



**GENERAL FISHERIES COMMISSION FOR
THE MEDITERRANEAN**

**COMMISSION GÉNÉRALE DES PÊCHES
POUR LA MÉDITERRANÉE**



Scientific Advisory Committee (SAC)

**Report of the intersessional meeting on management plans for the small
pelagic fishery in the Adriatic Sea**

GFCM HQ, Rome, Italy, 28-29 November 2014

EXECUTIVE SUMMARY

The intersessional meeting of the GFCM Scientific Advisory Committee (SAC) on management plans for the small pelagic fishery in the Adriatic Sea was held at the GFCM headquarters in Rome, Italy, on 28 and 29 November 2014. The meeting addressed issues raised by the thirty-eighth session of the Commission in relation to Recommendations GFCM/37/2013/1 and GFCM/37/2014/1 on the management of small pelagic fisheries in Geographical Sub-Areas (GSAs) 17 and 18 (Adriatic Sea). These items were as follows: i) the review and assessment of existing management measures at the country level; ii) the review and assessment of the draft advice prepared by the Working Group on Stock Assessment of Small Pelagics (WGSASP); and iii) the discussion on a roadmap of pending actions before the following meeting of the SAC. The meeting agreed on the draft advice prepared by the WGSASP relating to the status of stocks and technical aspects of the stock assessment models used. In addition, the meeting formulated advice on technical matters which are to be incorporated in a revision of the assessment of these stocks, due to be conducted in 2015. Finally, the meeting compiled a list of existing management measures at the country level and provided guidance on how to assess the effectiveness of these measures in achieving the objectives outlined in Recommendation GFCM/37/2013/1 before the eighteenth session of the SAC.

OPENING OF THE MEETING

1. The intersessional meeting of the GFCM Scientific Advisory Committee (SAC) on management plans for the small pelagic fishery in the Adriatic Sea was held at the GFCM headquarters in Rome, Italy, on 28 and 29 November 2014. The meeting was attended by 26 fisheries experts from the Adriatic Sea riparian States (Albania, Croatia, Italy, Montenegro and Slovenia) as well as by representatives of the European Union, the Advisory Council for the Mediterranean (MEDAC), the FAO regional projects and the GFCM Secretariat. The full list of participants is provided in Appendix B of this report.

2. Mr Othman Jarboui, SAC Chairperson and chair of the meeting, welcomed participants and recalled the purpose of the meeting, highlighting the importance of addressing the topics identified by the thirty-eighth session of the GFCM regarding the technical aspects of the management of the small pelagic fishery in the Adriatic Sea. He stressed the importance of the meeting in formulating concrete proposals and elaborating a clear roadmap to ensure that the SAC receives sufficient technical background information in order to provide adequate advice to the GFCM on this topic.

CONTEXT FOR THE MANAGEMENT OF SMALL PELAGICS IN THE ADRIATIC SEA

3. The GFCM Secretariat outlined the provisions of the existing GFCM Recommendations and Guidelines applicable to small pelagics in the Adriatic Sea, including Recommendations GFCM/37/2013/1 and GFCM/37/2014/1 and the GFCM guidelines on management plans, fishing capacity and precautionary measures. In addition, the Secretariat highlighted the specific elements for discussion on the technical basis for the management of the small pelagic fishery in the Adriatic Sea suggested in the thirty-eighth session of the Commission, and included in Appendix C of this report.

4. In reviewing the elements for management and the existing information, participants agreed to focus on achieving the following objectives: i) reviewing and assessing existing management measures at the country level; ii) reviewing and assessing the work of the Working Group on Stock Assessment of Small Pelagics (WGSASP); and iii) discussing a roadmap of pending actions before the subsequent meeting of the SAC.

REVIEW OF THE CONCLUSIONS AND ADVICE OF THE WGSASP

5. The GFCM Secretariat presented the results of the SAC- WGSASP (24 – 27 November 2014). The WGSASP provided a validated analytical assessment of the status of both sardine and anchovy in Geographical Sub-Area (GSA) 17, pending the final comments and endorsement of the Subcommittee on Stock Assessment (SCSA) and the SAC (see Appendix D for the proposed advice for sardine and anchovy in GSA 17). In addition, the WGSASP revised the reference points for biomass and exploitation rates for both species in GSA 17 and discussed the possibility to incorporate information from GSA 18 on both species in order to attempt a joint stock assessment for both GSAs. The WGSASP concluded that the reference points adopted for sardine in GSA 17 at the 16th session of the SAC (March 2014) were still valid, and therefore the WGSASP would continue to base its advice on them (see Appendix E for a summary of current and previously proposed reference points). For anchovy in GSA 17, the WGSASP encountered the same problem as in the previous year (instability of the stock assessment model with regards to the historical perspective of stock biomass) and therefore it was not possible to provide a reference point for biomass. For both species, the WGSASP continued to use the empirical reference point of exploitation rate = 0.4. The proposed advice on the status of sardine in GSA 17 was that the biomass of the stock is above both the limit and precautionary reference point, while the exploitation rate is higher than the reference point, therefore the stock is **in overexploitation**. For anchovy in the same GSA, the WGSASP proposed that the status be both

overexploited and in overexploitation, since the exploitation rate is above the reference point and the biomass is considered to be low (30th percentile of the time series). The WGSASP agreed that a complete revision of the input data used for the assessment would be performed before the next WGSASP meeting, and the assessment of both species would be reviewed in detail again in 2015. Finally, the WGSASP concluded that information from GSA 18 was fragmented and as such, the Group proposed a number of steps to be taken in order to incorporate data from this area into joint assessments of sardine and anchovy in GSAs 17 and 18. The WGSASP also highlighted that the bulk of the catches for both species as well as a considerable part of the acoustic energy were concentrated in GSA 17, and therefore a joint assessment of GSAs 17 and 18 is expected to be mainly driven by the catches and biological information available for GSA 17.

6. Participants agreed on the analysis and advice provided by the WGSASP, and echoed the need to follow up on the Group's recommendations in order to be able to use a revised and consolidated set of input data for the 2015 assessment of both species. In light of this, participants focused discussion on:

- **Revision of the input data before the next assessment**: Participants discussed the individual responsibilities of the different countries, of AdriaMed and of the GFCM in order to implement the steps required to revise the input data before the next assessment, as per WGSASP recommendations. The main revision of the input data would for logical reasons be carried out by Croatia and Italy, whilst Montenegro and Albania would make use of the standardized age-reading procedures, expected to be agreed, by applying it to their data. AdriaMed would support the various steps of the revision process, which needs to take into account the comments and suggestions provided by the WGSASP and the SAC. The final aim would be that the data is ready for use in the next session of the WGSASP (tentatively November 2015).
- **Timing of acoustic surveys and advice drafting**: Participants emphasized the need for the advice for these stocks to be based on the most recent scientific data available, due to its implications for management. In line with this, the possibility of preparing for the acoustic survey to be carried out between May and July could allow for acoustic-based biomass estimates to be generated by the end of December of the same year as the survey (as requested by GFCM Recommendation GFCM/38/2014/1-Point 85 and as suggested by the EU-DCF). However, information on catches and biological parameters would be needed for a full stock assessment, and this may not be available until the second quarter of the following year. Therefore, a full assessment could not be ready earlier than May-June of the reference year plus one (i.e., June-July 2015 for the 2014 reference year). A number of participants pointed out potential problems in changing the timing of the survey in GSA 17 (e.g., changes in the time series, the need to synchronize with the survey carried out in the eastern GSA 17; even if acoustic surveys in all GSA 18 have been already carried out in July, etc.) and mentioned that for an assessment conducted on June-July of year $n+1$, there would be no need to change the timing of the current survey. Conversely, the possibility of using acoustic surveys alone to provide an "advanced view" of the status of the stock was also discussed. However, the limitations of this approach were also pointed out (uncertainty in the acoustic index alone, lack of reliable information on recruitment from the acoustic survey). Participants concluded that this matter also required the views of the subcommittees and the SAC as the final provider of advice, and therefore suggested that the matter would be further investigated in those fora. However all the other MEDIAS acoustic surveys in the Mediterranean have been carried out in the May-August period, with a preference to June – July.
- **Review of reference points**: Participants highlighted that the WGSASP discussion on biomass reference points should be taken into consideration for a future revision of Recommendation GFCM/37/2013/1. Participants suggested that biomass reference points for the management of the anchovy and sardine fisheries in GSAs 17 and 18 should be revisited after the 2015 assessment, once the revised input data is used in the assessment. In relation to

exploitation rate reference points, defining the estimation of E (the value of M and the age classes to be used in the estimation) should be subject to further technical discussion within the SAC. Participants suggested organizing a comprehensive benchmark meeting to deal with all technical issues related to the provision of advice for these stocks.

Incorporation of information on GSA 18: Participants supported the conclusions of the WGSASP and highlighted that attempts to carry out a joint stock assessment of sardine or anchovy in both GSAs 17 and 18 should incorporate ‘real’ data from GSA 18. Participants agreed on the follow-up steps proposed by the WGSASP and pointed out that data from GSA 18 was in the process of being collected and should be incorporated as soon as possible. Additionally, participants underlined that there were differences in spatial extents of the ecosystems, in particular the fishery between GSAs 17 and 18, and between the eastern and western edges of those GSAs. As such, participants encouraged the development of methods that could incorporate these differences in the assessment and that could allow for the establishment of local management measures.

MANAGEMENT MEASURES APPLIED BY ADRIATIC COUNTRIES, INCLUDING EXISTING AND PROPOSED SPATIAL AND TEMPORAL CLOSURES

7. Each Member State briefly introduced the management measures in place in their country. The full list of these measures is can be found in Appendix F of this report. On the basis of previous work carried out on this issue through the GFCM Framework Programme (see report of the *Workshop on management plans in the Adriatic*; Split, March 2013), the management measures were classified as one of the following: “spatial restrictions”, “temporal restrictions”, “gear restrictions”, “minimum landing size”, “participatory restrictions”, “limits to fishing capacity” and “monitoring, control and surveillance (MCS) measures”.

8. Participants agreed that the table in Appendix F should be carefully checked by national representatives. Moreover, in order to address the requirements stipulated by the 38th session of the GFCM, participants were of the opinion that it would be worthwhile to attempt a qualitative assessment of the different measures proposed to attain the goals of the management plan in place. It was suggested that this assessment would be attempted at the *Follow-up workshop on the implementation of management measures in selected case studies in the Mediterranean* (GFCM HQ, February 2015). In preparing for this task, the GFCM Secretariat could assign an objective from the management plan to each measure and participants of the proposed workshop could hold a dedicated session to carry out qualitative assessments of the effectiveness of each measure in meeting its assigned objective.

PREPARATION OF THE ADVICE ON TECHNICAL MEASURES INCLUDED IN RECOMMENDATION GFCM/37/2013/1

9. Participants backed the draft advice prepared by the WGSASP on GSA 17 sardine and anchovy stock status. In particular, participants backed the conclusions and recommendations of the draft advice on reference points and the next steps needed to include data from GSA 18 in a joint assessment. This is in addition to supporting the additional comments and suggestions included in this report.

10. Participants compiled a list of current management measures applied by Adriatic countries in relation to small pelagic fisheries in GSAs 17 and 18. This list is provided in Appendix F. Furthermore, participants proposed carrying out a qualitative assessment of these measures at the *Follow-up workshop on the implementation of management measures in selected case studies in the Mediterranean* (GFCM HQ, February 2015).

11. With regards to the socioeconomic aspects of these fisheries, the meeting agreed on the importance of also assessing the socioeconomic effects of any management measure (those already proposed as well as any potential alternatives). Participants discussed existing initiatives that could facilitate this assessment process and suggested that results of this ongoing effort should be presented and discussed at the upcoming session of the Subcommittee on Economic and Social Sciences (SCESS; 4-5 February 2015). The meeting also discussed the importance of considering the ecosystem in the management of these fisheries and the need to include stakeholder views in the management process.

12. The subsequent section outlines the advice of the meeting in the form of conclusions and recommendations.

GENERAL CONCLUSIONS AND RECOMMENDATIONS

13. Following discussion among participants, and based on the questions included in the terms of reference prepared by the thirty-eighth session of the Commission to for the SAC on the technical aspects of Recommendation GFCM/37/2013/1, this meeting put forward a number of conclusions and recommendations. These conclusions and recommendations, detailed below, relate to: i) the advice on the status of stocks; ii) the socioeconomic condition of the fishery; iii) various technical aspects of the Recommendation; and iv) the management measures in place in each of the Adriatic countries.

14. For the advice prepared by the WGSASP on stock status (Appendix D) and its associated reference points (Appendix E), the meeting agreed on the following:

- a) The revised input data related to the topics identified by the WGSASP should be ready by the subsequent session of the Working Groups on Stock Assessment (WGSAs) in 2015. At that session, a benchmark assessment should be carried out for anchovy and sardine in the Adriatic Sea. The following actions should be carried out as part of this assessment:
 - i) Use the revised input data and identify the most appropriate model/model parameters for an assessment of anchovy and sardine stocks in GSA 17;
 - ii) Evaluate both the robustness of the model and its potential to generate short-term predictions;
 - iii) Revise the methods and assumptions for estimating the reference points for anchovy and sardine stocks and attempt to estimate the most appropriate reference points for both fishing pressure and stock biomass; and
 - iv) Test the possibility of adding existing data to GSA 18 and performing a joint stock assessment of anchovy and sardine in the entire Adriatic Sea (GSAs 17 and 18).
- b) For sardine in GSA 17, the updated reference points prepared by the WGSASP should be presented for consideration in the revision of the technical aspects of Recommendation GFCM/37/2013/1. This revision is to be carried out during the 17th session of the SAC (March 2015), as per the mandate of the thirty-eighth session of the Commission.
- c) The SAC should closely examine the most appropriate timing for the acoustic survey in GSA 17 and the provision of advice for this fishery, in order to ensure that advice and associated management measures are based on the most up-to-date scientific information.

15. Concerning socioeconomic advice and the potential short- and long-term effects of proposed management measures on the anchovy and sardine fisheries, the meeting called attention to a number of relevant initiatives that were currently underway : i) a European Union research project project on the socioeconomic characteristics of Adriatic Sea fisheries, as well as on the likely biological and socio-economic consequences of different management scenarios (SEDAF); ii) collection of socio-

economic data in Albania and Montenegro with the support of the FAO regional project AdriaMed; iii) planned collection of socio-economic information on Mediterranean and Black Sea fisheries by the GFCM Secretariat under the Framework Programme. The Group underscored the importance of presenting the results of these activities at the following session of the SCESS. This could be done in the context of a joint session with the SCSA so that the results can be used to provide advice on the socioeconomic dimensions of the small pelagic fishery in the Adriatic Sea.

16. The meeting suggested that, at its seventeenth session, the SAC should closely examine the following technical aspects of Recommendation GFCM/37/2013/1: i) the effects of environmental variables on the ecosystem and the productivity of small pelagic fisheries, as well as the interconnectivity of both species for the purpose of management plans; and ii) the potential of implementing local management procedures within a general regional management plan, in order to accommodate localized differences in the fishery, which are, at times, sizeable. In addition, the meeting stressed the need to encompass the views of a wide variety of stakeholders in the discussion on the revision of the Recommendation GFCM/37/2013/1, and suggested including some of the topics expressed above in a specifically dedicated session. This session could be jointly held with the benchmark assessment session described above.

17. To facilitate the gradual implementation of GFCM management objectives, participants expressed interest in having further technical work carried out on the properties of various potential “harvest control rules”. Having described it as “very useful”, participants suggested conducting this analysis in the context of the SAC and its relevant subcommittees.

18. Participants agreed to identify the primary objectives of the various measures applied by Adriatic Sea riparian states (e.g., reduction of fishing effort, protection of sub-populations, market-related measures, etc.). Furthermore, participants suggested conducting a qualitative assessment of the effectiveness (high, medium, low) of each of the measures in achieving the objectives included in Recommendation GFCM/37/2013/1. The meeting proposed to carry out this exercise before the seventeenth session of the SAC and validate it in a dedicated session of the subcommittees or at the *Follow-up workshop on the implementation of management measures in selected case studies in the Mediterranean* (February 2015). A comprehensive list of management measures currently applied by Adriatic countries is included in Appendix F of this report.

ADOPTION OF THE REPORT

19. The meeting formally adopted the conclusions, recommendations and appendices of this report on Saturday 29 November 2014. The full report was adopted by e-mail on 23 January 2015.

Agenda

- 1. Opening and arrangement of the meeting**
- 2. Introduction of the context for the management of small pelagics in the Adriatic Sea**
- 3. Review of the conclusions and advice of the Working Group on Stock Assessment of Small Pelagics, based on the terms of reference provided by the thirty-eighth session of the Commission**
- 4. Management measures applied by Adriatic countries, including existing and proposed spatial and temporal closures**
- 5. Preparation of the advice on technical measures included in Recommendation GFCM/37/2013/1**
 - Advice on stock assessment methods and reference points
 - Advice on current management measures applied by Adriatic countries
 - Roadmap for the assessment of socio-economic issues related to the small pelagic fishery in the Adriatic Sea
 - Discussion on the provision of regular advice on the status of Adriatic small pelagic fisheries
- 6. Adoption of conclusions and recommendations**
- 7. Closure of the meeting**

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Appendix C

Key elements for discussion of the technical content of Recommendation GFCM/37/2013/1, as prepared by the thirty-eighth session of the Commission

The thirty-eighth session of the Commission (May 2014) adopted Recommendation GFCM/38/2014/1 amending Recommendation GFCM/37/2013/1 and on precautionary and emergency measures for 2015 on small pelagic stocks in the GFCM-GSA 17. In line with this Recommendation, the Commission suggested that technical aspects of the management of small pelagic fisheries in the Adriatic Sea should be addressed during the next intersessional period, with the aim to carry out the following actions:

- Identify the most suitable model to use for the individual assessment of sardine and anchovy stocks in GSA 17;
- Devise reference points consistent with the model used to perform stock assessments of both sardine and anchovy in GSA 17;
- Conduct a socioeconomic impact assessment of possible measures and/or scenarios to be applied;
- Identify gaps and explore opportunities to strengthen the methodology used to conduct acoustic surveys. Subsequently, propose alternatives to reduce the amount of time between the acoustic survey and the availability of data for the stock assessment;
- Identify gaps and needs pertaining to scientific data and devise a strategy to achieve comprehensive stock assessments of sardine and anchovy in the entire Adriatic Sea (i.e., GSAs 17 and 18). Depending on the results and, to the greatest extent possible, a working programme for the Subcommittee on Stock Assessment shall be developed. Where the lack of data prevents the completion of a formal stock assessment is noted, the subcommittee shall formulate the necessary strategy to address the issue.

Furthermore, as per the adopted Recommendation GFCM/38/2014/1, the SAC should address the following comments from the Commission related to the review of the management plan included in Recommendation GFCM/37/2013/1:

- The SAC shall organize a specific intersessional meeting in 2014-2015 to review the reference points of the management plan and to evaluate the measures applied by Adriatic countries, including the closures to be applied by Adriatic countries. The SAC shall assist in identifying additional areas relevant for temporal closures, either within or outside national waters;
- For the purpose of paragraph 8 of the Recommendation, the SAC shall take into consideration socioeconomic characteristics and, where necessary consult , its Subcommittee on Economic and Social Sciences (SCESS); and
- Based on the advice of the SAC, the GFCM shall review, and if necessary, adapt the content of the management plan in 2015.

These terms of reference should be addressed by the SAC and its subsidiary bodies, as well as by a dedicated intersessional meeting on the management plan for the Adriatic Sea.

Appendix D

Assessments for small pelagic species in the Adriatic Sea as proposed by the WGSASP

GSA	Species	Methodology used	Stock status	Management advice	WGSASP comments
GSA 17 – Northern Adriatic Sea	Sardine, <i>Sardina pilchardus</i>	SAM tuned by acoustic	<p><u>Biomass above reference point and in overexploitation</u></p> <p>Exploitation rate is higher than the Patterson's reference point ($E_{(1-4)} = 0.53$).</p> <p>$B_{current}$ is above both the limit and the precautionary reference point.</p>	Reduce fishing mortality	<p>The WG agreed on the improvement of some parameters in the assessment with respect to last year. In particular, the F_{bar} was set equal to 1-3, the plus group was set at age 4 and the two series of survey were used separately. These changes did not affect the assessment.</p> <p>The reference points remain the same as the ones proposed at the last session of the WG.</p> <p>The WG recommends a revision of the basic input data (e.g., age structure) including testing the use of recent biological data (length structure and ALKs) from the eastern area in the older part of the eastern landings time series.</p>
GSA 17 – Northern Adriatic Sea	Anchovy, <i>Engraulis encrasicolus</i>	SAM tuned by acoustic	<p><u>Overexploited and in overexploitation</u></p> <p>Exploitation rate is higher than the Patterson's reference point ($E = 0.50$).</p> <p>Biomass level is low (30th percentile),</p>	Reduce fishing mortality immediately	<p>The WG agreed on the improvement of some parameters in the assessment with respect to last year. In particular, the F_{bar} was set equal to 1-2, the plus group was set at age 4+. The results are consistent with last year's estimations from the SAM model.</p> <p>Due to an unclear historical perspective, reference points cannot be updated. Advice is therefore provided on a precautionary basis (exploitation rate and biomass percentiles).</p> <p>The WG recommends a revision of the basic input data (e.g. age structure) including testing the use of recent biological data (length structure and ALKs) from the eastern area in the older part of the eastern landings time series.</p>

Appendix E

Empirical reference points for sardine and anchovy in GSA 17, provided by the sixteenth session of the SAC, Recommendation GFCM/37/2013/1 and the second 2014 session of the WGSASP

Table 1: Reference points (precautionary – B_{pa} and limit - B_{lim}) for spawning stock biomass (SSB) and current estimate of SSB for sardine and anchovy in GSA 17

GSA	Species	SAC 16		Rec. GFCM/37/2013/1		Current SSB
		B_{lim}	B_{pa}	B_{lim}	B_{pa}	
17	Sardine	62505	125010	78000	109200	154199
17	Anchovy	-- (**)	-- (**)	142000 (*)	198800 (*)	163407

(*) Reference points for anchovy included in Recommendation GFCM/2013/37/1 have been corrected to reflect historical levels of Spawning Stock Biomass, as the original reference points in the Recommendation referred to Total Stock Biomass.

(**) No limit reference point for anchovy has been provided in 2014, due to uncertainty of the assessment models in the historical perspective. The precautionary reference point for anchovy in GSA 17 included in the recommendation should be revised as per the new formula for precautionary reference points approved by the 16th session of the SAC ($B_{pa} = 2 * B_{lim}$; so if using $B_{lim} = 142000$ as in Recommendation GFCM/2013/37/1, then $B_{pa} = 284000$)

Table 2: Reference points for exploitation rate (E) and current estimate of E for sardine and anchovy in GSA17

GSA	Species	E (Empirical RP)	Current E
17	Sardine	0.4	0.53
17	Anchovy	0.4	0.5

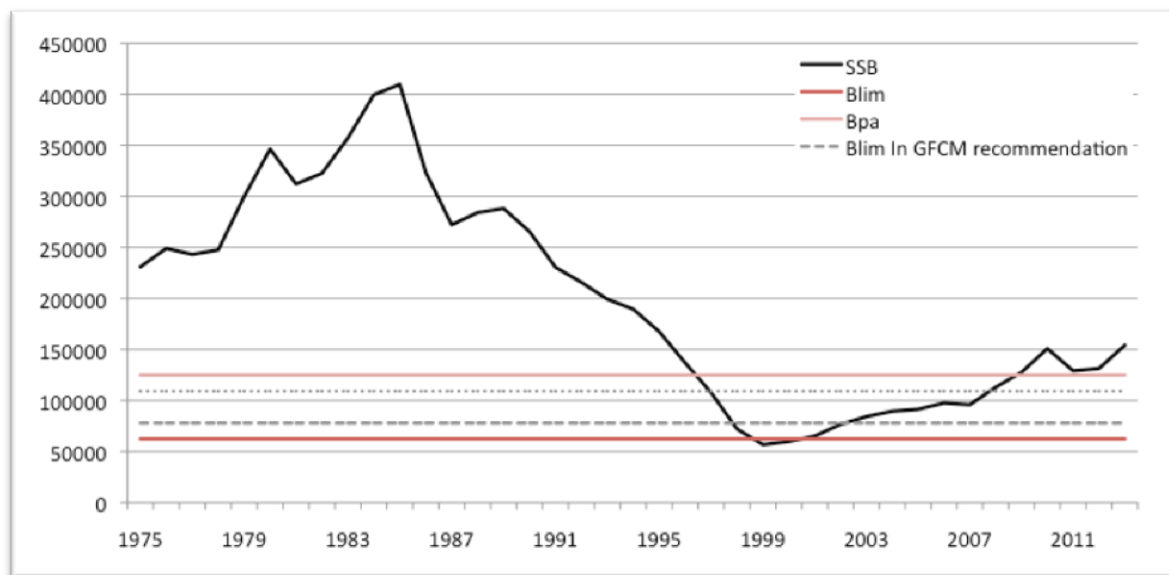


Figure 1: Sardine in GSA 17: Spawning Stock Biomass and associated reference points

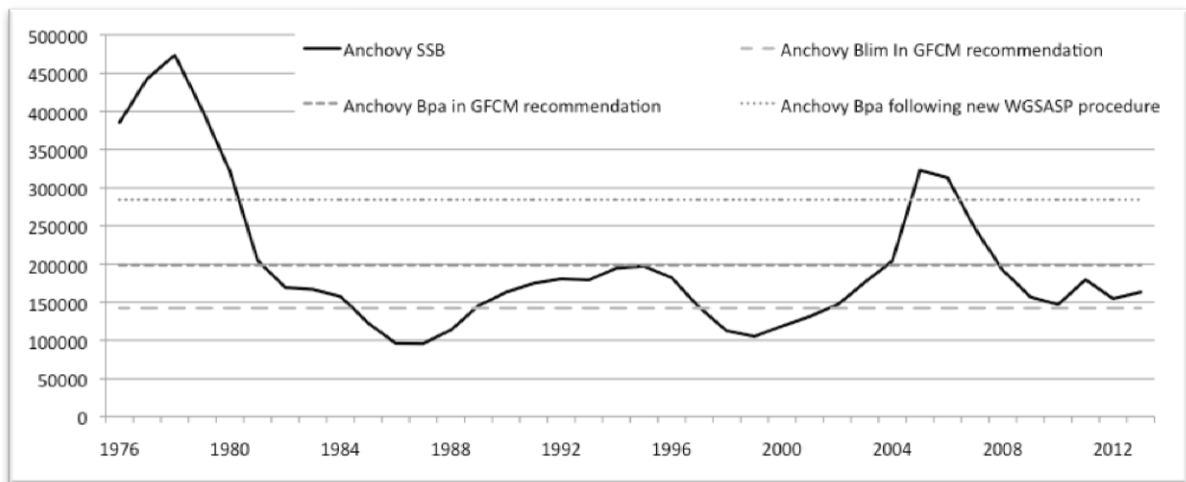


Figure 2: Anchovy in GSA 17: Spawning Stock Biomass and associated reference points

**Summary of management measures and recommendations relevant for
the small pelagic fisheries in the Adriatic Sea adopted by countries, the EU and the GFCM**

Management measures	Montenegro	Albania	Slovenia	Italy	Croatia	European Council Regulations	GFCM
<i>Spatial restrictions</i>	Fishing in the Bay of Boka Kotorska only allowed at designated sites (fishing posts). Beach seines can only be drawn at designated sites. Specific rules in place to avoid conflicts between users of fishing posts. Fishing with bottom trawls, pelagic trawls and purse seines is prohibited in the Bay of Boka Kotorska. Purse seines (70 m in height and 400 m in length) only allowed at the entrance of the Bay of Boka Kotorska.	Prohibited fishing above sea grass meadows. Exception for purse seine, boat seine nets that during fishing operation do not touch the meadows. Prohibited use of purse seines 300 meters of the coast with reached depths over 50m. Prohibited use of trawler (bottom and pelagic) net at Vlora Bay. Fishing is prohibited in areas of 2 km radius from mouth of Buna River and 1 km radius from the mouth of other Albanian rivers and 2 km radius from the mouth of	Prohibited commercial and leisure fisheries in Portorož and Strunjan Fishing Reserves. Exceptions: fishing aggregations of the winter mullet shoals (special licenses required) and leisure fishing from the shoreline.	See Council Regulation. Biological Protection Zone (ZTB) established in the Adriatic Sea to prohibit the use, <i>inter alias</i> , of pelagic trawl In accordance with the provisions of the Recommendation GFCM/38/2014/1 Italy is in the process of prohibiting the use of any gears targeting small pelagics within 6 M with derogation for fishing vessels with LoA>15m (within 4 M), from 1 to 30 July 2015 from Monfalcone to Termoli.	Special protected areas with specific fishing regulations: 1. Special habitats of fish and other marine organisms, and regulation of fishing in Velebit Channel, Novigrad and Karin Sea , Prokljan Lake, Marina Bay and Neretva Channel. 2. National Parks: Mljet, Brijuni, Kornati 3. Special Marine Reserve: Malostonski Zaljev i Malo more 4. Nature Park: Lastovo, Telašćica	Prohibited use of purse seines at depths less than 70 % of the overall drop of the net. Prohibited use of purse seines 300 meters off the coast or within the 50 metres isobaths. Prohibited towed gears within 3 nautical miles of the coast or within the 50 m isobaths. Prohibited fishing above seagrass beds, coralligenous habitats and mäerl beds*.	Recommendation GFCM37/2013/1: Areas of aggregation of anchovy and sardine juveniles in their first year of life shall be protected from fishing activities with fishing gears suitable to catch them. Members shall communicate to the GFCM the areas and periods protected to this scope by making reference to the GFCM statistical grids.

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		sea lagoon communication channels. Prohibited use of purse seines at depths less than 70 % of the overall drop of the net					
<i>Temporal restrictions</i>	Prohibited fishing and sale of pelagic fish four days prior to the full moon and four days after the full moon. For the beach seine fishery in the Bay of Boka Kotorska: on fishing posts that are also used as bathing sites in the period from May 1 st to October 1 st : fishing only at night and up to seven hours by daylight.		In accordance with the provisions of the Recommendation GFCM/38/2014/1, Slovenia will impose a closure of the fishery in the period 1-15 April 2015 for the vessels fishing for small pelagics. The area of the closure is all waters under the jurisdiction of the Republic of Slovenia. In addition temporary cessation of fishing is foreseen (not yet implemented).	Closure for pelagic trawlers on August (in 2011 extended from August to September). Specific regulations apply to pair-trawlers and purse seiners (Ministerial decree March 1 8th 2002), that cannot fish during the weekends. In accordance with the provisions of the Recommendation GFCM/38/2014/1 Italy is in the process of impose a maximum of 180 fishing days per year, not exceeding 20 days per month. For	Permanent fishing closure for purse seiners from 15th December to 15th January (possible modification over the years). Temporary closure in 2014. - for all purse seiners above 12 m LOA as from 14 Aug to 24 Dec about 1/3 of inner fishing sea (channel area) - All fishing sea for all purse seiners as from 1 to 14 Dec. Temporary closure in 2015. All purse seiners as from 15 to 31 Jan and as from 1 to 31 May.		Recommendation GFCM37/2013/1: Authorized vessels shall not operate for more than 5 fishing days per week and shall not exceed 180 fishing days per year Recommendation GFCM37/2014/1: Each fishing vessel shall not exceed 144 fishing days per year Adriatic countries shall apply spatio-temporal closures of no less than 15 continuous days and up to 30 continuous days in GSA 17. These closures shall be designated in waters under their jurisdiction and

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				2015, for vessels targeting specifically anchovy, the limit is 144 fishing days per year			shall take place between 1 April and 31 August
<i>Gear restrictions</i>	For the beach seine fishery in the Bay of Boka Kotorska: min. mesh size (12 mm); max. length ropes (500 m); towing by moving fishing vessel not allowed. Minimal mesh size pelagic trawls and purse seines: 20 mm.	Minimum mesh for surrounding nets 14 mm Pelagic trawler net for sardines and anchovies minimum size 20 mm. for the other trawler net 40 mm cod end.		Min. mesh size for trawl nets (20 mm) and for surrounding nets (14 mm) Surrounding nets: max. length 800 m and max. drop 120 m	Permitted use of artificial light in the purse seine fishery.	Min. mesh size for trawl nets (20 mm) and for surrounding nets (14 mm) Surrounding nets: max. length 800 m and max. drop 120 m	
<i>Minimum landing size</i>	<i>E. encrasicolus</i> : 6 cm in Bay of Boka Kotorska, 11 cm elsewhere. <i>S. pilchardus</i> : 6 cm in Bay of Boka Kotorska, 12 cm elsewhere. <i>S. japonicus</i> : 25 cm <i>S. scombrus</i> :	<i>E. encrasicolus</i> : 9 cm. <i>S. pilchardus</i> : 11 cm <i>Scomber spp</i> 18 cm. <i>Trachurus spp.</i> 15 cm.	See EU Council Regulations and GFCM Recommendations	<i>E. encrasicolus</i> : 9 cm. <i>S. pilchardus</i> : 11 cm; not applicable to fries of sardine landed for human consumption if authorized by national management plan		<i>E. encrasicolus</i> : 9 cm. <i>S. pilchardus</i> : 11 cm; <i>Scomber spp.</i> : 18 cm <i>Trachurus spp.</i> : 15 cm	Recommendation GFCM37/2013/1: Anchovy: 9 cm, Sardine: 11 cm

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	<p>20 cm <i>T. trachurus</i>: 20 cm <i>T. mediterraneus</i>: 20 cm <i>A. hepsetus</i>: 8 cm <i>B. boops</i>: 13 cm <i>S. maena</i>: 14 cm <i>S. sarda</i>: 45 cm</p> <p>Undersized fish can be up to 20% of total weight of the catch. If catch of undersized fish in one towing > 50% of total weight, fishing stops in the area.</p>			<p>provided that the stock is within safe biological limits. <i>Scomber</i> spp.: 18 cm <i>Trachurus</i> spp.: 15 cm</p>			
<i>Participatory restrictions</i>	Fishing permit required	<p>Fishing permit required.</p> <p>Fisheries beyond territorial waters only with special authorization</p>	Fishing licenses required.	<p>Fishing licenses required. No new fishing licenses without cessation of activity of vessel/s with same GT and KW of engine power.</p> <p>In accordance with the provisions of the Recommendation GFCM/38/2014/1</p>		<p>Fishing licenses required.</p> <p>Issuing of special fishing permits required within national management plans.</p>	

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				Italy is in the process of creating a regime of special authorization for fishing vessels targeting small pelagic in GSA 17 and GSA 18. A list of authorized fishing vessels will be established (each year)			
<i>Limits to fishing capacity</i>			Fleet capacity frozen since 31/12/ 2002. Since 2012 Slovenia has been applying a Temporary non-issuing of new licenses measure, meaning that no new fishing licenses that would allow use of purse seine (PS), pelagic pair trawls (PTM), demersal trawls (OTB) and drift and fixed nets	On the basis of Council regulations concerning CFP, and srt.19 of Med Regulation (n. 1967/2006) a national management plan for fishing fleet of purse seiners and pelagic trawlers is in force from 20 sept of 2011, providing fleet reduction through permanent cessation or reduction of effort through temporary	Fleet capacity frozen since 1/7/ 2013.	Fleet capacity frozen since 31/12/ 2002.	General recommended freeze in the fishing capacity of vessels more than 15 meters. Recommendation GFCM37/2013/1: authorized vessel list for the fishery

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			<p>(GNS and GTRS), were issued and thus preventing potential increase of effort.</p> <p>Measure of the permanent cessation of fishing activity (scrapping) with the support from the EFF was carried out in period 2012-2013. As a result, fleet reduced by 37.6% in terms of GT and for 19.2% in terms of KW.</p> <p>There are no more active vessels in the fleet using pelagic pair trawls (PTM).</p> <p>Implementation of the scrapping measure had a drastic impact on the reduction of landings: total landings in 2011 (just before the scrapping)</p>	<p>closures</p> <p>See also the participator restrictions applied for small pelagics</p>			

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			were 719 tons and 238 tons in 2013 (reduction of 66.9%). Landings of sardine and anchovy in 2011 were 469 tons and only 49 tons in 2013 (reduction of around 90%).				
<i>MCS measures</i>	<p>Vessels authorized to fish registered in Registry of Vessels of the administrative authority.</p> <p>VMS required for vessels with more than 10 m.</p> <p>First landing only in places meeting the prescribed technical conditions for inspection.</p> <p>Required notification and record of trans-shipment within national vessels.</p>	<p>Required registration of vessels in Registry of Fishing Vessels.</p> <p>Vessels on the IUU black list excluded from the Registry of Fishing Vessels.</p> <p>First landing in Albanian ports. Tran-shipment only with prior authorization.</p> <p>VMS required for vessels > 12 m.</p> <p>Logbook required for vessels with more than 10 m (catch above 10 kg must be recorded).</p>	<p>Only Slovenian vessels authorized to land in national ports.</p> <p>VMS required for all vessels with trawls and purse seines and vessels of more than 15 m of length.</p> <p>ERS for vessels of more than 15 meters of length.</p> <p>Fishing logbooks have to be submitted for every fishing trip, for all quantities and species of fish caught, for all vessels, irrespective of</p>	<p>VMS required for vessels of more than 15 m of length;</p> <p>Logbook required for vessels above 10 m.</p> <p>Logbooks have to be submitted for every fishing trip.</p> <p>Italy is in the process of establishing catch report obligation also for vessels with LOA <10 m (special declaration). All the vessels will have the obligation to report also catches</p>	<p>All vessels above 15 m covered by VMS (plan to cover all vessel sizes).</p> <p>All vessels over 15 m equipped with electronic logbooks.</p> <p>Logbook required for all vessels</p>	<p>Catches of pelagic trawlers and purse seiners only allowed in designated ports.</p> <p>Obligatory registry of fishing vessels more than 15 m authorized to fish in GFCM area.</p> <p>Logbook required for vessels above 10 m.</p> <p>Any amount greater than 50 kg of live-weight equivalent retained on board must be recorded in the logbook.</p> <p>Daily electronic</p>	<p>Vessel information submitted to GFCM Regional Fleet Register.</p> <p>Record of fishing vessels larger than 15 metres authorized to fish in the GFCM Area.</p> <p>Satellite-based VMS required for vessels >15 meters authorized to fish in the GFCM area.</p> <p>Required submission of data on vessels engaged in IUU fishing (IUU Vessel List).</p>

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	<p>Logbook required for vessels with more than 10 m.</p> <p>Port State measures to prevent, deter and eliminate IUU fishing.</p>	<p>Landing and trans-shipment only in designated ports.</p> <p>Catch certification scheme is in place for products in trade (to combat IUU)</p>	<p>their length.</p> <p>Also see EU Council Regulations and GFCM Recommendations</p>	<p>of quantity < 50 kg of anchovies and sardines</p>		<p>completion and transmission of fishing logbook data for vessels > than 12 m.</p> <p>Trans-shipment at sea prohibited; only allowed with specific authorization.</p> <p>Recommended not to issue licenses to vessels that have previously carried out IUU fishing.</p> <p>Compulsory use of remote VMS for vessels > than 12 m.</p> <p>Monitoring and control of fishing capacity.</p> <p>Traceability of products at all stages of production, processing and distribution.</p>	<p>Required logbook for vessels exceeding 15 meters authorized to fish in GFCM area. Logbook shall register quantities of each species caught and kept on board, above 50kg in live weight.</p> <p>Port State measures to prevent, deter and eliminate IUU fishing.</p> <p>Recommendation GFCM37/2013/1:</p> <p>National control programmes and plans shall be established and communicated each year to the GFCM Secretariat, during the last quarter of the precedent year and not later than 30 October each year.</p>