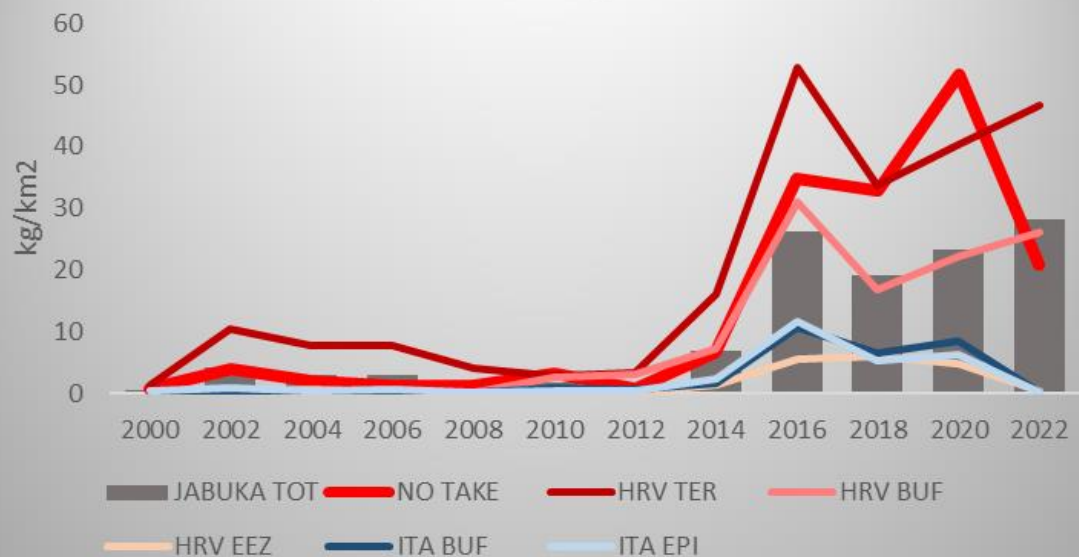
### PAPELON



### SQUALIFORMES



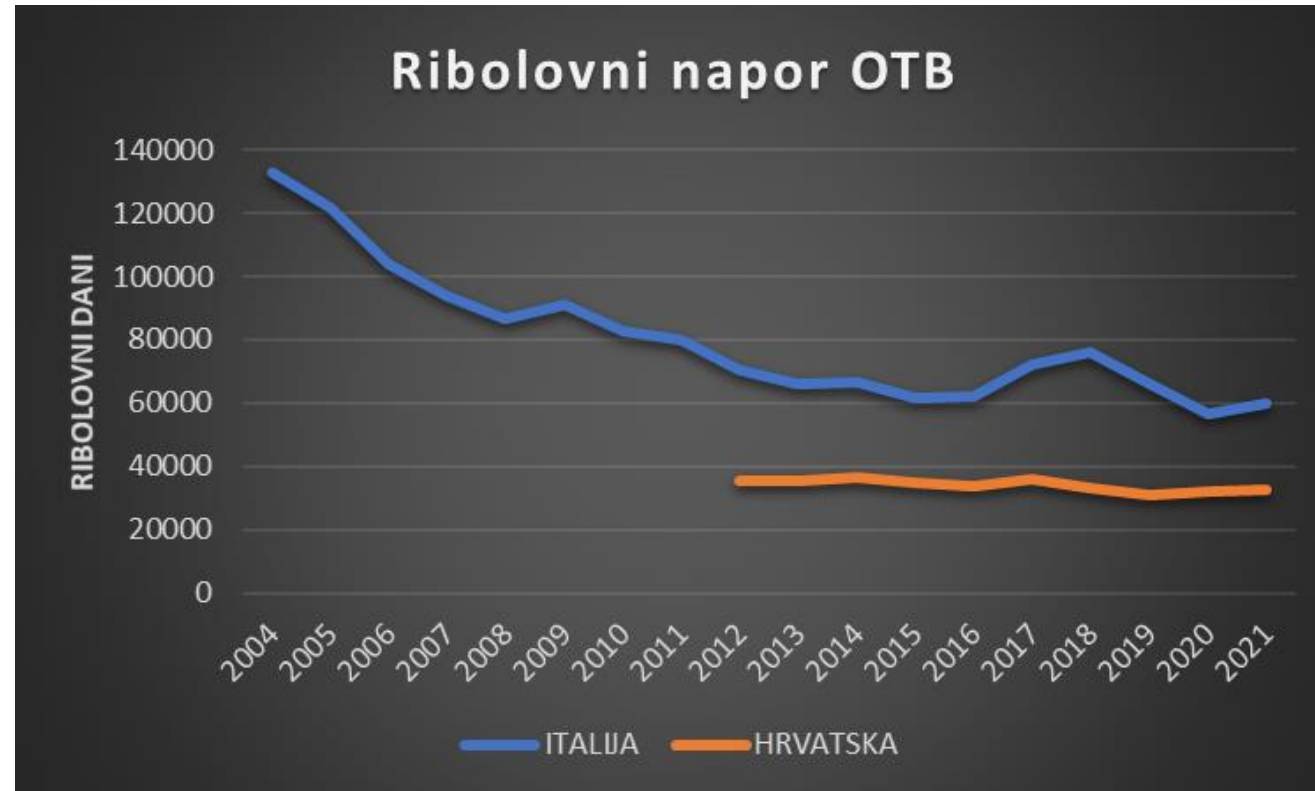
### Parapenaeus longirostris



### SELACHIANS

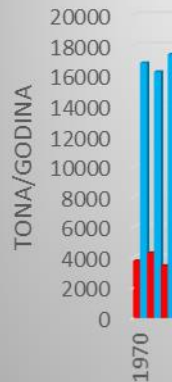


# GODIŠNJI ULOV HRVATSKE I ITALIJE U GSA 17



# GODIŠNJI ULOV HRVATSKE I ITALIJE U GSA 17

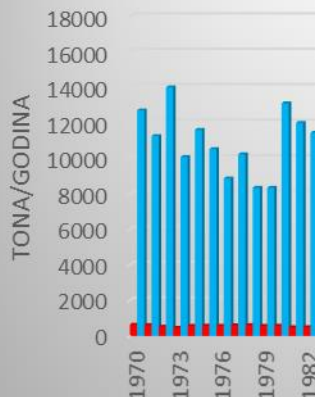
## DEMERZAL



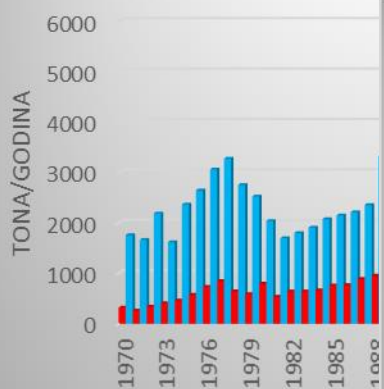
## RAKOVI



## GLAVONOŠCI



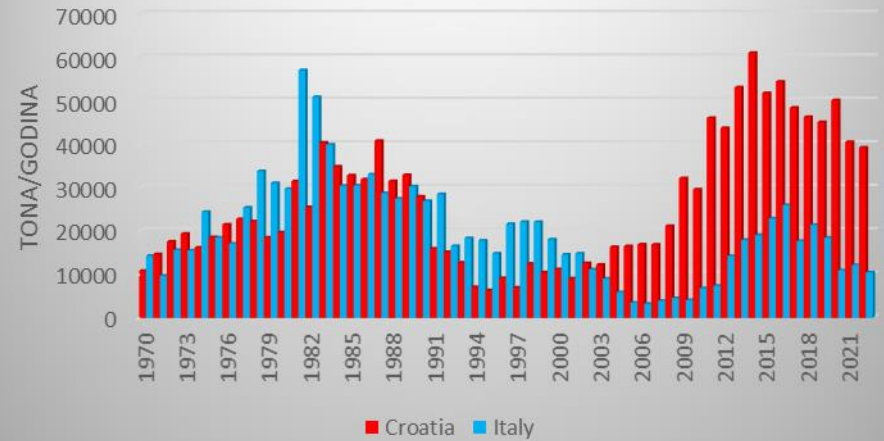
## OSLIĆ



## INĆUN



## SRDELA



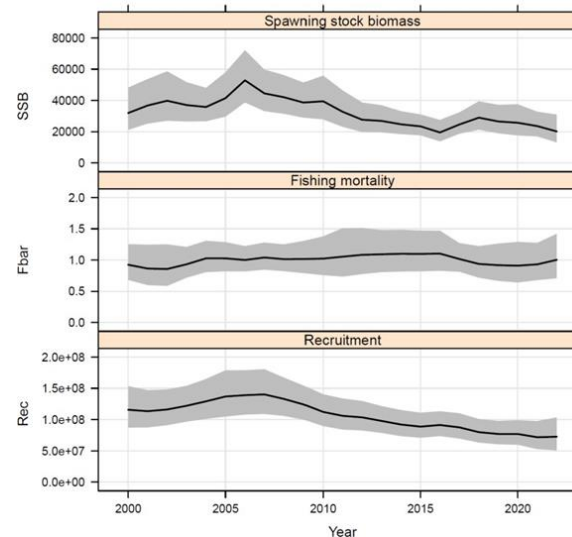


# PROCJENE STANJA STOKOVA JADRANA SAC GFCM (2022) I STECF (2021)

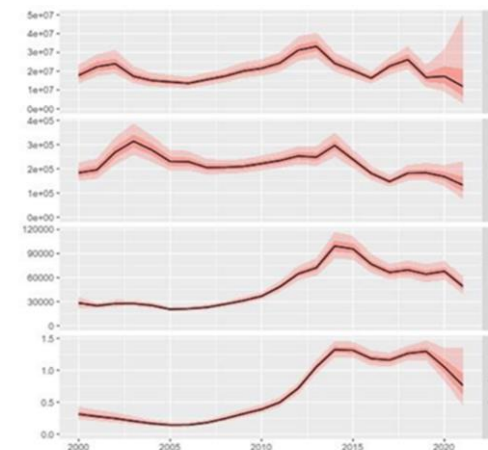
- **Inćun** – prelov – pad smrtnosti, porast biomase
- **Srdela** - predostrožnost
- **Oslić** prelov – pad smrtnosti, porast biomase, pad novačenja
- **Trlja** - solidno stanje (STECF) – pad smrtnosti, porast biomase,
- **Škamp** – prelov, mala smrtnost, mala masa
- **Kozica** – prelov, porast smrtnosti, pad biomase
- **List** prelov – pad smrtnosti, pad biomase
- **Sipa** – prelov, mala biomasa

## INĆUN

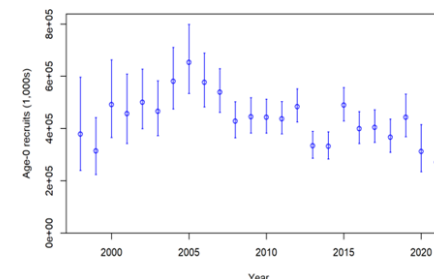
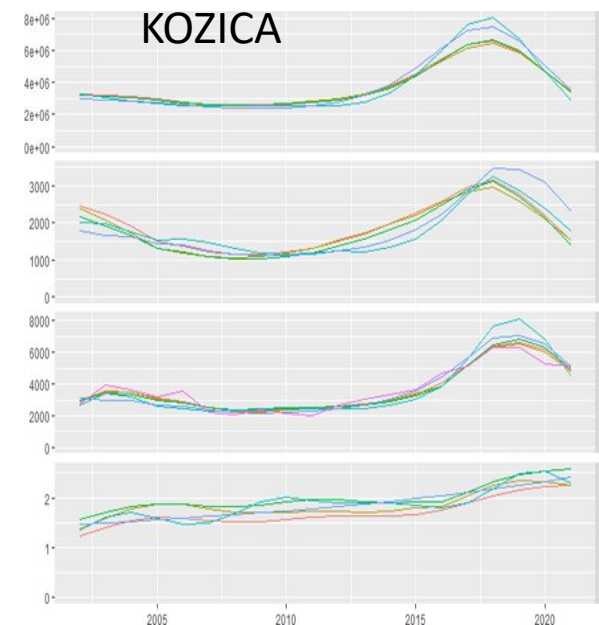
Anchovy – Adriatic Sea – GSA 17 and 18



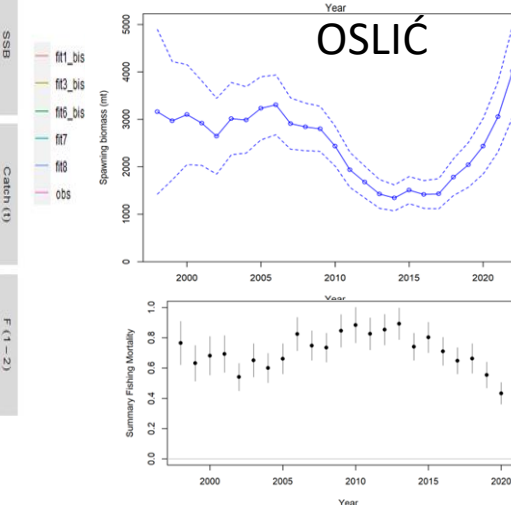
## SRDELA



## KOZICA



## OSLIĆ

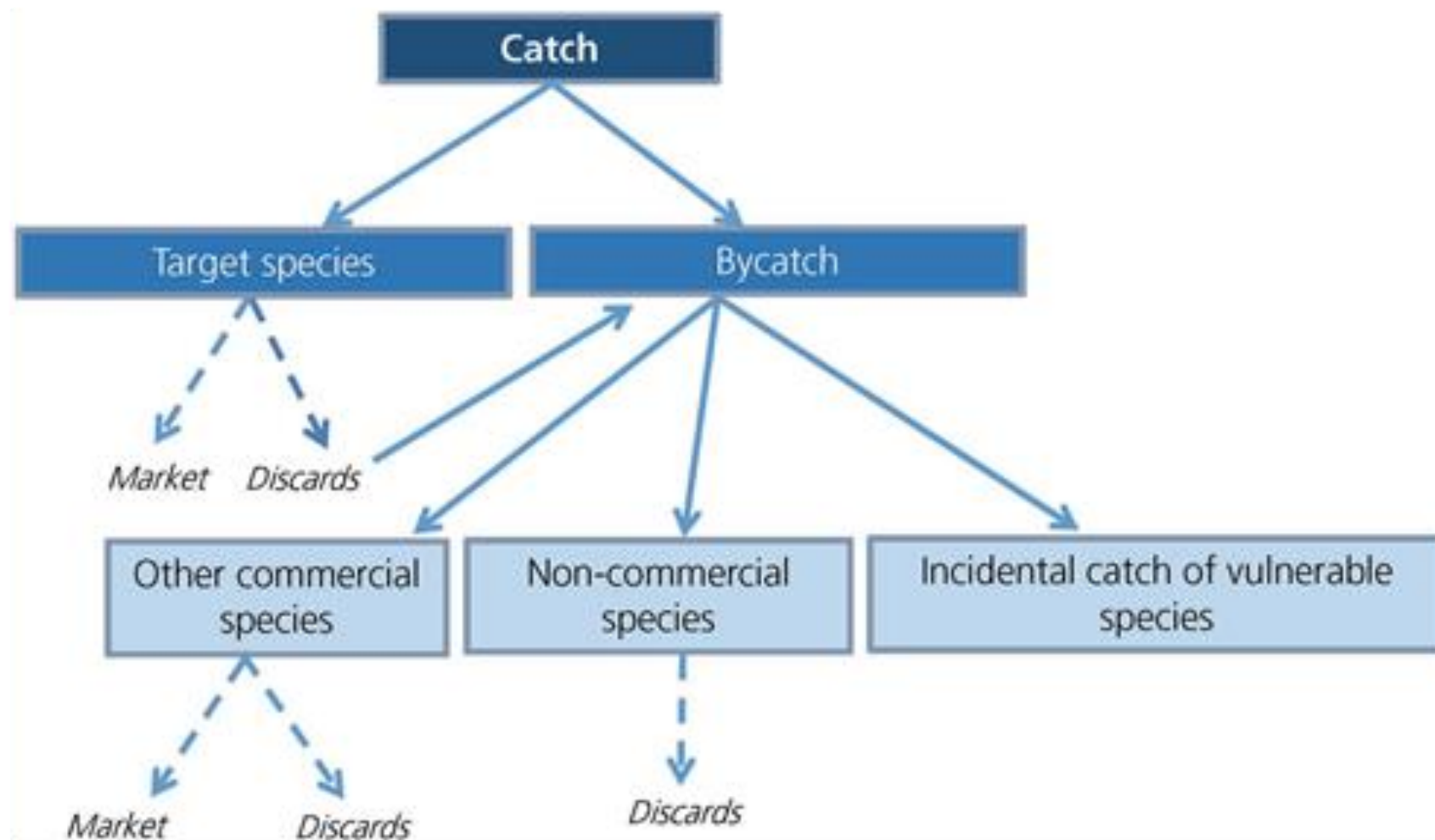


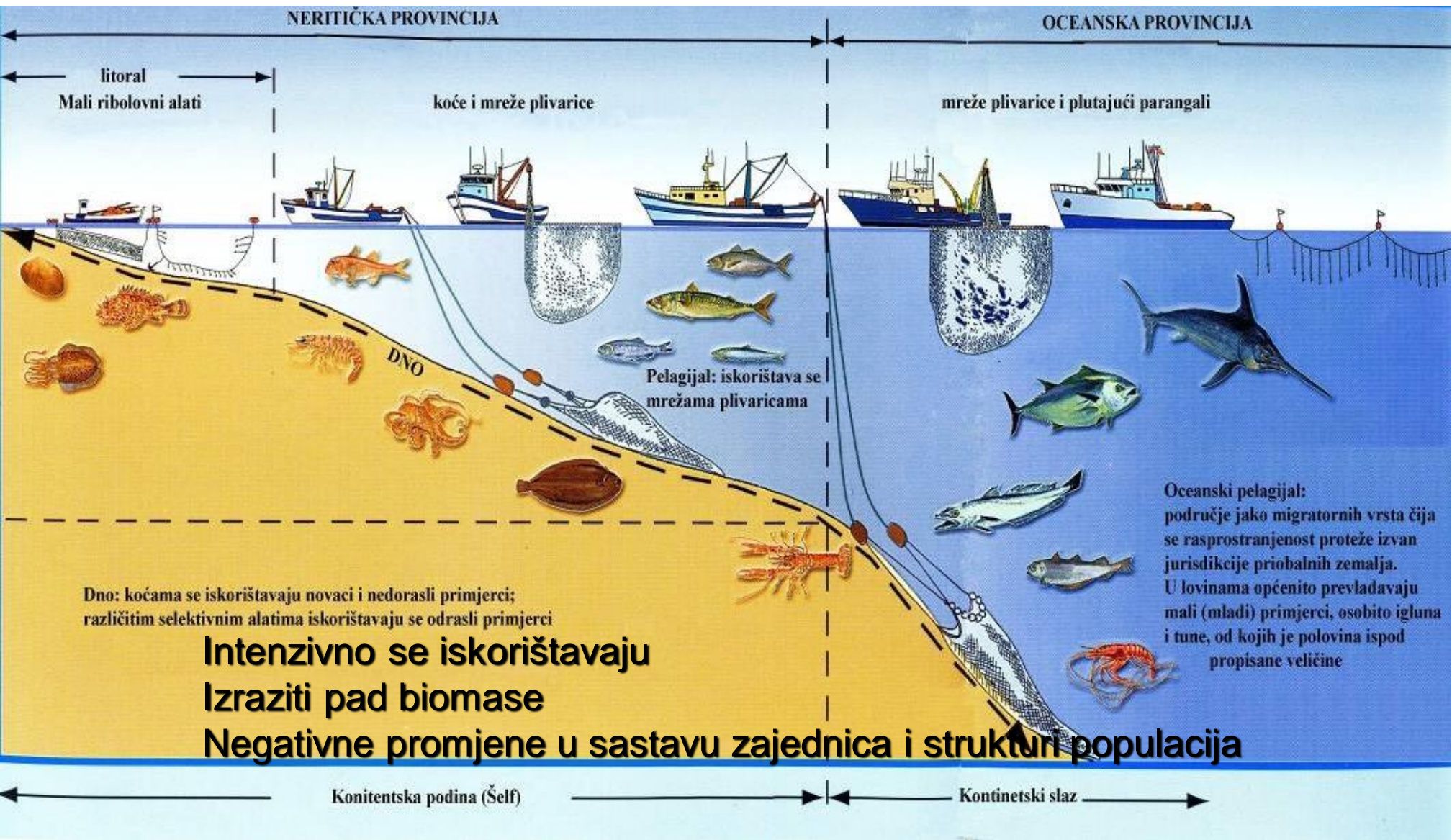
"Neželjeni i odbačeni ulov u  
gospodarskom ribolovu"

- ŠTO JE ODBAČENI ULOV - DISCARD?
- To je dio ulova, koji se ne zadržava na plovilu i odbačen je u more (GFCM, 2018.a).
- Sastoji se od gospodarski važnih i gospodarski nevažnih vrsta morskih organizama
- Razlozi za Odbačeni Ulov
  - Zakonska ograničenja veličine i vrste
  - Ulov nejestivih vrsta
  - Previše ulova u određenom području
  - Ekonomska neisplativost određenih vrsta ribe

FIGURE 1

**Different components of the catch as defined by the GFCM Data Collection Reference Framework (DCRF)**





# INDIREKTNI UČINCI RIBOLOVA

PRILOV I ODBAČENI  
ULOV

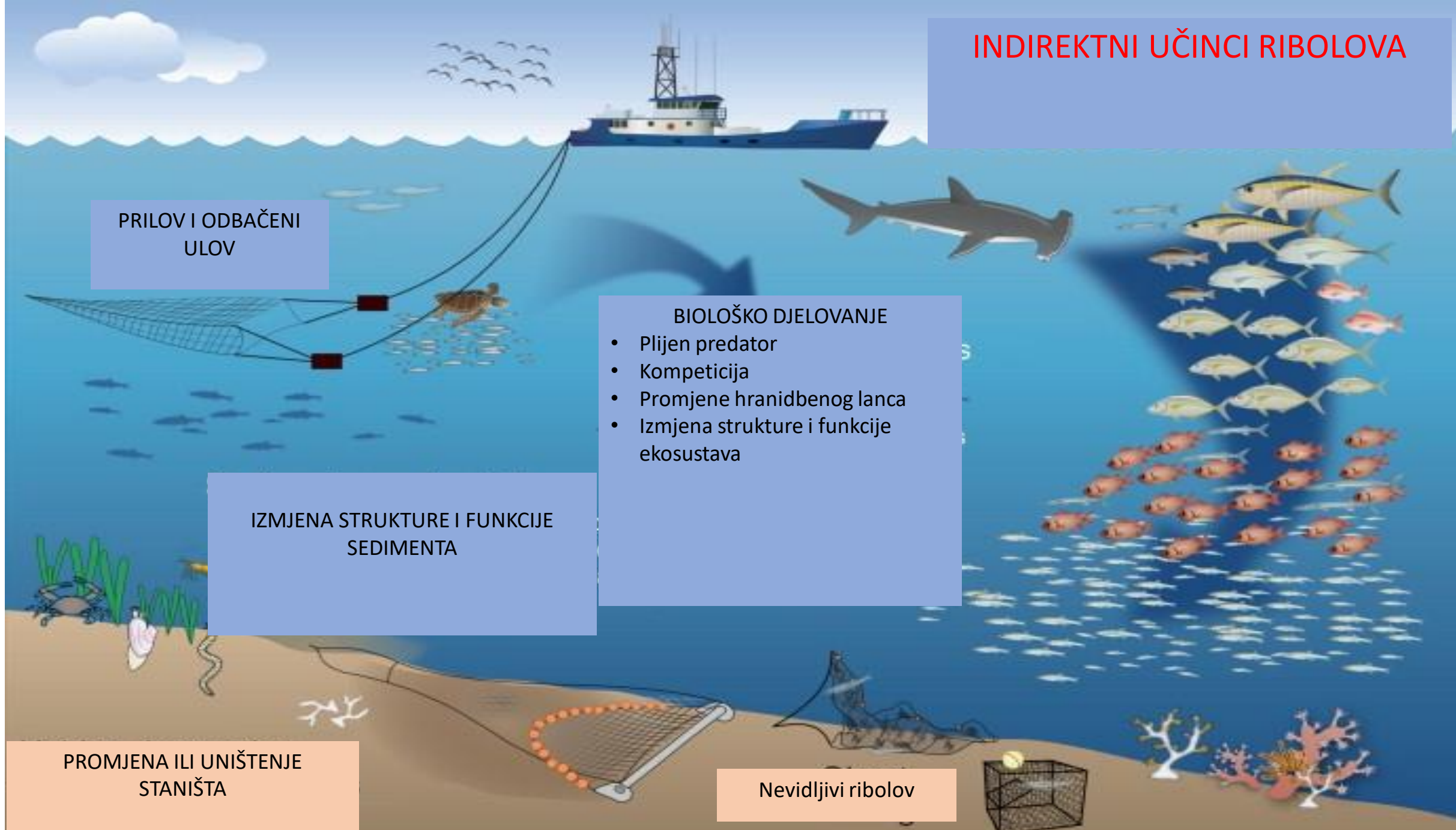
## BIOLOŠKO DJELOVANJE

- Plijen predator
- Kompeticija
- Promjene hranidbenog lanca
- Izmjena strukture i funkcije ekosustava

IZMJENA STRUKTURE I FUNKCIJE  
SEDIMENTA

PROMJENA ILI UNIŠTENJE  
STANIŠTA

Nevidljivi ribolov



# Negativni učinak odbačenog ulova na morski ekosustav

1. Povećanje ribolovne smrtnosti
2. Poremećaji populacija
3. Oštećenje morskog dna
4. Gubitak resursa
5. Selektivni pritisak

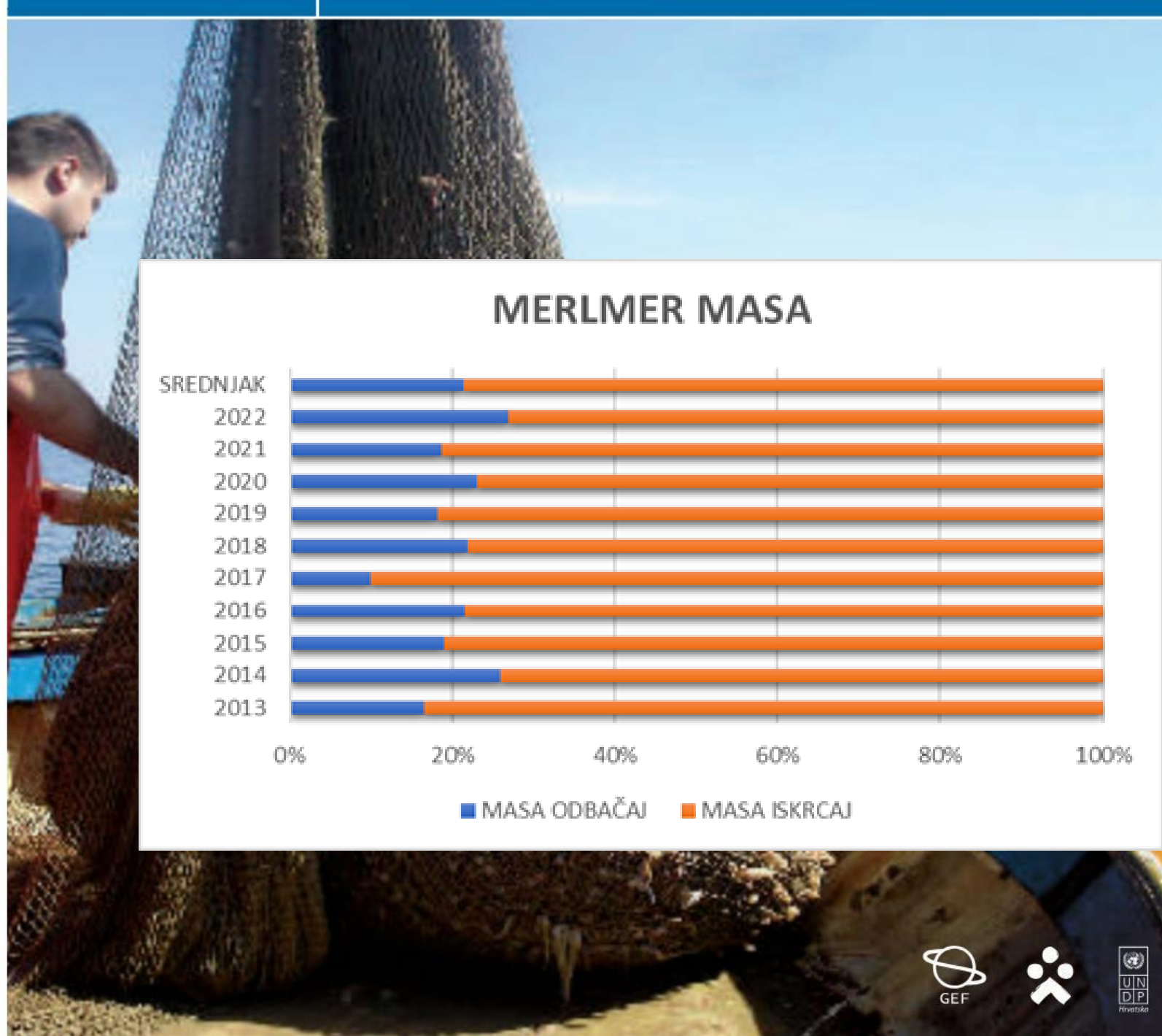
## Važnost prikupljanja podataka o odbačenom ulovu

- Procjena odbačenog ulova je od temeljne je važnosti za razjašnjavanje i izbjegavanje štetnosti utjecaje ribolovnih aktivnosti na okoliš, osobito kada te aktivnosti dovode do prekomjernog iskorištavanje morskih resursa – prelov
- Ako se količina i sastav odbačenog ulova ne uzme u obzir u procjenama stanja stokova i provedbi relevantnih planova upravljanja, to može rezultirati neodrživim ribolovom.

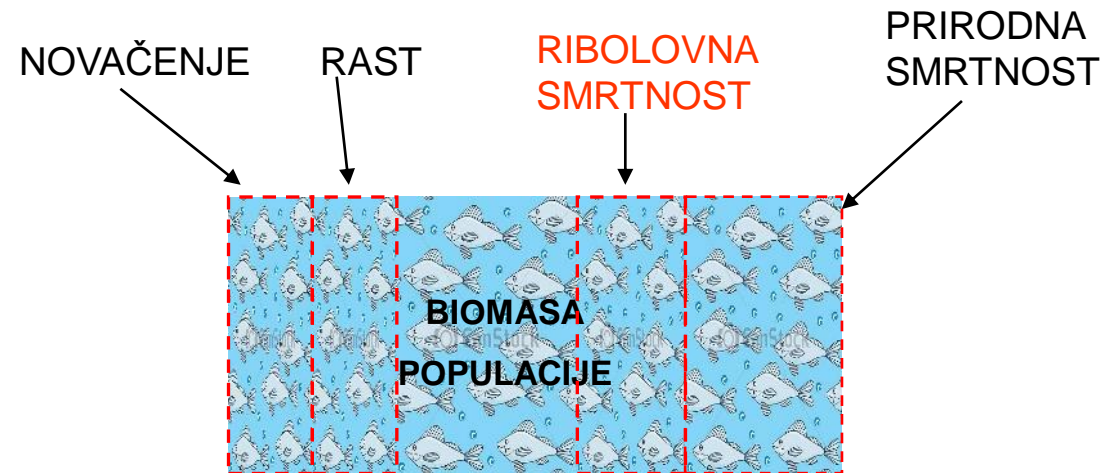


	Iskrcaj	Odbačaj
2013	1126	4.68
2014	897	5.55
2015	771	4.51
2016	753	3.05
2017	928	5.5
2018	992	6.38
2019	1145	6.27
2020	1202	5.36
2021	1064	4.67
2022	1181	21.69

Statistički podaci ulova oslića



## Dinamika eksploatiranih populacija



**RAST + NOVAČENJE**



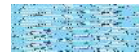
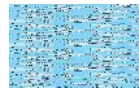
**PRIODNA SMRTNOST**

**+**

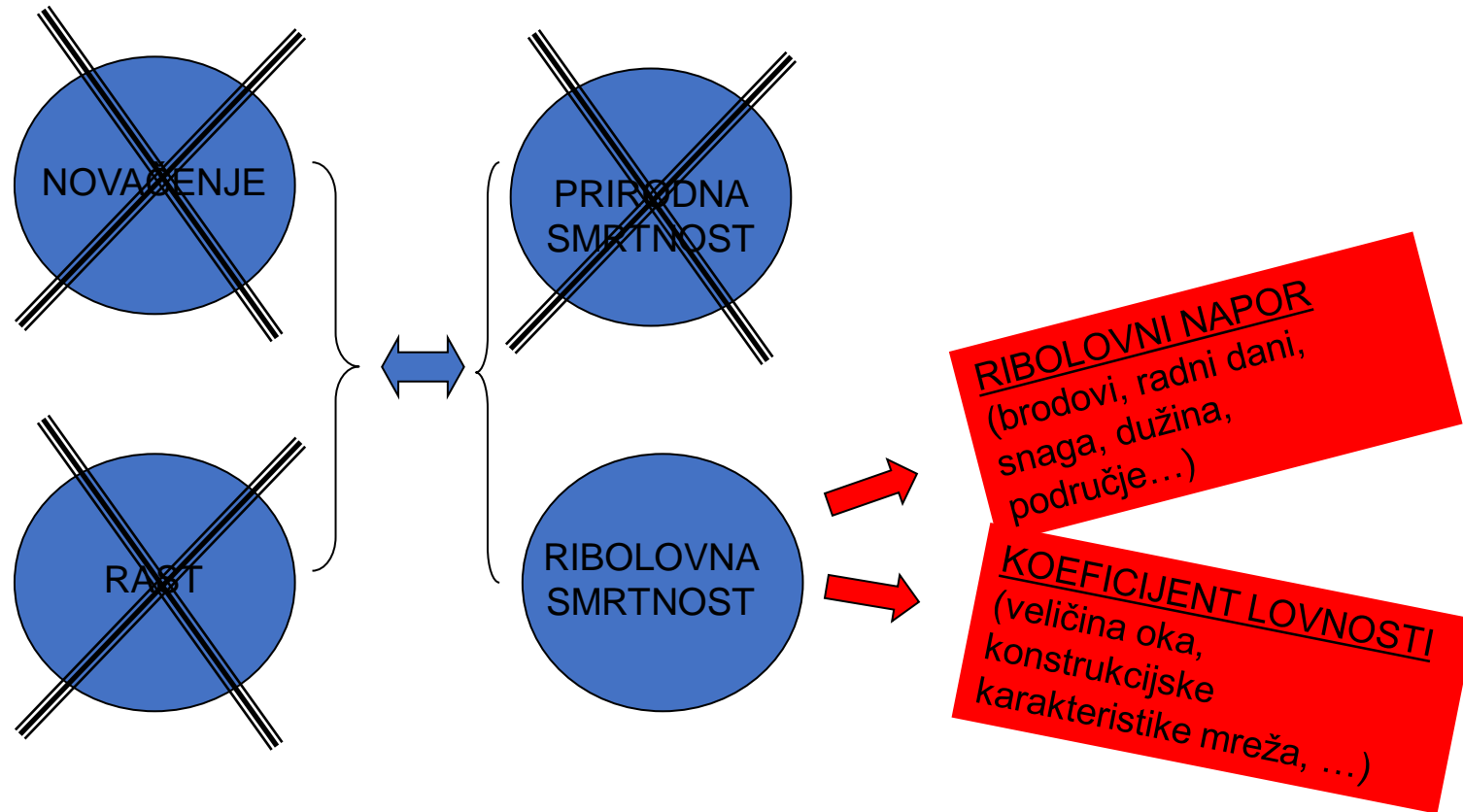
**RIBOLOVNA SMRTNOST**

# Dugoročna ravnoteža u populacijama

PRETJERANI RIBOLOV

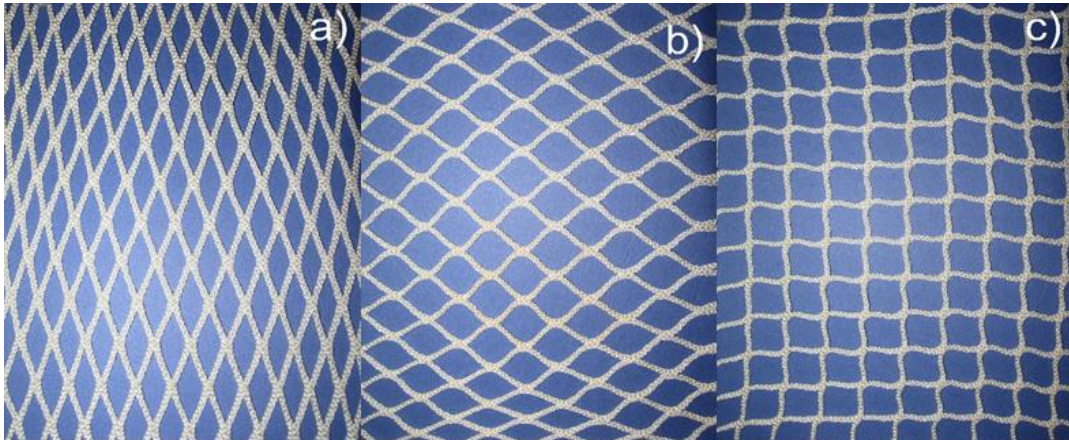


# Mogućnosti reguliranja dinamike populacija



- **Minimalna veličina ulova:** Postavljanje minimalne veličine ribe koju je dopušteno uloviti kako bi se osiguralo da se love uglavnom zrele jedinke.
- **Sustav kvote:** Postavljanje ograničenja količine ulova određenih vrsta tijekom određenog vremenskog razdoblja ili područja.
- **Selektivna ribolovna oprema i tehničke inovacije:** Korištenje opreme koja smanjuje slučajni ulov neželjenih vrsta. Npr., mreže s većim otvorima oka ili uređaji koji odbijaju ili propuštaju određene vrste.
- **Zatvorena područja:** Uvođenje područja koja su zatvorena za ribolov u određenim razdobljima kako bi se omogućila obnova populacija.
- **Povećanje svijesti i obuke:** Edukacija ribara o negativnim posljedicama odbačenog ulova i promicanje praksi koje smanjuju takav ulov.
- **Zakonodavstvo i sankcije:** Uvođenje restriktivnih mjera i sankcija kako bi se potaknulo pridržavanje regulacija o odbačenom ulovu.

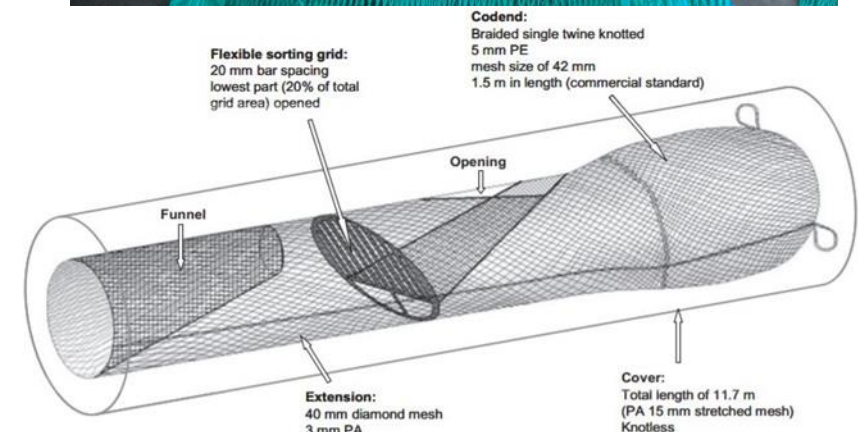
# Tehničko konstrukcijske izmjene

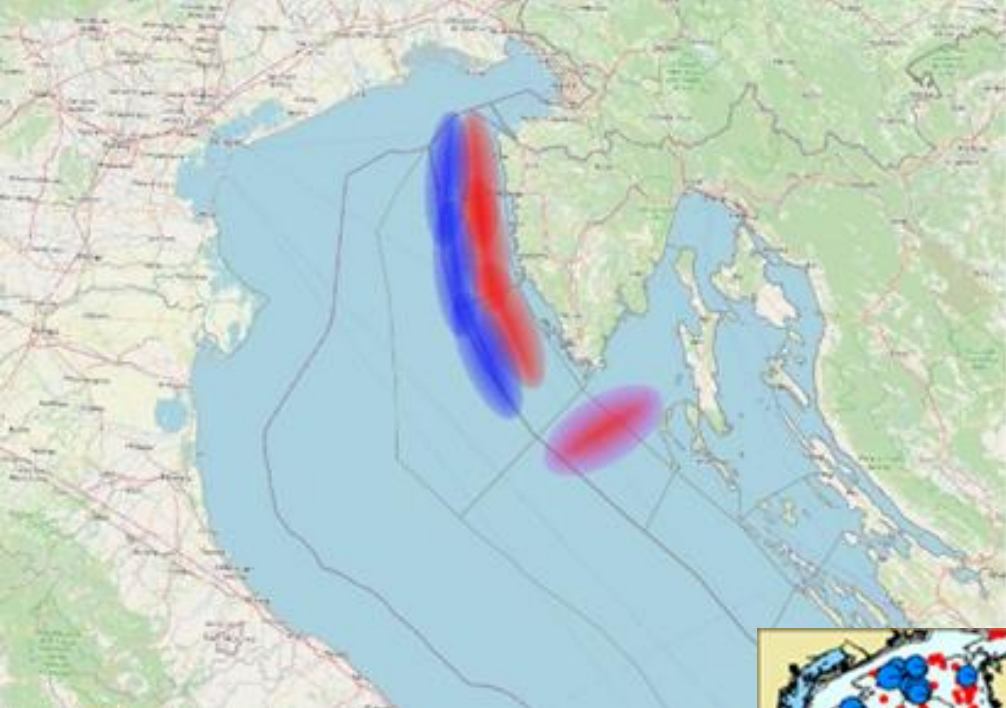


Romboidno oko

T90

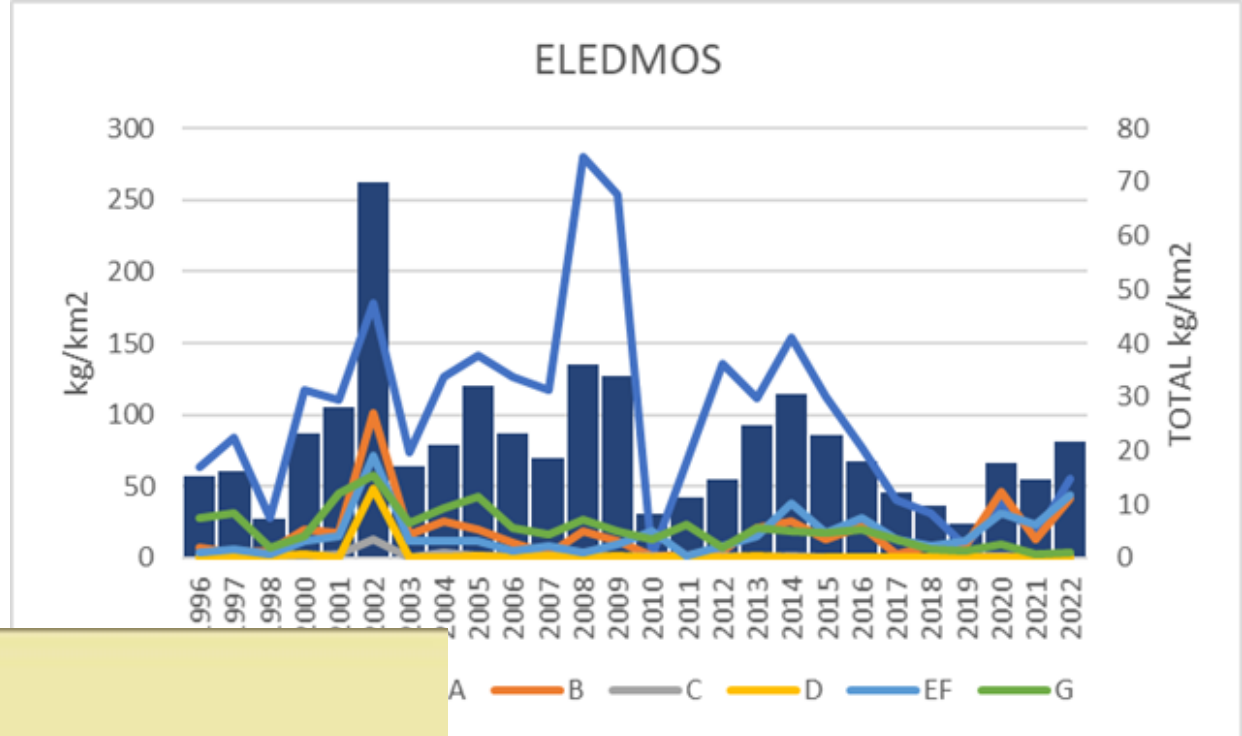
Kvadratno oko



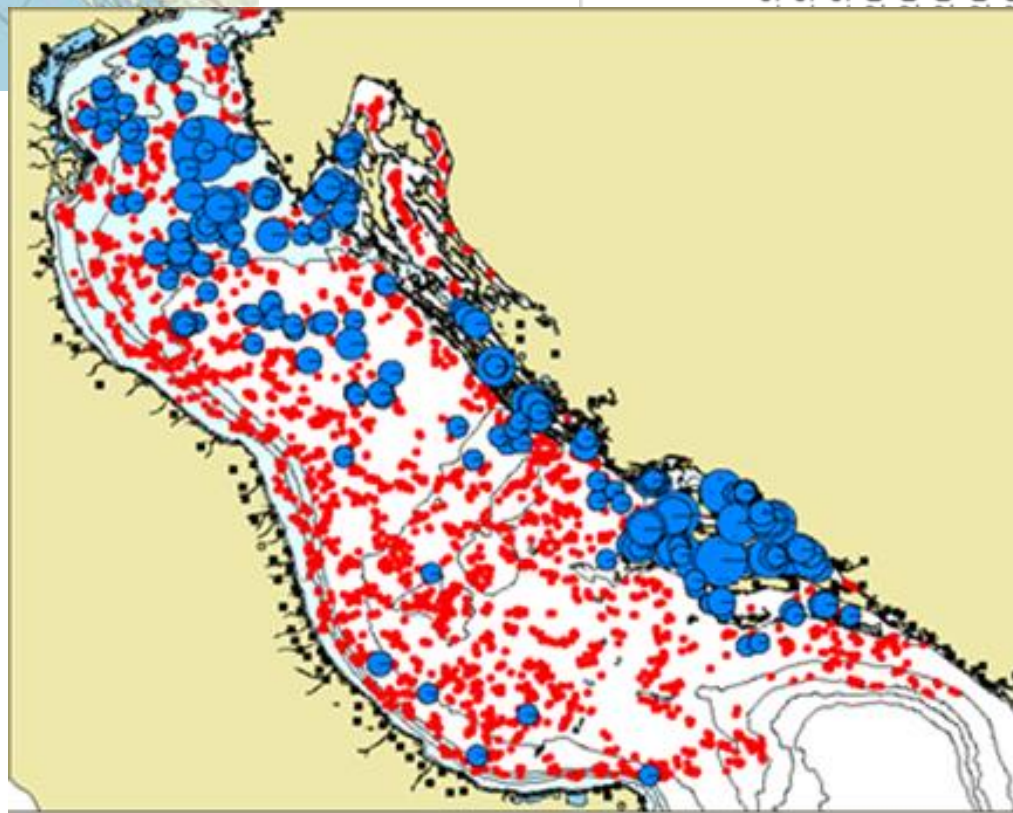


Glavna područja ribolova

**Primjena tehničkih mjera i zabrane područja ribolova na primjeru crnog muzgavca**

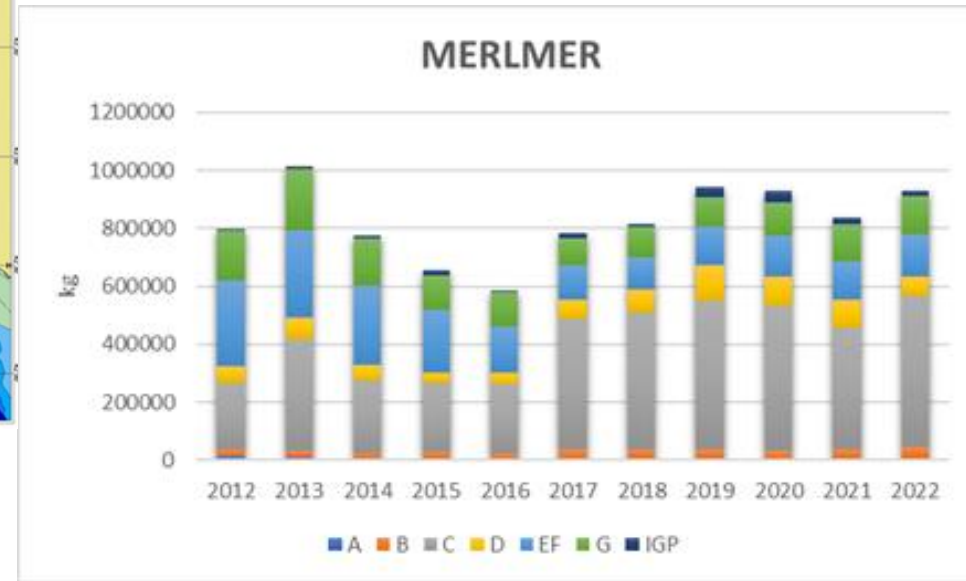
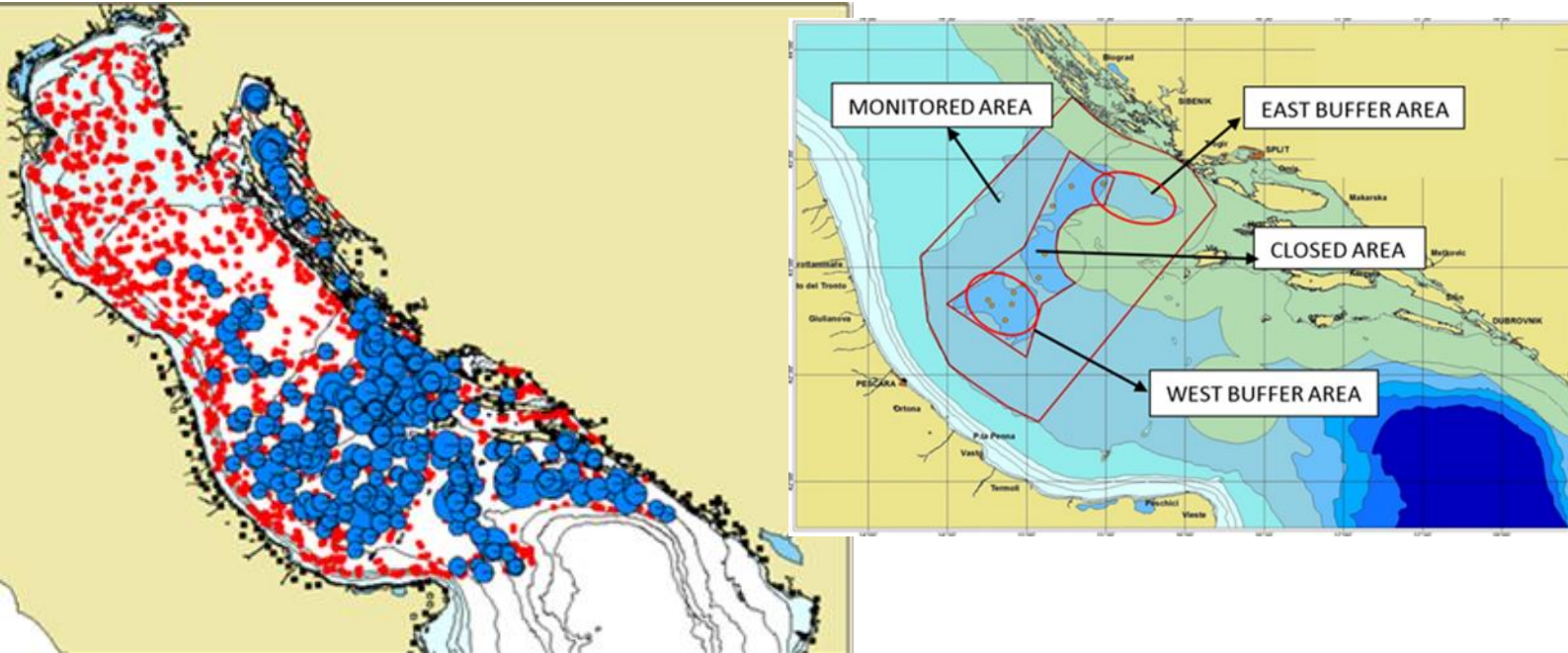


Indeks biomase populacije



Područje rasprostranjenosti juvenila

# Mjere regulacije na primjeru oslića





HVALA NA PAŽNJI!!!

