

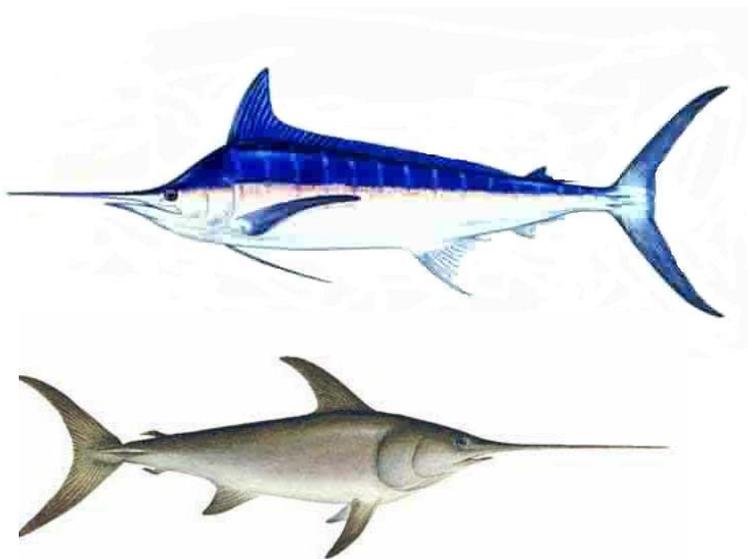


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Preliminary Overview of the Recreational Billfish Fishery on the Eastern Coast of Baja California Sur, Mexico

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Introduction

Fishing is one of the main economic activities in Baja California Sur, Mexico. In recent years, with over 85% of fishery resources overexploited¹, the Mexican commercial fishing industry has faced challenges in continuing steady operations. Meanwhile, recreational fishing, mainly targeting billfish², has grown along with tourism in the region and has developed into a large industry with a very significant role in the local economy and relatively stable catches since the mid-1980s². The purposes of this working paper are three-fold; 1) review of the billfish fishery in Baja California Sur (BCS), 2) identify roles of the recreational billfish fishery in Baja California Sur and 3) describe current issues in this fishery.

Overview of the billfish fishery in Baja California Sur

The Gulf of California has always been a very important area for fisheries; around 40% of Mexico's commercial catch (by volume) is landed in the Gulf of California³. Moreover, the tropical climate and the short travel distance make the Gulf of California a popular destination for vacations by Americans and Canadians. So it is no surprise that the area has become one of the premier recreational fishing destinations for tourists. Most recreational fishing effort takes place on the eastern coast of BCS, mainly in the Los Cabos region and in Buenavista (Fig. 1).

² Other fish targeted by recreational fisheries are mackerel, jacks, bonito and dolphinfish.



Fig 1. Primary area of recreational fishing operations in the western coast of the Gulf of California.

Billfish are very highly regarded as prize fish by sport fishermen, and international tournaments are held every year, with marlin and sailfish being the most targeted species. Striped marlin, blue marlin and sailfish make up 99% of billfish captures, which total to around 23,000 fish a year². Billfish are exclusively reserved for recreational fishermen, but due to bycatch in the commercial fisheries, these two sectors in Baja California Sur have been in conflict over billfish resources.

Roles of the recreational billfish fishery in Baja California Sur

Revenues from recreational fishing licenses alone in Baja California Sur increased in the past few years to 1.5 million USD in 2006. The government of Mexico estimated the total value of recreational fishing direct expenditures in BCS to be around 8 million USD in 2007. However, no methods for the estimate or a definition of this economic value were provided in this report⁴. A recent report conducted on behalf of The Billfish Foundation places the total expenditure of angling retail sales (based on operator and visitor surveys) around 633 million USD in the Los Cabos region alone. Furthermore, an input-output analysis in this same study, which estimates the effects on the

local economy by recreational fisheries, calculated a total of 1.12 billion USD in total economic activity generated by the recreational fishing industry in this region⁵, which would account for a third of the states' GDP⁶.

Current issues in the recreational billfish fishery

A critical issue in the Mexican recreational billfish fishery is the ongoing conflict with commercial shark fisheries over billfish resources. Recently, these conflicts have been brought to a head by the approval of a new fisheries law, NOM-029 (2007), which sets objectives to improve the commercial shark fisheries management in Mexico. The law's main points are to limit the type and use of shark fishing gear such as long-lines and driftnets and to regulate bycatch of marine mammals, birds and sea turtles. It also prohibits commercial shark fishing in certain areas (such as around islands, whale sanctuaries and turtle nesting beaches) and restricts fishing to 15 nautical miles away from shore for small vessels and 50 nautical miles for larger vessels⁷. The law also states that bycatch must be reported in the ship's log books but does not specifically prohibit the incidental catch of other fish. The government's rationale is that, while not perfect, the law will do much for the management of shark fisheries and that it can be improved over time to protect other fish species. While this is probably true, the recreational billfish fisheries sector has very strongly opposed the law^{8,9}, stating that, by neglecting the explicit bycatch limit on billfish resources, this law will by default allow shark fishing vessels to capture billfish "incidentally" and then sell them on the market. However, as there are currently no accurate estimates of bycatch by the commercial fleet, this law may be a first step in addressing this issue.

The recreational fishing industry on the coast of BCS has been the most vocal opponent of NOM-029, but no scientific studies have yet been conducted to gauge the ecological or economic impact of commercial bycatch to billfish populations and recreational catch. The collapse of billfish resources would result in a negative impact on the entire tourism industry, key for the BCS economy.

Concluding remarks

- It is clear that the recreational fishing industry, which mainly targets billfish, is a major contributor to the economy of BCS.
- In order to have a sustainable recreational fishery in place, stock assessment studies of billfish are needed which incorporate total fishing effort, both by the recreational and commercial fishing sectors. A detailed analysis of bycatch rates of billfish by commercial vessels, and the impact of this bycatch on billfish stocks, is a priority.
- A detailed study is needed in order to evaluate the economic value of billfish to the BCS region, considering the value derived from billfish to the recreational and commercial fishing sectors.

References

¹DOF (Federal Gazette). 2006. Acuerdo por el que se aprueba la actualizacion de la Carta Nacional Pesquera. Poder Ejecutivo—Secretaria de Medio Ambiente, Recursos Naturales y Pesca, Diario Oficial de la Federacion, Mexico, August 25, 2006.

²DOF (Federal Gazette). 2004. Acuerdo por el que se aprueba la actualizacion de la Carta Nacional Pesquera y su anexo. Poder Ejecutivo—Secretaria de Medio Ambiente, Recursos Naturales y Pesca, Diario Oficial de la Federacion, Mexico, March 15, 2004.

³Brusca, R.C., E. Kimrey and W. Moore. 2004. *Seashore Guide to the Northern Gulf of California*. Arizona-Sonora Desert Museum Press, Tucson, AZ. 203 pp.

⁴CONAPESCA. 2007. <http://www.conapesca.sagarpa.gob.mx/>

wb/cona/cona_baja_california_sur_pd

⁵Southwick Associates, Inc., Nelson Consulting, Inc. and Firmus Consulting. 2008. The economic contributions of anglers to the Los Cabos economy. The Billfish Foundation.

⁶INEGI. 2009. Producto interno bruto por entidad federativa, 2001-2006. http://www.inegi.gob.mx/prod_serv/contenidos/espanol/bvinegi/productos/derivada/regionales/pib/pibe2006.pdf

⁷DOF (Federal Gazzete). 2007. NORMA Oficial Mexicana NOM-029-PESC-2006, Pesca responsable de tiburones y rayas. Especificaciones para su aprovechamiento. February 14, 2007. <http://www.ordenjuridico.gob.mx/Federal/>

[PE/APF/APC/SAGARPA/Normas/Oficiales/2007/14022007\(1\).pdf](http://www.ordenjuridico.gob.mx/Federal/PE/APF/APC/SAGARPA/Normas/Oficiales/2007/14022007(1).pdf)

⁸The Billfish Foundation. <http://www.billfish.org/new/newsarticle.asp?ArticleID=66>

⁹El SudCaliforniano. <http://www.oem.com.mx/elsudcaliforniano/notas/n301588.htm>,
<http://www.oem.com.mx/elsudcaliforniano/notas/n283126.htm>