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Dictamen 107*: Posibilidades de pesca 2017 y 2018, Goraz, zona CIEM X

Contexto:

- La aprobación del próximo Reglamento, fijando las posibilidades de pesca para las especies de aguas profundas, desempeñará un papel muy importante a la hora de alcanzar el objetivo RMS, dado que fijará las posibilidades de pesca para 2017 y 2018.
- Le población de goraz o besugo de la zona CIEM X no dispuso en 2014 de una evaluación analítica, siendo contemplada, pues, en la categoría 3 por parte del CIEM. Por otra parte, la Región autonómica de Azores ha recientemente presentado los resultados de la campana oceanográfica dedicada a las especies demersales realizada en 2016. Estos resultados, según los científicos, confirman la recuperación de este stock.
- Tal y como estipula la Comisión en su documento de política general, las posibilidades de pesca se deben fijar según el enfoque RMS, salvo que haya quedado claramente demostrado su impacto socioeconómico.
- Le población de goraz o besugo es explotada en las Azores por 463 pesqueros, lo que representa el 80% de la flota del Archipiélago. Un 76% de estos navíos tienen una eslora inferior a 10 metros y todos salen a faenar esta especie con anzuelos. El grado de dependencia económica respecto a esta especie es muy importante, ya que la misma representa un 25% de la Cifra de Negocio Anual para cerca de la mitad de las empresas pesqueras, llegando a representar el 80% en algunos casos.
- La Pesca en Azores solo se realiza a través de artes de pesca selectivos (anzuelos)
- La Región Autonómica implementó desde dos años un conjunto de medidas de gestión muy restrictivas, para mejorar la gestión del Besugo en la zona CIEM X.
- La Comisión propone que se reduzcan en un 12% las posibilidades de Pesca de esta población entre el nivel de base de 2016, y los años 2017 y 2018.

Elementos de análisis:

- El CC Sur desea recordar que se había opuesto al método propuesto por el CIEM para las poblaciones comprendidas en la categoría 3, dado que 1/ se apoyaba en las capturas, lo que podía poner en peligro la estabilidad relativa y 2/ aplicaba algunos niveles de reducción de manera arbitraria
- El *Grupo de trabajo sobre* la *biología y* la evaluación de recursos pesqueros de *aguas profundas* (WGDEEP) tiene que tener en cuenta la campaña realizada en 2016 por la Universidad de Oceanografía y de Pesca de la Universidad de Azores. A lo que se añade, además, la ausencia de campañas en 2014 y 2015, por lo que el dictamen del CIEM no se basa, pues, más que en datos antiguos.
- La campaña 2016 da muestra de un fuerte aumento del nivel de abundancia de esta población (cf Anexo I), a lo que se suma lo sentido en la mar por los

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pescadores, que han tenido que adoptar numerosas medidas de gestión, para ajustarse a la cuota asignada (cf Anexo II).

- La eventual falta de consideración de las medidas de gestión adoptadas por la Región Autonómica, apoyandosé sobre el peritaje de los científicos, y de los esfuerzos realizados por los pescadores, pondría en tela de juicio y desacreditaría la gestión del Gobierno Regional. Esta situación podría resultar en conflictos y revueltas en contra de las Instituciones de la Pesca y en contra de la PPC.

Recomendaciones:

- Importa tener en cuenta dictámenes científicos más recientes.
- Para no contribuir a castigar más aún el tejido socioeconómico de las comunidades de pescadores de las Azores, se propone mantener los TAC al nivel actual. Tomando en consideración el aumento del nivel de biomasa, no resulta exagerado esperar que si se aplica este roll over, se asistirá a una disminución de la mortalidad por pesca en 2017 y 2018.
- Los Miembros del CC Sur invitan a la Comisión y al CIEM a organizar un taller a fines de 2017, para tomar en consideración los resultados de la próxima campaña, asegurándose así de que las recomendaciones aprobadas este año son pertinentes.

Origen del dictamen y Contribución: Gualberto Rita, Federacao Das Pescas

Anexo I: Resumen de la campaña de pesca en mar 2016, por el Departamento de Oceanografía de las Azores

Anexo II: Estudio realizado por el Gobierno regional de las Azores

** Dictamen validado por el Comité Ejecutivo durante el periodo de suspensión de la actividad de las ONG ambientales en el CC SUR.*

UNIVERSIDADE DOS AÇORES
DEPARTAMENTO DE OCEANOGRAFIA E PESCAS

Demersal and deep-water fish annual monitoring cruise survey in the Azores - 2016

(ARQDAÇO-46-P16)

Results report: *Pagellus bogaraveo*

by

Gui Menezes, Mário Rilhó Pinho

2016

Abstract

The monitoring fishing surveys targeting the demersal and deep-water fish species in the Azores occur since 1995. The cruise had been use for monitoring the relative abundance of commercially important demersal species, but also to collect other biological and ecological data of these species. The cruise follows a standard stratified random sampling both at horizontal level (covering pre-defined Areas and Subareas) and at the vertical level (covering different depth strata up to the 1200 meters). The survey relative abundance indices had been used as an indicator of the state of the stock of the blackspot seabream (*Pagellus bogaraveo*) classified as a Category 3 species in terms of assessment and management. The present report presents the results obtained in the 2016 monitoring cruise survey for the species *Pagellus bogaraveo*. Results show an overall significant increase on the relative abundance index of this species in the Azores. This increase was observed simultaneously in all the surveyed areas and the observed relative abundance is similar to the best values observed in 1999 and 2005. Size composition show a high abundance of young adults but also a high abundance of larger individuals when compared to the average size composition of the most recent period available (2010-2013).

These results suggest that the population abundance recovers when compared with the decreasing trend observed in the survey period 2010-2013. Taking into account the current management measures and the survey results it is prudent to maintain a precautionary management approach on the exploitation of this species, yet based on this results, there is no reason to reduce the current TAC of 507 tons for the region.

Introduction

Temporal data series on the distribution and abundance of species are of great importance to assess the status of communities and species of commercial interest. The importance of research and long-term monitoring is widely recognized by scientists and managers as the best way to monitor and understand the temporal trends and ecological patterns at the level of communities, populations or species. In the Azores the fishing targeting the demersal fishes is the most important fishery in terms of economic value, being held in scattered or fragmented fishing grounds (islands and seamounts). The latter fact makes the assessment and management of these resources in the Azores a complex and challenging problem.

Since 1995 it has been implemented in the Azores an annual monitoring campaign using a bottom longline gear targeting the demersal species covering the main fishing areas (islands and seamounts), and covering the depths up to the 1200m, and had been primarily funded in the recent years by the Azores Government. The main objective of the cruise surveys is monitoring the abundances of these species, but also to collect information and biological material to better know and understand the biology and ecology of these species. This information is essential to better access and manage these resources. In addition to the annual reports from the cruise surveys data collected have allowed the publication of numerous scientific articles and thus have contributed significantly to increase scientific knowledge on many different marine research issues.

The data collected in ARQDAÇO campaigns represent the longest and complete data series of a significant number of fish population in the Azores. Since 1995, a total of 15 cruise surveys were carried out (with failures in 1998, 2006, 2009, 2014, 2015, for technical and operational reasons). Along the years over 100 species of fish have been regularly sampled every year and over 50,000 otoliths and more than 15,000 samples of tissue for genetic, reproduction and eco-toxicological studies were collected so far. Since 1999, when the tagging activities started, more than 25,000 fish belonging to 47 different species were tagged and released. This tagging program is an important and unique contribution to increase the current knowledge about the movements of these species, connectivity between geographically distant fishing grounds, abundance, mortality and / or growth estimates.

Data from ARQDAÇO campaigns have been used to support the scientific advice provided to policy makers. It contributed to many reports of various working groups such as those of the ICES (International Council for the Exploration of the Sea), or regional/national reports for example those under the "Marine Strategy Framework Directive". In 2016 ICES - WGDEEP stressed the importance of ARQDAÇO campaigns as a key component of assessment and management of various demersal and deep-water fish species of the Azores and the North Atlantic. In addition,

ICES-WGDEEP highlighted the time series built so far and the importance that these estimates have for the fish stock assessment modeling and to improve the advice for various stocks assessed in the working group. The ICES-WGDEEP strongly recommended that an effort should be made in order to not interrupt these cruise surveys.

The blackspot seabream (*Pagellus bogaraveo*), is the most important target species of demersal fisheries of the Azores. The stock is classified by ICES in Category 3 according to the ICES approach to data-limited fishery analysis. This means that the abundance indices obtained annually by ARQDAÇO campaigns are the preferred indicator for the management of this species and the setting of multi-annual quotas (TAC's) in ICES area X, hence the importance of this surveys for the region.

Cruise survey design and methodology - 2016

The annual cruise surveys (also called ARQDAÇO campaigns) follow a standardized statistical design (stratified and random design) using a bottom longline gear, and every year about 34 fishing stations are sampled. Among others the information on the fishing effort used in each fishing haul (station) and the respective catches by species was collected. Each species was sub-sampled in more detail, and various biological variables (i.e. lengths, sex, weight, maturation states) were collected as well as biological samples (otoliths to estimate the age, muscle portions for genetic analysis and other tissues) for further studies. During the cruise survey a significant number of fishes (mainly bream - *Pagellus bogaraveo* and mouth-black / redfish - *Helicolenus dactylopterus*) were tagged and released with traditional tags (spaghetti tags).

Under the cruise survey of 2016 (ARQDAÇO-46-P16), 34 fishing hauls (stations) were sampled (Figure 1). Overall about 106884 hooks were deployed covering the 1 to 24 depth strata (25 to 1200 m) (Table 1). The cruise survey of 2016 covered all areas and took place between the end of April and beginning of July.

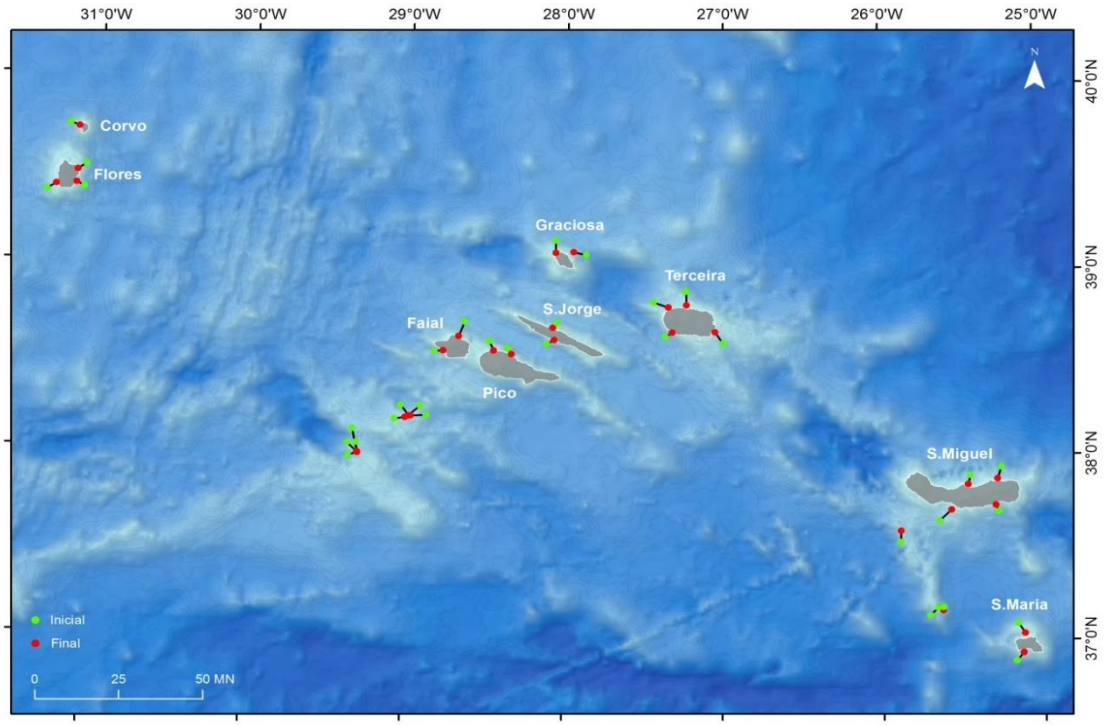


Figure 1 – Location of the sampling stations surveyed during the cruise survey ARQDAÇO-46-P16.

Tabela 1 – Resume of the number of sampling stations and the fishing effort applied during the cruise survey ARQDAÇO-46-P16.

	Areas	No. of sampling stations	Fishing effort
1	Bancos Princesa Alice e Açores	8	2697
2	Ilhas do Grupo Central	12	3676
3	Ilhas do Grupo Oriental	6	2155
4	Banco Mar da Prata	4	980
6	Ilhas do Grupo Ocidental	4	1179
	Total	**34**	**10688**

Results

The results of the 2016 survey cruise give an increase on the relative abundance index in weight units (RPN/B) of the blackspot seabream attaining a value of 80.15 (percentile limits: 65,12 – 85,59) (Figure 2). For comparison reasons with the previous years this global result only considers

the areas 1, 2, 3 and 4 and the strata depth of 3 to 12 (101 to 600 meters), because in the years 1996 and 2008 the Area 6 (Western Group - Flores and Corvo) were not sampled.

The relative abundance obtained in 2016 corresponds to a significant increase when compared with the value obtained in 2013, which was the last year of survey (Figure 2). This significant increase of the abundance indicates an increase of the fishing availability of the species in the Azores in 2016, and the values obtain are similar to the highest values obtained in the years 1999 and 2005, which were the maximum values observed along the entire time series. These years also coincided with observed peaks on the landings carried out by the commercial fleet in the Azores (Figure 6) before the implementation of the TAC.

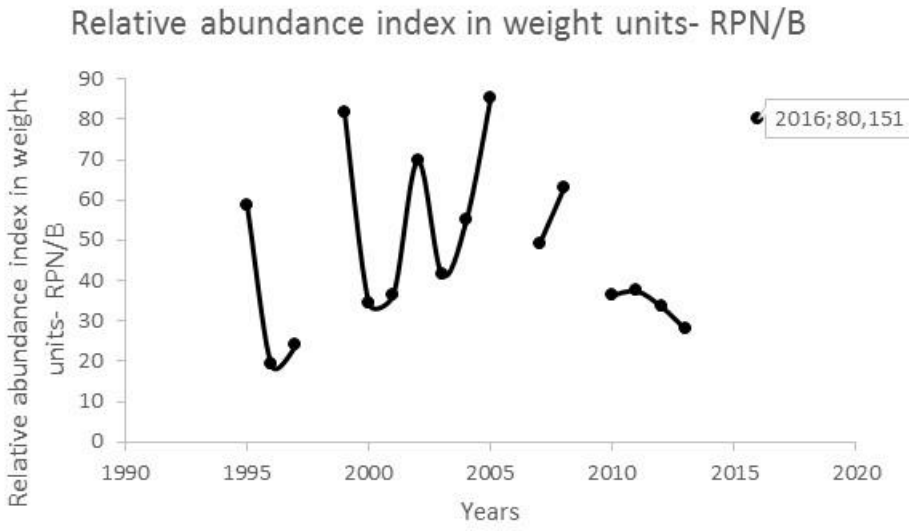


Figure 2 – Annual trends of the relative abundance index in weight units (RPN / B) for blackspot seabream (*Pagellus bogaraveo*) in the areas 1 to 4 and for the depth interval 101-600 meters.

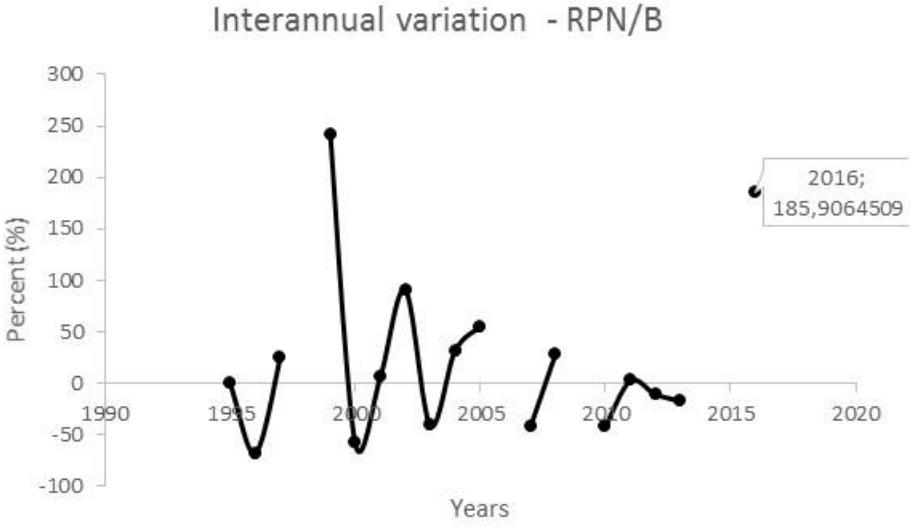


Figure 3 – Inter-annual percentage variation in the relative abundance index in weight units (RPN / B) for the blackspot seabream (*Pagellus bogaraveo*) in the areas 1 to 4 and for the depth interval 101-600 meters.

It is worth to mention that the relative abundance indices increased in all surveyed areas, including those where persistently we observed the lower abundance values throughout the time series (Areas 3 and 4, Figures 4 and 5). In the case of the area 6 (not always surveyed), there was a decrease in 2016, however the abundance index of this area is in average high when compared with the other areas taking into account the reduced dimension of potential habitat of this area for the blackspot seabream.

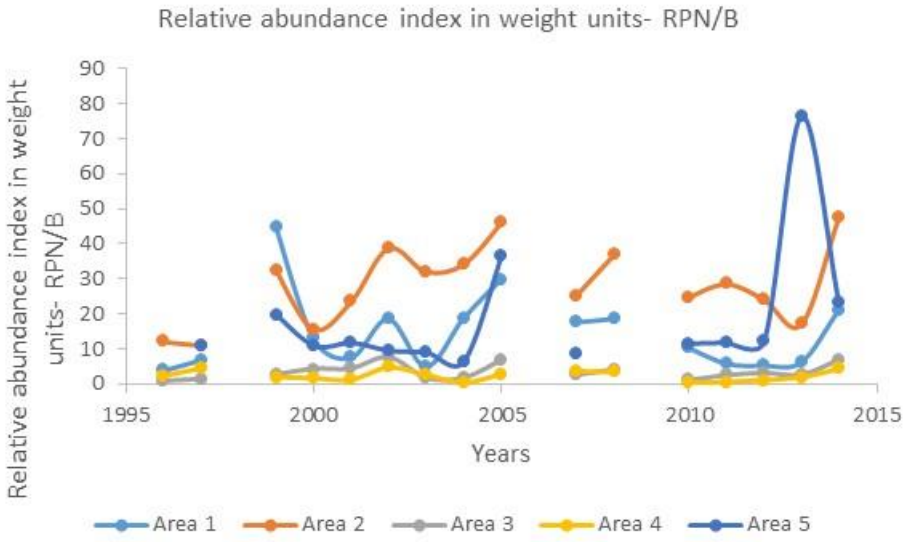


Figure 4 – Annual trends of the relative abundance index in weight units (RPN / B) for blackspot seabream (*Pagellus bogaraveo*) in each area (1 to 6) and for the depth interval 101-600 meters.

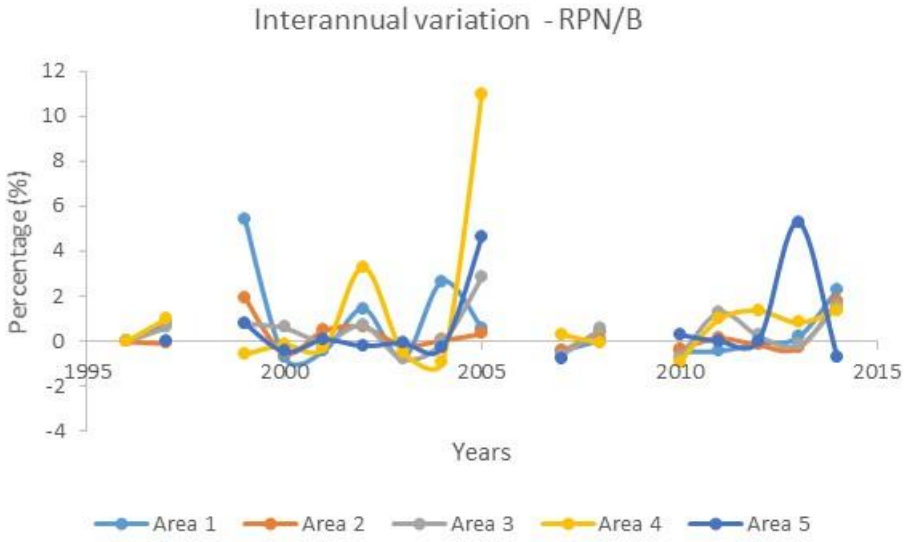


Figure 5 – Inter-annual percentage variation in the relative abundance index in weight units (RPN / B) for the blackspot seabream (*Pagellus bogaraveo*) in each area (1 to 6) and for the depth interval 101-600 meters.

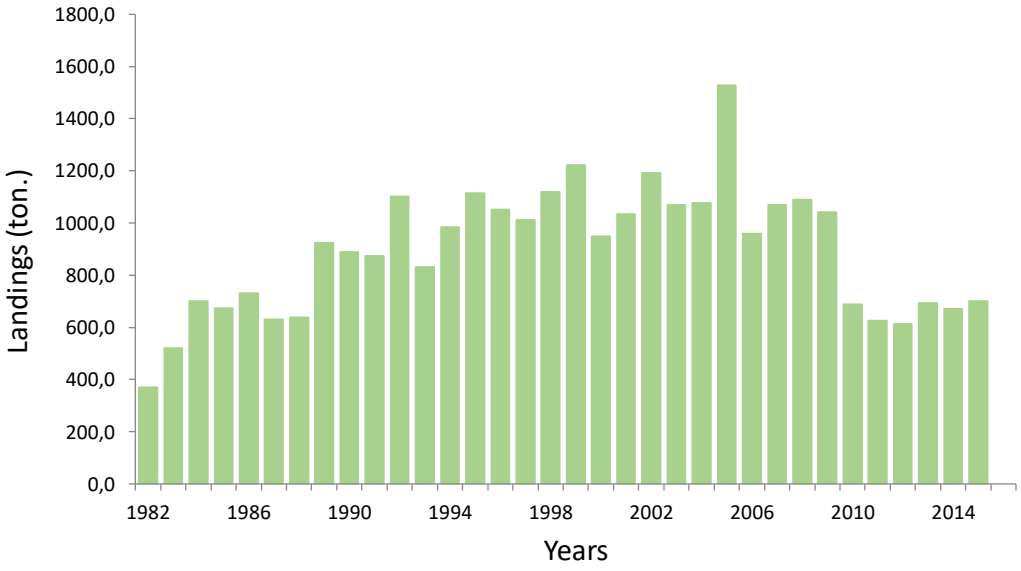


Figure 6 – Annual landings of the blackspot seabream in the Azores (Área x do ICES).

The length composition obtained in 2016 follow an asymmetric distribution pattern (mode at 27cm) identical to average pattern observed over the historical period, but showing a greater abundance (Figure 7). It also shows a small mode at about 35 cm and a slightly high number of larger individuals when compared with the 2010-2013 period.

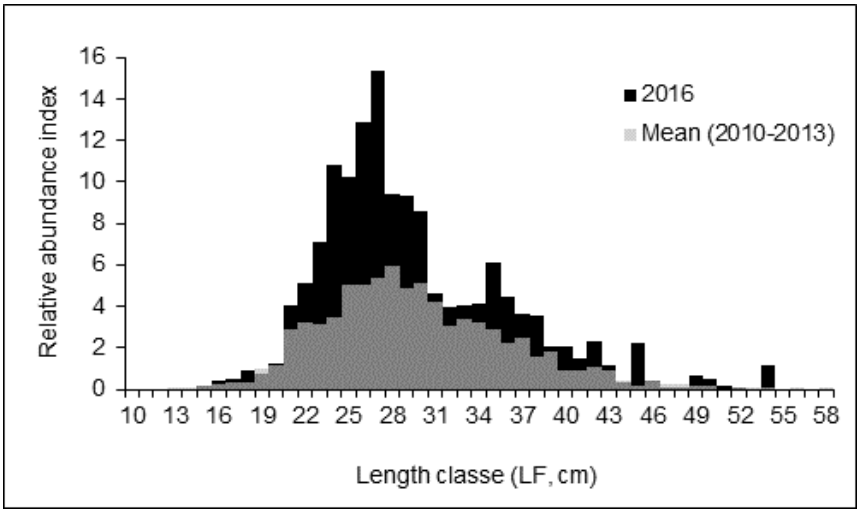


Figure 7 – Size composition of the blackspot seabream (*Pagellus bogaraveo*) obtained in the 2016 monitoring cruise survey (black bars), and the average size composition of the period 2010-2013 (grey).

Conclusions

The annual survey cruise of 2016 follow the standardized design and methodologies of the previous years. The survey cruise was carried out in the same period, between April and July, and in total 34 longline hauls/stations were surveyed covering the same pre-defined areas of the previous years.

Results from the 2016 monitoring cruise survey show a generalized and significant increase in the abundance of the *Pagellus bogaraveo* in the region. The fact that the increase in the relative abundance of this species is being observed in all areas means that the population is recovering in all the area of their distribution. Results also show that the size composition is dominated by young adults but the abundance of larger animals is also higher when compared with the period 2010-2013.

The observed trend on the relative abundance as given by the annual surveys may indicate good recruitment in recent years and simultaneously a positive effect of the management measures implemented in the region. These measures were diverse and target among others, a reduction and a change on the distribution of the fishing effort, but also the size selectivity of the catch. This includes among others, the implementation of minimum sizes, prohibition of the use of the bottom longline within the 3-mile zone around the coast of the islands, the reduction of the TAC, close of fishing in some months of the year, and closure of some areas to the demersal fisheries with the implementation of some Marine Protected Areas with diverse regimes.

The blackspot seabream shown to be a species with some resilience and apparently to be a species whose population dynamics favors a rapid recovery. This recovery capability has been evident in the study being conducted in Condor bank in the last years, where after a period of intensive fishing in this seamount (with averages catches of about 40 tonnes of *P. bogaraveo* per year) the population increase almost exponentially after the seamount closure to demersal fisheries in 2010.

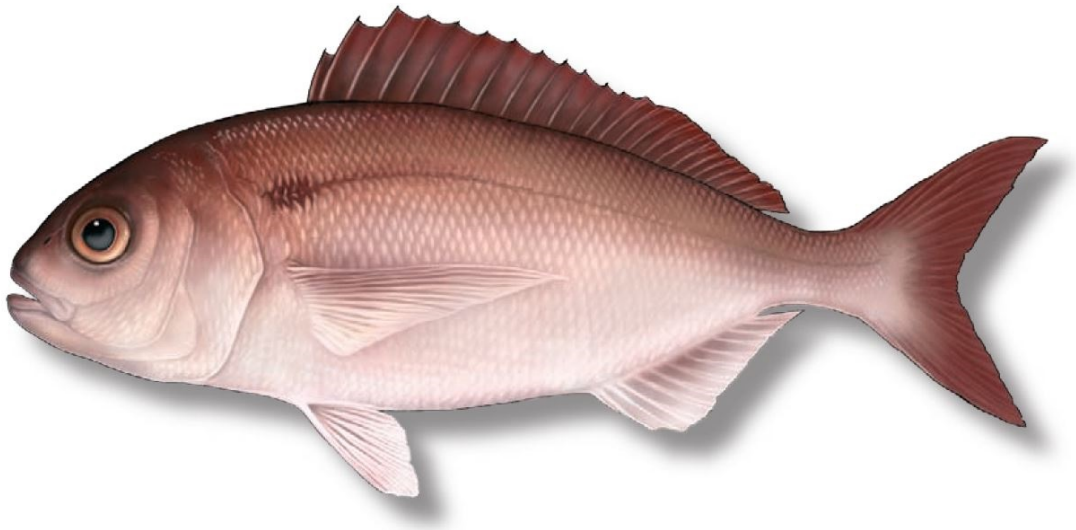
Although there was a clear recovery of the abundances in the large seamount areas (Area 1: Princesa Alice bank and the Açores bank), due to the current high fishing pressure in this areas it is not advisable to increase the catches excessively so that the abundances in these areas can gradually continue to increase. Although it deserves a more detailed analysis, results show the possible existence of cycles of 3 or 4 years of high abundances followed lower abundances, which may be related to environmental cycles that may regularly influence the recruitment of this species (Figure 2). Hence, additional to the effects of the fishing there also some influence of the environmental conditions which may affect the dynamic of the population.

Although it is prudent to maintain a precautionary management approach on the exploitation of this species in the Azores, in particular due to the differences in abundance observed between areas, some of which still have in general low abundances, it seems reasonable and safe to maintain the present TAC (507 tons.) for the species in the region, if all the other current management measures and the monitoring survey of the species are maintained. The spatial management of the species, including the creation of marine spatial closures for resource management purposes moreover complex, can also be a very effective management measure in view of the characteristics of the marine territory of the Azores and based on the recent experience in the Condor seamount which clearly show how the species reacts rapidly to such measures. However, the implementation of this last spatial management measures must be well balanced and analyzed to avoid an excessive concentration of the fishing effort in a few number of available areas to fishing.

AZORES AUTONOMOUS REGION
Regional Secretariat for the Sea, Science and Technology

The Socio-economic importance of Blackspot Seabream fishing (*Pagellus bogaraveo*)

Justification for keeping the current fishing possibilities in 2017 - 2018



September 2016

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1. Background information on the Blackspot seabream fishing in the Azores

The blackspot seabream (*Pagellus bogaraveo*) has been captured, as part of the demersal fishing in the Azores since, approximately, the XVI century. This resource is exploited through hook and line fishing and traditionally is one of the most important in the Region. In the period between 2003 and 2015, blackspot seabream represented around 25% (895 tons) of the volume caught and 41% (7.8 million euros) of the total value of the demersal fish species landed in the Azores.

Demersal fishery development has been subject to monitoring and control programs, with time series going back to the 1980's. Traditional assessment methods, such as the Virtual Population Analysis (VPA), have been used to assess the state of exploitation of the blackspot seabream. However, the assessment models have not been validated by ICES, which requires the study of abundance through the use of trawling techniques. This technology is prohibited in the Azores and therefore, difficult to apply. As such, the resource is currently classified as category 5 (stocks for which there are only data from unloading catch numbers), according to the categorization of ICES and to the data available for assessment. The scientific recommendations have been based on the historical series of abundance data of monitoring campaigns that have been conducted since 1995 by the Department of Oceanography and Fisheries of the University of the Azores.

In recent years there has been a significant decrease in the quota established for the Azores, dropping from 1,136 tons in 2012 to 507 tons in 2016. The fishing opportunities established for 2016 represented a severe limitation, which means that the Azorean fishermen and boat owners had to make a huge effort to apply these restrictive management measures. As mentioned below in point 3 in more detail, regional legislation, such as Ordinance 94/2015 of 10 July and Ordinance 80/2016 of 27 July, established extraordinary time periods in which blackspot seabream fishing was prohibited, and Ordinance 74/2015 of 15 June set a minimum size for capture of 300 mm or 400 g, later increased by Ordinance 88/2016 of 12 August to 320 mm and 500g.

Table I – Evolution of TAC of the Blackspot seabream in zone X of ICES between 2010 and 2016.

	2010	2011	2012	2013	2014	2015	2016
TAC (Ton.)	1,136	1,136	1,136	1,022	920	690	507

2. Description of the hook fishing fleet in the Azores

In the Azores, fishing for blackspot seabream is carried out in a traditional "hook and line" fishing framework with predominantly multi-species characteristics aimed at a group of demersal and deep water species, and the fleet fundamentally operates in Azores (ICES subarea X), within the Portuguese Exclusive Economic Zone.

The current fleet of the Azores, which operates with hook and line gears to capture demersal and deep water species, uses 463 boats, representing 80% of the regional fishing fleet. It comprises about 2,500 fishermen and for many it represents the only form of income in the family. Note also that many fishing communities are located in remote villages with few employment alternatives other than fishing.

This section of the fleet is mostly made up of small boats that are less than 10 meters long (76%) which develop their activity with hand lines in coastal areas and in the seamounts close to the islands of the archipelago. The larger boats, with an average of 10 fishermen, operate mainly with bottom longlines in the areas further away from the coast.

During 2015, 448 vessels landed blackspot seabream. For 182 of these vessels, blackspot seabream represented more than 25% of the annual income and for 91 this species represented more than 50% of the annual income. Blackspot seabream landed represented 80% of the income for some of the boats.

Furthermore, in recent years, there was a decrease in the number of fishing boats.

Table II – Impact of blackspot seabream in total fishing, per island (in % of total value. Source: Lotaçor).

	S Maria	S Miguel	Terceira	Graciosa	S Jorge	Pico	Faial	Flores	Corvo	Total Azores
2012	1.07%	8.69%	29.15%	59.66%	5.98%	6.18%	16.00%	34.99%	51.19%	13.73%
2013	0.87%	9.85%	32.99%	77.36%	9.44%	2.63%	28.51%	38.30%	70.99%	15.80%
2014	6.77%	8.97%	39.66%	83.74%	8.32%	9.05%	27.27%	55.37%	40.31%	20.34%
2015	10.59%	13.19%	36.16%	82.26%	13.18%	10.08%	30.43%	41.25%	20.48%	22.94%
2016	11.61%	16.85%	34.98%	61.06%	11.71%	9.24%	38.36%	29.80%	40.64%	23.75%

3. Management measures adopted in the Azores

The blackspot seabream catch decrease recorded from 2010, indicated the need for a reduction in the fishing effort. In this sense, the Regional Government has put forward, since 2012, a number of legislative initiatives aiming to diversify fishing and to implement conservation management measures for a wide range of demersal species in which the blackspot seabream is included. We highlight the following initiatives:

- Ordinance 50/2012 of 27 April: establishes areas of more restrictive operations for coastal fishing boats. Boats until 14 meters' length are forbidden to fish within 1 nautical mile from shore and boats over 24 meters long may only fish beyond 30 nautical miles from shore;
- Ordinance 74/2015 of 15 June: eliminates the margin of tolerance of 15% below the minimum size in total blackspot seabream catches previously established in Ordinance 1/2010 of 18 January;
- Ordinance 74/2015 of 15 June, sets a minimum size for blackspot seabream catches to 300 mm or 400 g and, later, in Ordinance 88/2016 of 12 August, the minimum size increased to 320 mm and 500 g;

The Azores Government defends a gradual increase in the minimum catch size, aiming to achieve a minimum size of 330 mm by 2020.

- Ordinance 74/2015 of 15 June: clarifies that a closure of any fishery for having reached the fishing opportunities implies an immediate ban into recreational fishing;
- Ordinance 74/2015 of 15 June: establishes an annual closure period for blackspot seabream between 15th January to 29th February. The established prohibition period coincides with the breeding season of the species in the Azores and has as its main objective the protection of spawning biomass;
- Ordinance 157/2015 of 4 December: allocates how the blackspot seabream quota is distributed between the islands, to ensure quota management per island;
- Ordinance 87/2014 of 29 December: establishes specific access rules and restrictions to fishing activities in the seamount areas of "Baixa do Ambrósio",

"Baixa da Maia", "Baixa da Pedrinha" and the islet of "Ilhéu da Vila" in the island of Santa Maria, including a full ban of demersal fishing;

- Ordinance 53/2016 of 21 June: lays down specific rules for fishing in the marine areas of "Monte da Guia", in Faial island, and the "Ilhéus da Madalena" and "Baixa da Barca", in Pico island, including a full ban of demersal fishing;
- Ordinance 54/2016 of 21 June: which applies specific rules for fishing in the areas of "Ribeira Quente", in São Miguel island, including prohibiting of demersal fishing;
- Ordinance 55/2016 of 21 June: establishes specific rules for fishing in the "Baixo do Ferreiro", in islets, "Ilhéu da Praia" and "Ilhéu da Baixa", in Graciosa island, including a full ban of demersal fishing;
- Ordinance 88/2014 of 31 December: establishes specific rules for access and extends by three more years the ban of demersal fishing in the seamount "Banco do Condor", to ensure the continuation of scientific projects to monitor the recovery of stocks.

4. ICES recommendations for 2017 and 2018

Similarly to what has happened since 2013, the 2016 ICES assessment recommends that the blackspot seabream catch limit should be reduced to 400 tons for the years 2017 and 2018. In the last assessment, it is emphasized the importance of data from annual monitoring campaigns to identify tendencies in the abundance of this fish species.

Due to unforeseen boat failures in the research vessel of the Azores, the fish assessment campaigns in 2014 and 2015 were interrupted. As such, ICES reclassified the stock from category 3 (*stocks for which there is data from monitoring campaigns*) to category 5 (*stocks for which there is only data from the catch unloaded*).

It is important to stress that the efforts made by the Government of the Azores, to have a data source independent of the fishery data ensured the continuation of an annual monitoring campaign in 2016, devoted to demersal fish species. These campaigns were conducted by the Department of Oceanography and Fisheries. The final report of this campaign, which took place between 26 April and 15 July, will only be available in late October 2016. Yet, according to information gathered from scientists, preliminary analysis of data on the blackspot seabream indicates an increase in the abundance of this species, in all sampling areas, which cover the 9 islands.

Furthermore, a scientific project conducted in the seamount “Banco do Condor”, has been in progress since 2008 and, among other objectives, the project aims to estimate the relative abundance and assess the responsiveness of a number of demersal fish species to fishing bans. Right from the start, the Government of the Azores supported this project and set an experimental area for scientific purposes (Ordinance 48/2010 of 14 May and Ordinance 47/2012 of 19 April), prohibiting fishing for demersal species. Since 2009, the Regional Government funded an annual scientific cruise to monitor the demersal fish ecosystem in the “Banco do Condor”. The results show an increase on the relative abundance of the blackspot seabream (Figure 1).

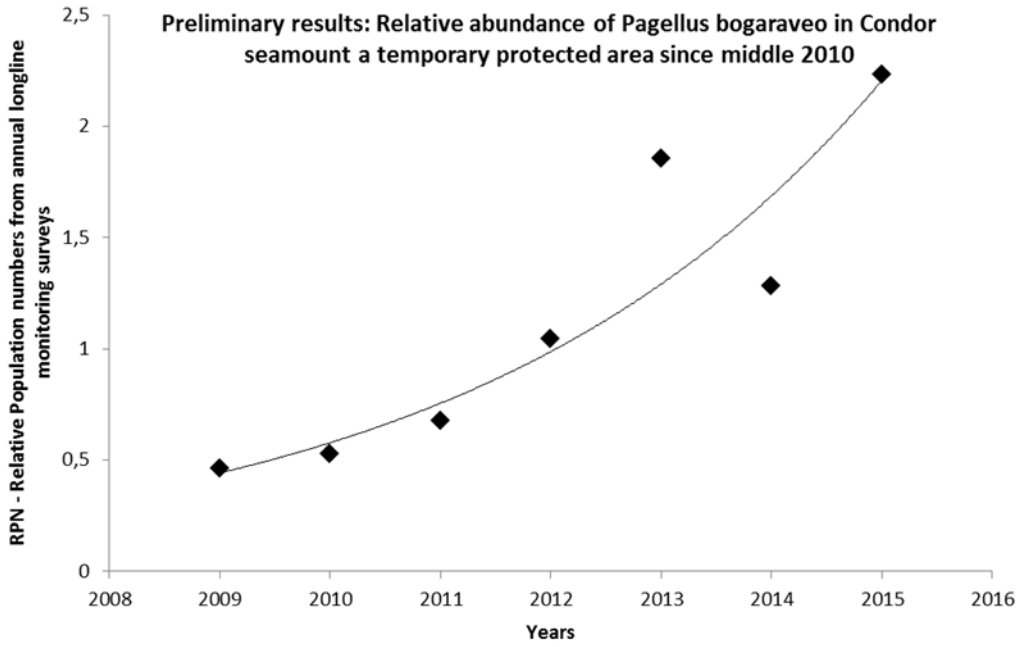

Figure 1 - Relative abundance of blackspot seabream (*Pagellus bogaraveo*) in “Banco do Condor” for the period between 2009 and 2015.

Besides data collected to estimate abundance numbers and to characterize demersal fish stocks during the annual cruise made in this seamount, a significant portion of the fish caught is tagged to get a better understanding of the ecology and spatial behavior of this species. To date, over 3,500 fish, of which 2,728 were blackspot seabream, have been tagged at Condor seamount. These results demonstrate the species’ resilience and that the restriction policies for demersal fishing, adopted in various areas of the archipelago are effective in recovering the stock. Additionally, the results also foresee the positive impact of the many measures that have been implemented by the Regional Government of the Azores.

5. Expected Economic Impact

Using as a parameter for comparison, the period of 2011 to 2015, we find that the quota set for 2016 (507 tons) represents a decline in the landings of approximately 150 tonnes and a decrease of income of the hook line fishing fleet of around 1.3 million euros (income reduction of € 2,880 / boat = 5 times the minimum wage).

The catch limits projected by ICES for the years 2017 and 2018 (400 tonnes), represent a decrease of about 251 tonnes, in total, of blackspot seabream landings in the Azores and a reduction in the fleet income of about 2.2 million euros (income reduction of € 4,752 / boat = 8.5 times the minimum wage).

Furthermore, more than 90% of the blackspot seabream captured in the Azores is exported. Such scenario would create a negative impact in indirect employment that is difficult to assess. This impact would extend to trade, conservation and transport, with severe repercussions on the regional gross domestic product, employment and exports in the region. A cut of 520 tonnes between 2014 to 2017 would be too drastic and would not allow for the vast majority of the boats dedicated to this fishery in the Azores, to adapt, causing a great number of bankruptcies, and an increase in unemployment in this sector of the fishing fleet.

As set in Article 349 of the Treaty on the Functioning of the European Union, whose legal status was reinforced by the decision of the EU Court of Justice, in its ruling of 15 December 2015 (Joined Cases C-132/2014 C-136/2014), the adoption of measures by the European Union, including in fisheries policy, should take into account the structural, economic and social situations of the outermost regions such as the Azores.

6. Conclusions

Considering the legislative changes introduced by the Government of the Azores, in particular regarding the implementation of seasonal and area closures and the setting of larger minimum sizes for the blackspot seabream, it is expected that the subsequent implementation of stricter management measures must, first and foremost, take into

account the positive impact of the measures already adopted. The imposition of new reductions in fishing opportunities would discredit the effort that is being made by the Azores and the azorean boat owners in the protection of the blackspot seabream, exacerbating the social problems already existing in the fishing community due to the quota cut to 507 tonnes per year, and would cause conflicts between fishermen, administration and the scientific community.

Nevertheless, the Regional Government intends to continue its efforts in cooperation with fishing sector partners to implement new restrictive measures in professional and recreational fishing that will ensure the sustainability of this activity, including new fishing reserve areas as well as increasing the minimum fishing hook size and the minimum capture size.

Aware of the difficulties that the sector is facing caused by the cut of the blackspot seabream quota, and the sharp drop in tuna fish captures in recent years, the President of the Azores Regional Government appointed a working group that incorporates representatives of the fishing sector, the scientific community and the regional administration in order to present a set of measures to restructure the fisheries sector. Among these measures is the downsizing of the fleet, to improve the protection of marine resources, and the increase of the *per capita* income of fishermen.

The possible establishment of a new limit to blackspot seabream landings for the biennium 2017-2018, more restrictive than the 2016 limit (507 tons), and the multispecies characteristics of this fishery, put a substantial portion of the regional fishing fleet in a high socio-economic risk.

Thus, the Azores Regional Government considers essential that the Council of the EU does not reduce the blackspot seabream quota in the Azores (ICES subarea X) for 2017 and 2018. This measure would entail severe socio-economic consequences for thousands of Azorean families, and compromise the efforts made so far in the management of this fishery and in the conservation of the species, which are being developed in the Azores with encouraging results.