## Croatian fishing fleet status and managment measures for small pelagics

Focus group GSA 17-MEDAC Rome, 20.11.2014.


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## Croatian fleet

* 488 licences for purse seine net for small pelagics
* Authorisation of the licences is in progress, app. 250 licences will be active after the authorisation (end of December 2014)


## Croatian fleet

| Vessel length | Number of licences | Active in 2012 | Share in the total number of active vessels | Average Gt | Average kW | Amount of catch (t) | Average amount of catch (kg) / day | Share in the total catch |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| <12 m | 188 | 54 | 24,5 \% | 5.1 | 75,0 | 150,5 | 145,0 | 0.27 \% |
| 12-18 m | 113 | 37 | 16,8\% | 22,2 | 166,0 | 5033,9 | 1222,7 | 8,96 \% |
| 18-24 m | 91 | 56 | 25,5\% | 77,5 | 335,8 | 17094,64 | 2236,1 | 30,42\% |
| > 24 m | 96 | 73 | 33,2 \% | 153,2 | 547,9 | 33909,0 | 3246,1 | 60,35 \% |

The distribution of licences and active purse seiners according to length groups of vessels in 2012.

## Protected areas - fishing prohibited

* National parks - sea area 195 km²
* Brijuni
* Kornati
* Mljet
* Nature parks - sea area 188 km²
* Telašćica
* Lastovsko otočje



## Croatian coastline

* 300 m from the coast prohibited fishing
* More than 600 islands with 300 m around them fishing prohibited area



## Management measures

* Permanent cessation of fishing
* Temporary cessation of fishing (potential temporary ban for during the warmer months (anchovy spawning season) or winter season (sardine spawning season), depending of evaluation and status of the anchovy and sardine stock) - whole fleet.
* Temporary cessation of fishing- in some specific situations in certain fishing zone and fleet authorized for fishing in this zone.


## Management measures

* Minimum mesh size; minimun catch size as specified in Council regulation No. 1967/2006.
* GFCM recommendation - 180 fishing days per year, 20 fishing days per month.


## Temporary management measures - 2014

* Temporary cessation of fishing
* January (temporary ban in winter season in order to protect sardine in spawning period) - 15 day (01.01.-15.01.2014.)
* December (temporary ban in winter season in order to protect sardine in spawning period) - 8 day (from 24.12.2014.)


## Temporary management measures - 2014

* Temporary cessation of fishing
* In certain fishing zone and fleet authorized for fishing in this zone. - 4 months (14.08.2014. 24.12.2014.)



## Temporary management measures - 2014

* $28 \%$ of inner fishing zones are closed for fishing
* Significant amount of small anchovy (not undersized) were noticed in the named area, since anchovy stock status is estimated as overfished Croatia has decided to close this area as contribution to the increase of the spawning stock biomass (SSB)



## Temporary management measures -2015

* Anchovy - 144 fishing days (GFCM recommendation)
* Temporary cessation of fishing
* January (temporary ban in winter season in order to protect sardine in spawning period) - 31 day
* May (temporary ban in warmer season in order to protect anchovy in spawning period) - 31 day (GFCM recommended minimum 15 days)


## Interpretation of the scientific data on the stock status in the management plans / measures

## * Gaps:

* data on stock status are applied in management measures with minimum two years of delay (anchovy stock status in 2011/2012. = management measures in 2015.).


Anchovy GSA 17. Mid-year spawning stock biomass (in tons, top), reference F (mean F 1 2 , middle) and recruitment (in thousands individuals, bottom), with the $95 \%$ confidence intervals.

## Interpretation of the scientific <br> data on stock status in the <br> management plans / measures

* Gaps:
* It is not logical to cut fishing effort regulated for the current year according to the two or three years old data, if we are cutting fishing effort we must cut the fishing effort that caused that decrease of the stock status in the year of the stock decrease.
* For example: fish stock status from 2012. = the regulation of the fishing effort (reduction) should be done on the fishing effort that was in 2012. (the one that cause the decrease of the stock).
* We still do not have the data on the impact of the GFCM recommendation (37/2013, 38/2014) measures and we are already cutting the fishing effort for the 2015. from these measures, it is contradictory and inconsistent. Instead of cutting from the fishing effort that cause the decrease of the anchovy stock status.


## Interpretation of the scientific <br> data on stock status in the management plans / measures

* Gaps:
* STECF stated:
* ,,It should be considered that sardine is a short lived species characterized by high fluctuations in abundance and recruitment strongly depends on environmental conditions."
* ,,Moreover, anchovy is a short lived species characterized by high fluctuations in abundance and recruitment strongly depends on environmental conditions."
* From one side it is stated that stock status of the small pelagic species (sardine, anchovy) are strongly dependent on the enviromental conditions, and from the other side the only solution that STECF is giving for reaching the target values is by regulating the fishing activites, which is as well contradictory.


## Interpretation of the scientific data on stock status in the management plans / measures

* Solution - proposal:
* Please do not think that we are running away from the responsibility of the management of fisheries NO!!!! We just believe that fisheries should be managed in such a way that when the enviromental conditions are unfavorable for stock status then fishery should make a contribution towards the reduction of fishing mortality, with the aim of stabilizing spawning stock biomass.


## Interpretation of the scientific <br> data on stock status in the <br> management plans / measures

* Solution - proposal:
* We believe that it is appropriate to do closure of areas, in certain area in certain period, to make it a pseudo-selectivity tool
* Once the smaller fish (not undersized) of the specie that is characterized as overfished appears in certain fishing zone, that zone should be closed for fishing on certain period. On this way fishing fleet would be moved to other areas where is bigger fish and other species that is in the better condition, which then becomes an instrument of the selectivity of fishing. And with the implementation of these measures, through monitoring, we can go towards the goal of approaching the sustainable exploitation rate.


## Thank you!



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