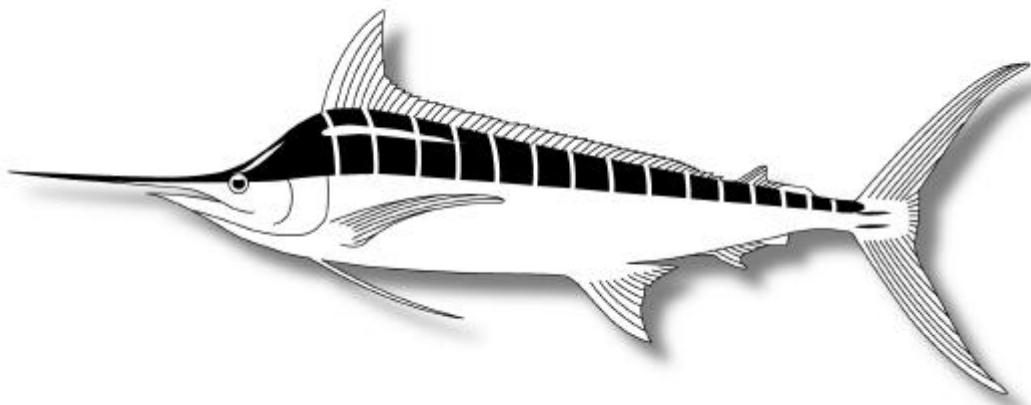




SCTB13 Working Paper

## **BBRG-2**

### Present knowledge on Game Fisheries in the Western and Central Pacific



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## Introduction

This paper is in response to a ‘task’ that evolved from SCTB 12 (Tahiti June 1999) where it was requested that some information be provided on targeting, fishing gear and practices in game-fisheries around the Pacific.

This paper describes what is known about the present gamefishing facilities of the member countries and some information, where available, on the seasonality of the game fish species.

This is a first attempt at bringing together this sort of information and as such has many deficiencies and data gaps. It is intended for this document to evolve with time as more information is obtained. All input and corrections by member countries would be very much appreciated.

Billfish fishing and gamefishing is rapidly developing throughout the world as a revenue source for nations. It provides increased tourist numbers to an area as well as allowing for better utilisation of countries limited natural resources. Game fishing, especially if catch and release fishing is practiced, can provide more economic benefit to a country than can extractive fishing of the same species. This is especially true of the larger pelagics such as the marlin species.

There are a number of centres around the world, which have developed game fishing into major industries. Examples include Cairns (Australia), Kona (Hawaii, USA), North Carolina (USA), Florida Keys (USA), the Caribbean as well as local examples in the Western Pacific such as Vanuatu, Guam, French Polynesia and Fiji.



## Summary

Game-fishing infrastructure and facilities vary widely across the Pacific with the most developed infrastructure and facilities occurring in countries which have developed their tourism industry. Game fishing, especially charter fishing, is intimately linked with tourism for its development.

We have defined 'gamefishing' as any 'blue water' fishing activity, targeting larger pelagic fishes, which is not industrial or subsistence, but rather is carried out for recreation and/or food. This includes charter operators, members of sport and gamefishing clubs and private individuals. Game fishing usually refers to the use of rods and reels, and the use of line that has a breaking strain less than the weight of the targeted fish. It also generally refers to fishing under a set of rules and regulations set by a governing body, either local, and/or the International Game Fish Association (IGFA).

A number of countries in the Pacific, such as Fiji, French Polynesia, Guam and to a lesser extent New Caledonia, Vanuatu, Tonga, American Samoa and PNG have quite well developed game fisheries with organised game-fishing clubs, tournaments and affiliations with the IGFA.

A number of other countries, mainly through a lack of developed tourism infrastructure, have minimal game fishing facilities, though often have a high level of subsistence fishing on some of the recognised game-fish species. Most countries have some charter vessels that offer a full service for game fishing to anglers, at a daily fee. A successful charter operation supplies a well fitted out vessel, complete with all fishing gear (set to IGFA standards), lures, bait, etc. A captain operates the vessel, while one or more deckhands rig baits, set gear and ensures smooth operation on the deck.

Because of the high mobility of clients for charter fishing (they often come from the US, Europe, Japan, Australia etc), it is important that a charter operation offers certain incentives that are perceived to be an advantage over competing areas. Such features might include the availability of large specimens of a certain species (e.g., record sized sailfish, dogtooth tuna, bigeye tuna, blue marlin and so on); or the likelihood of high strike rates from the target species. A good charter fishery may average several strikes from billfish per day's fishing, which would be sufficient attraction for anglers to travel large distances. International anglers also usually prefer comfortable boats and on shore accommodation, although this is not essential if good fishing is assured.

A typical game fishing boat is a 'cabin cruiser', usually over 10 metres in length. It would normally be equipped with twin diesel engines (200 hp each, and above), plus a flying bridge, and electronic equipment such as depth sounder and GPS. Smaller vessels are quite capable of game fishing with boats 5 metres and over often performing well in competitions. Modern banana boats have proven to be excellent vessels for trolling for gamefish, although their one disadvantage is the inability to 'back up' quickly. This can be compensated for, however, by driving forward to retrieve line, since the angler can be positioned either fore or aft.

Game fish are usually defined as the larger, pelagic species of marine predatory fish. They are categorized as such by the IGFA, and include, in particular, all of the billfishes (marlins, sailfish, spearfishes and swordfish); all of the tunas (the true tunas (*Thunnus* species) as well as the little tunas and bonitos; the mackerels (*Scomberomorus* spp); some sharks, notably, the mako, tiger, blue, white (where not protected), hammerheads, threshers and members of the requiem or whaler group

(*Carcharhinus* spp); and other sundry species, including wahoo, cobia, dolphin fish, and giant trevally. All these species are seasonal in their catchability due to varying environmental parameters, mainly water temperature.

While the seasonality of some species for some countries has been presented here, it has not been possible to provide information for all countries due to lack of data. In some instances there has been no game-fishery data but rather seasonality for the species has been derived from longline data within the countries EZ as well as from port landings. It is hoped that the data collected and archived by the game-fishing industry will improve with the provision of a central game-fishing database now available at SPC.

A number of countries have developed gamefishing clubs. These clubs provide a central co-ordinating body that organise tournaments as well as collect game-fish catch and effort data. A number of these clubs have provided information for this report. This work is to be encouraged. To assist with this, a web page (<http://www.spc.org.nc/oceanfish/>) has been developed to provide tournament and charter vessel troll data sheets to assist in the collection of game-fish catch and effort data.

The two major game fisheries in the SW Pacific are in Australia and New Zealand. These countries support extensive private, club and charter sectors. On the east coast of Australia, game fishing clubs are located in most major ports. Membership of east coast clubs affiliated with the Game Fishing Association of Australia is about 6,000. Important charter fisheries, which primarily target black, blue and/or striped marlin, are located in centres spread along the east coast between Cairns (northern Queensland) and Bermagui (southern New South Wales). Other primary target species include yellowfin tuna and mako, tiger and blue sharks.

It has been estimated that expenditure on game fishing in eastern Australia is more than \$200 million per annum (Pepperell 1994). Summaries of the history, extent and catches of the eastern Australian gamefish fishery are reported in Campbell et. al. (1996, 2000) and BRS (2000).

Game fishing in New Zealand is also extensive and highly organized through the Big Game Fishing Council of New Zealand. Most of the activity occurs along the northeast coast of the North Island, especially from the Bay of Islands, where a large charter fleet is based. Target species are primarily striped marlin and mako sharks.

## **Methods**

The information contained in this report has been provided by relevant country contacts as well as gleaned by staff of the Secretariat of the Pacific Community. While every effort has been made to include all relevant information, there will no doubt be some omissions or errors.

Much of the information within this report was derived from questionnaires completed by country representatives. The information provided on population size, area of EEZ, land area etc were derived from 'Pacific Island Populations – Data Sheet', (SPC, 1997) and information available on the SPC regional country database. Much additional information was also obtained from individuals within the gamefishing community as well as from various fisheries departments.

## Results

The results are described by country. In many cases there are gaps in our information and it is hoped that participants of the 13<sup>th</sup> SCTB will be able to fill in some of these gaps.

Results, not surprisingly, are quite diverse with some Pacific countries having quite developed game fisheries while others are still in the developmental stage.

### American Samoa

Population	62,500	Land Area (km <sup>2</sup> )	201
EEZ area (km <sup>2</sup> )	390,000	Population per 100 km <sup>2</sup> of EEZ	16.03
% off EEZ area as land	0.052	Coastal fish catch/capita (kg)	4.87

American Samoa is an unincorporated territory of the United States. It is composed of 7 islands and is the only American territory below the equator.

Pago Pago is the capital and is where most of the game fishing is carried out. There are a number of charter operators based out of here for sport fishing, diving and sailing.

The game-fishing infrastructure here is fairly well developed in comparison to many of the other Pacific countries with a number of charter vessels available as well as many private gamefishing boats.

### Game Fishing Facilities

<b>Main Fishing Grounds</b>	Fishing is carried out around the islands with a number of existing FAD's being utilised.
<b>Marinas</b>	There are a number of marinas??
<b>Boat Ramps</b>	??
<b>Jetties</b>	??
<b>Number of Charter Vessels</b>	??
<b>Game Fishing Club</b>	American Game Fishing Association (Tutelei – 1670-6332465) - affiliated with IGFA
<b>Approximate No of private vessels</b>	10–20
<b>Tournaments</b>	??
<b>Game fishing contacts</b>	American Game Fishing Association
<b>Fisheries Management contact</b>	Department of Marine and Wildlife resources. PO Box 3730 Pago Pago, American Samoa

### Target Species

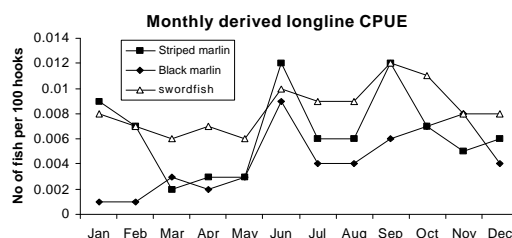
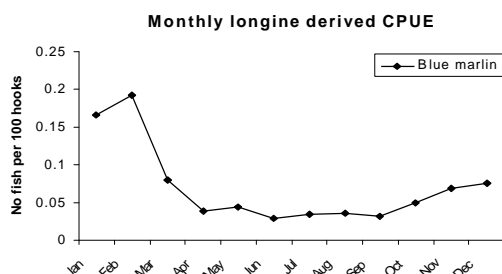
Blue Marlin	Black Marlin	Striped Marlin	Sailfish	Swordfish	Short bill spearfish
X	X		X		
Yellowfin Tuna	Skipjack Tuna	Other Tunas	Wahoo	Mahi mahi	Shark
X	X	X	X	X	X

### World Records

Common Name	Species name	Line class	Weight (kg)	Place	Date
Trevally, giant	<i>Caranx ignobilis</i>	M – 60	52.61	Pago pago	20/2/78

### Game fish seasonality

Blue marlin is the dominant billfish species caught by commercial vessels operating around American Samoa. They show a distinct seasonal variation with the highest CPUE in the summer months of November to March. The other species of billfish show a less distinct ‘periodicity’; in fact they appear to be fairly constant throughout the year. It should be noted that blue marlin CPUE is significantly higher than the other billfish species during all months.



### Cook Islands

Population	19,100	Land Area (km <sup>2</sup> )	240
EEZ area (km <sup>2</sup> )	1,830,000	Population per 100 km <sup>2</sup> of EEZ	1.044
% off EEZ area as land	0.013	Coastal fish catch/capita (kg)	51.41

The Cook Islands are composed of 15 main islands distributed over nearly 2 million square miles of ocean. They are a self-governing democracy situated 1,630 miles to the NE of Auckland (NZ) in the centre of the Polynesian triangle. They are divided into the southern more populated group (Rarotonga is the capital) and the northern more remote group. The Cook’s exhibit some good fishing and are especially famous for their bonefish fishing.

<b>Main Fishing Grounds</b>	Blue water fishing around Rarotonga and Aitutaki. Also fish around FAD’s.
<b>Marinas</b>	Rarotonga 3, Aitutaki 1
<b>Boat Ramps</b>	Rarotonga 3, Aitutaki 1
<b>Jetties</b>	unknown
<b>Number of Charter Vessels</b>	Rarotonga 5, Aitutaki 5
<b>Game Fishing Club</b>	Cook Island Game Fishing Club (IGFA) Aitutaki Fishing Club (IGFA)
<b>Approximate number of private fishing vessels</b>	Rarotonga 50, Aitutaki 50
<b>Tournaments</b>	Public holidays and sporadically throughout the year. Aitutaki club Charter vessels operate every couple of days – weather dependant.
<b>Game fishing contacts</b>	Cook Island Gamefishing club (Box 183 Raratonga) and the Atutaki fishing club (Box 102 Aitutaki)
<b>Fisheries Management contact</b>	Ian Bertram – Ministry of Marine Resources

### Target Species

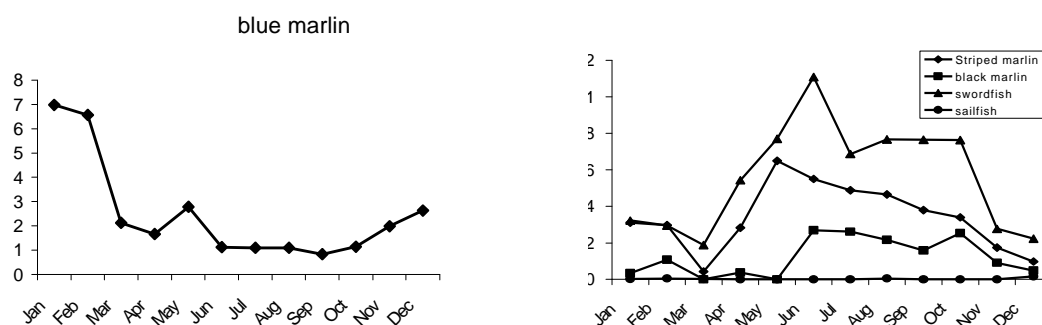
Blue Marlin	Black Marlin	Striped Marlin	Sailfish	Swordfish	Short bill spearfish
X	X	X	X		X

Yellowfin Tuna	Skipjack Tuna	Other Tunas	Wahoo	Mahi mahi	Shark
X	X	X	X	X	

### Game fish seasonality

The Cook islands have a large EEZ which extends from 5°S to 25° S and as such the seasonality of the various game fish species will vary depending on the latitude and the prevailing oceanographic conditions. Blue marlin, which is the prevalent billfish species in the area, shows a distinct seasonality in CPUE with the peak period during



the summer months of November to March. The other billfish species, while caught in lower numbers, appear to be more prevalent from April to November, again this will depend on latitude. May to July appear to be the major months for striped marlin, black marlin and swordfish (which are seldom caught recreationally) while sailfish show no distinct seasonality, though these are a species which frequent coastal waters and as such are not caught as often by oceanic longliners.

### Federated States of Micronesia

Population	105,700	Land Area (km <sup>2</sup> )	701
EEZ area (km <sup>2</sup> )	2,978,000	Population per 100 km <sup>2</sup> of EEZ	3.549
% off EEZ area as land	0.024	Coastal fish catch/capita (kg)	65.09

The Federated States of Micronesia is the largest part of the greater Micronesian region and are made up of Kosrae, Chuuk, Yap and Pohnpei, four island states of more than 600 islands and atolls. Each 'state' speaks its own language with its own distinctive culture, traditions and history.

### Game Fishing Facilities

Main Fishing Grounds	Trolling outside the barrier reef around Pohnpei and neighbouring islands. Cast poppers at pass entrances. There are presently no FAD's in FSM
Marinas	Pohnpei gamefishing club marina and weigh station
Boat Ramps	
Jetties	2 places to obtain fuel.
Number of Charter Vessels	One to two
Game Fishing Club	Pohnpei Gamefishing Club <a href="http://www.pacificfishing.com/micrones/pages/pfish.htm">http://www.pacificfishing.com/micrones/pages/pfish.htm</a>

<b>Approximate number of private fishing vessels</b>	Around 100
<b>Tournaments</b>	
<b>Game fishing contacts</b>	Pohnpei Gamefishing Club – Noel Boylan
<b>Fisheries Management contact</b>	Francis Itimai – Dept. of economic affairs

### Target Species

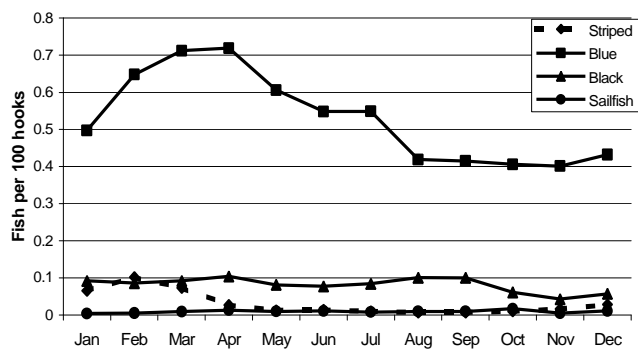
Blue Marlin	Black Marlin	Striped Marlin	Sailfish	Swordfish	Short bill spearfish
X			X		

Yellowfin Tuna	Skipjack Tuna	Other Tunas	Wahoo	Mahi mahi	Shark
X	X	X	X	X	

### Game fish seasonality

FSM has a large EEZ that extends from 135-165° E and from the equator to around 13°N. As such, the seasonality of the game fish will vary with longitude and of course prevalent oceanographic conditions. Information derived from commercial CPUE data shows that while striped and black marlin and sailfish do not show much seasonal variation.



Blue marlin, which are the most prevalent species, show an increase in CPUE from January through to June/July. Mahi mahi are also seasonal and mainly caught during the trade wind season of January to March. Wahoo and yellowfin tuna appear to be better outside this windy season. It should be noted that both Wahoo and giant trevally are important game-fish species here.

### Fiji

<b>Population</b>	<b>774,800</b>	<b>Land Area (km<sup>2</sup>)</b>	<b>18,274</b>
<b>EEZ area (km<sup>2</sup>)</b>	<b>1,290,000</b>	<b>Population per 100 km<sup>2</sup> of EEZ</b>	<b>60.062</b>
<b>% off EEZ area as land</b>	<b>1.417</b>	<b>Coastal fish catch/capita (kg)</b>	<b>30.01</b>

Often referred to as the ‘crossroads, or hub of the Pacific’, the republic of Fiji straddles the international dateline. Fiji has over 330 islands of which Vanua Levu and Viti Levu (Suva) are the two largest. Originally a British colony the country gained independence in 1970 and became a Republic in 1987. Suva is one of the largest urban centres in the South Pacific region as well as the major administrative centre for many national, regional and international organisations

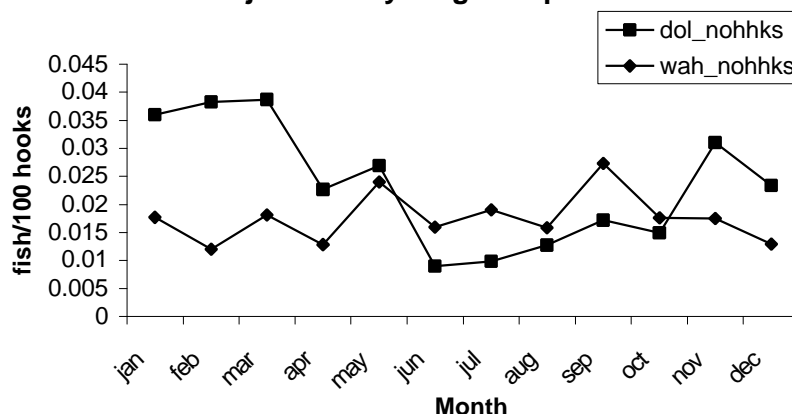
Game fishing in Fiji is well developed with numerous charter vessels operating out of the main hotels as well as organised clubs and regular competitions. Game fishing is very much linked to tourism in Fiji.

### Fishing Facilities

<b>Main Fishing Grounds</b>	Pacific harbour (near Suva) is one of the main fishing grounds though there is extensive fishing all along the west coast (protected from the wind) and some along the east coast (more exposed)
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Fiji - monthly longline cpue



### French Polynesia

Population	225,000	Land Area (km <sup>2</sup> )	3,521
EEZ area (km <sup>2</sup> )	5,030,000	Population per 100 km <sup>2</sup> of EEZ	4.334
% off EEZ area as land	0.070	Coastal fish catch/capita (kg)	27.72

French Polynesia is composed of 120 islands spread over 1.5mill square miles. These islands are divided into 5 archipelagos, being the Tuamotu, Society (including Bora Bora), Leeward (Tahiti and Moorea), windward and the Austral archipelago. It is thought that the Society islands were first settled around 200-300AD. Tahiti was then ‘discovered’ in 1767 by the English (Cap. Wallis) who ‘took possession of the island’ while a year later it was “rediscovered” by the French (de Bougainville) who in turn claimed it for France. Eventually the islands became a French colony in 1957 and has been internally autonomous since 1984.

### Game Fishing Facilities

<b>Main Fishing Grounds</b>	Near the main Windward Islands (Tahiti, Moorea) and Leeward Islands (Raiatea and Bora Bora). Some FAD fishing.
<b>Marinas</b>	4
<b>Boat Ramps</b>	numerous
<b>Jetties</b>	numerous
<b>Number of Charter Vessels</b>	Around 15 which are members of the game fishing clubs. Of these around 4 operate full time.
<b>Game Fishing Club</b>	7 Gamefishing clubs & associations. The main one is the Haura Club de Tahiti. <a href="http://www.tahitisportfishing.com">http://www.tahitisportfishing.com</a>
<b>Approximate number of private fishing vessels</b>	Around 450 between 18 & 25’ long. Around 50 between 25 & 42’ long.
<b>Tournaments</b>	International tournament in February each year. Fishing is carried out all year. There are over 30 tournaments held throughout French Polynesia each year.
<b>Fisheries management contacts</b>	Stephen Yen – Service des Ressources Marines.
<b>Game fishing and tourism contacts</b>	tahitifishing.com, www.tahiti-tourisme.com , Haura club of Tahiti PO Box 4503 Papeete – Tahiti. Ph/fax 689-423714, Alban Ellacott (tep@mail.pf) - Tahitian International Billfish Association

### Game fish target species

<b>Blue Marlin</b>	<b>Black Marlin</b>	<b>Striped Marlin</b>	<b>Sailfish</b>	<b>Swordfish</b>	<b>Short bill spearfish</b>
X	X	X	X		X
<b>Yellowfin Tuna</b>	<b>Skipjack Tuna</b>	<b>Other Tunas</b>	<b>Wahoo</b>	<b>Mahi mahi</b>	<b>Shark</b>
X	X	X	X	X	

### Current World Records

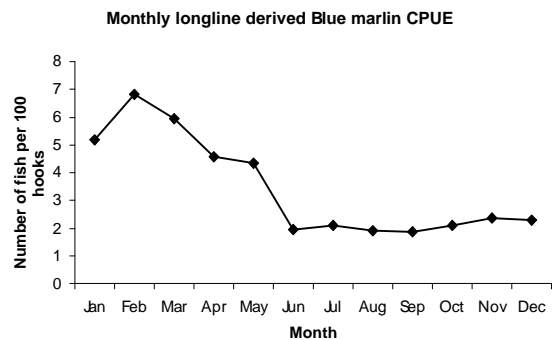
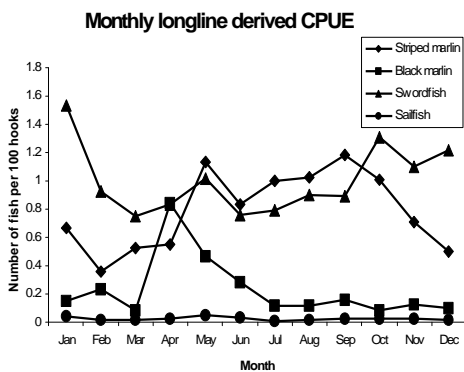
Common Name	Species name	Line class	Weight (kg)	Place	Date
Blue marlin	<i>Makaira mazara</i>	W – 4	37.19	Bora Bora	11/4/90
Dogtooth tuna	<i>Gymnosarda unicolor</i>	M – 3	9.00	Tubai Island	2/1/76

### Game fish seasonality

Due to the large size of the EEZ of French Polynesia the seasonality of game fish is varied depending on location and of course on changes in the environmental parameters, especially such large scale events as the El nino and la nina.

The game fish of French Polynesia exhibit, for the most part, a distinct seasonality in catch rates. This holds especially true for blue marlin which, while having a comparatively high CPUE throughout the year, tends to peak in the warmer summer months (January to April). The blue marlin CPUE plateau's out to around 2.5 fish per 100 hooks for the remainder of the year. Some of the largest blue marlin in the world are caught in French Polynesia.

The other marlin species, while exhibiting a lesser CPUE, also show a seasonal effect with black marlin peaking in April, striped marlin showing a general increase in abundance during the winter months from May to October, and swordfish, which aren't caught very much recreationally, having a fairly high CPUE with a peak around December/January. Sailfish have a very low CPUE with no obvious seasonality.



### Guam

Population	149,300	Land Area (km <sup>2</sup> )	541
EEZ area (km <sup>2</sup> )	218,000	Population per 100 km <sup>2</sup> of EEZ	68.486
% off EEZ area as land	.248	Coastal fish catch/capita (kg)	3.96

Guam, which is the westernmost territory of the United States, is the southernmost point of the Mariana Islands and lies about 2,700 km south of Japan. Guam was discovered for the western world in 1521 by Ferdinand Magellan and was claimed for Spain in 1565 by Migel Lopez de Segaspi. The island passed into American hands in 1898 and in 1950 it became an unincorporated territory and its people American citizens.

## Game Fishing Facilities

<b>Main Fishing Grounds</b>	Within 50 mls of shore, but usually within 10. There are 16 FAD's used by the fishery. There is also a coastal reef fishery.
<b>Marinas</b>	There are a number of marinas in Guam. There are three main ports – Agana, Agat and Apa.
<b>Boat Ramps</b>	Numerous
<b>Jetties</b>	
<b>Number of Charter Vessels</b>	25 charter boats – main contact through???
<b>Game Fishing Club</b>	<a href="http://ns.gov.gu/">http://ns.gov.gu/</a>
<b>Approximate number of private fishing vessels</b>	More than 100 private vessels
<b>Tournaments</b>	numerous
<b>Fisheries management contacts</b>	Gerry Davis – Dept. of Agriculture.
<b>Game fishing and tourism contacts</b>	

## Target Species

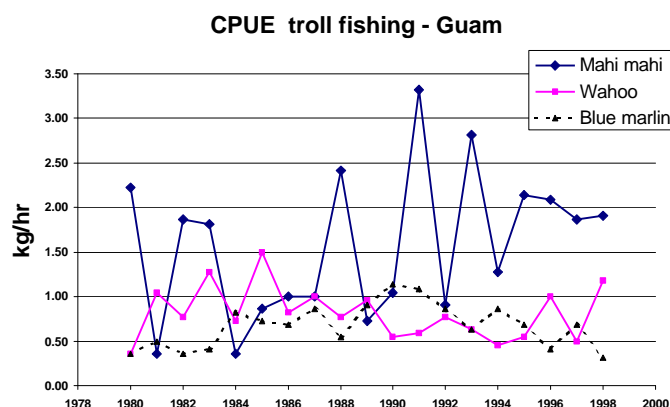
Blue Marlin	Black Marlin	Striped Marlin	Sailfish	Swordfish	Short bill spearfish
X			X		

Yellowfin Tuna	Skipjack Tuna	Other Tunas	Wahoo	Mahi mahi	Shark
X	X	X	X	X	

## Gamefish seasonality

Catch data from trollers operating around Guam (WPRFMC 1999) show wide fluctuations in annual CPUE for mahi mahi, wahoo and blue marlin with 1988, 1991 and 1993 showing high catch rates for mahi mahi. Blue marlin and wahoo tend to be more stable in the catch rates though still do show periods of higher catch rates such as 1990-91 for blue marlin and 1998 for wahoo.



## Kiribati

<b>Population</b>	<b>78,400</b>	<b>Land Area (km<sup>2</sup>)</b>	<b>690</b>
<b>EEZ area (km<sup>2</sup>)</b>	<b>3,550,000</b>	<b>Population per 100 km<sup>2</sup> of EEZ</b>	<b>2.208</b>
<b>% off EEZ area as land</b>	<b>0.019</b>	<b>Coastal fish catch/capita (kg)</b>	<b>156.05</b>

Kiribati (pronounced Kiri-bas) is a group of 33 low-lying coral islands spread over three and a half million square kilometers of sea. Now a fully independent republic, the group comprises the Gilbert, Phoenix and Line Islands. It is the only country that lies both sides of the equator and both sides of the International Date Line. While the economy of Kiribati is mainly subsistence, the main source of foreign income is copra

and fisheries with Kiribati seamen working on foreign cargo and fishing vessels. Christmas Island is internationally known as the best bone-fishing site in the world.

### Game Fishing Facilities

<b>Main Fishing Grounds</b>	Concentrated around the main island of Tarawa, extends out about 30km to the Mariana banks.
<b>Marinas</b>	Most vessel activity is centred around the main harbour area
<b>Boat Ramps</b>	
<b>Jetties</b>	Main harbour
<b>Number of Charter Vessels</b>	There are some operators who specialise in fishing for bonefish at Christmas Island. One – two part time.
<b>Game Fishing Club</b>	Beito Game Fishing Club ( <a href="http://www.fishos.com">www.fishos.com</a> , info@fishos.com ).
<b>Approximate number of private fishing vessels</b>	15 belong to the club
<b>Tournaments</b>	Monthly tournaments, some targeting billfish and others targeting other game-fish species. Most tournaments are held during the full moon. Billfish tournament 14 September 2000.
<b>Fisheries management contacts</b>	
<b>Game fishing and tourism contacts</b>	Gerard Cotter – Commodore Betio GFC Louis Bell – Betio GFC

### Target Species

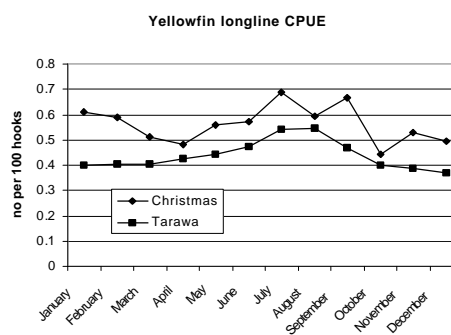
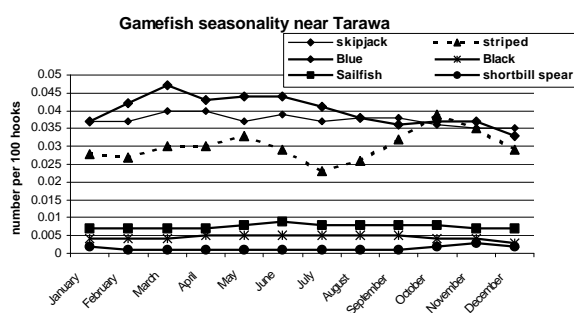
<b>Blue Marlin</b>	<b>Black Marlin</b>	<b>Striped Marlin</b>	<b>Sailfish</b>	<b>Swordfish</b>	<b>Short bill spearfish</b>
X			X		
<b>Yellowfin Tuna</b>	<b>Skipjack Tuna</b>	<b>Other Tunas</b>	<b>Wahoo</b>	<b>Mahi mahi</b>	<b>Shark</b>
X	X	X	X	X	X

### World Records

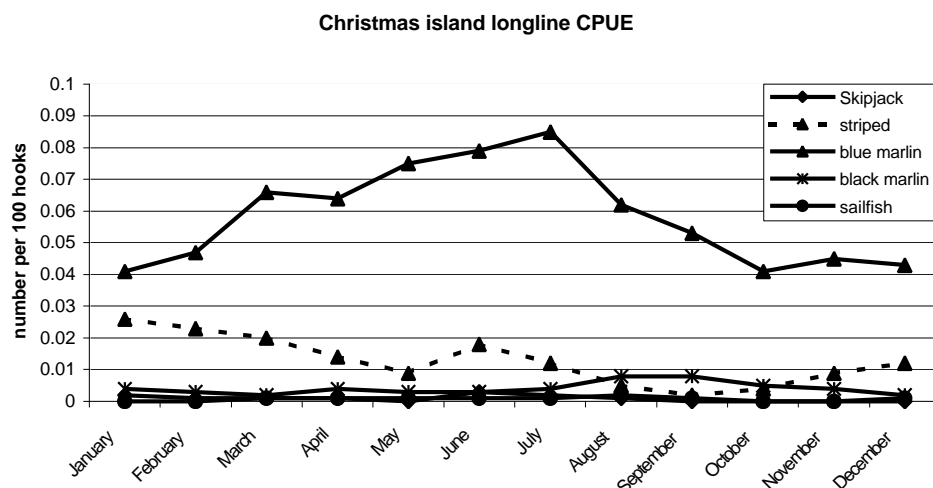
Common Name	Species name	Line class	Weight (kg)	Place	Date
Trevally, bluefin	<i>Caranx melampygus</i>	W – 1	0.68	Christmas Island	30/12/86
Trevally, bluefin	<i>Caranx melampygus</i>	W – 4	1.50	Christmas Island	16/2/92
Trevally, giant	<i>Caranx ignobilis</i>	W – 15	33.19	Christmas Island	12/7/87

### Gamefish seasonality

Due to the large size of waters surrounding Kiribati, it is not possible to make generalisations on fish seasonality for the whole area. Longline CPUE data from around Tarawa shows that there is little seasonality for most of the species, though blue marlin



catch rates appear to peak in March while striped marlin has its lowest catch rates in July. Yellowfin tuna CPUE, both around Christmas Island and near Taraw, tend to show a peak around in the cooler months of July and August, though are caught all year. Blue marlin caught around Christmas island show a peak in CPUE also around July and August while the other species, which are caught in much lower numbers, do not appear to show any distinct seasonality, though striped marlin do appear to be caught more at the beginning and end of the year.



## Marshall Islands

<b>Population</b>	<b>54,700</b>	<b>Land Area (km<sup>2</sup>)</b>	<b>181</b>
<b>EEZ area (km<sup>2</sup>)</b>	<b>2,131,000</b>	<b>Population per 100 km<sup>2</sup> of EEZ</b>	<b>2.567</b>
<b>% off EEZ area as land</b>	<b>0.008</b>	<b>Coastal fish catch/capita (kg)</b>	<b>43.31</b>

The Marshall Islands are composed of five main islands as well as 29 atolls comprised of more than one thousand island and islets lying in two parallel chains running north and south. It is thought that the Marshalls were first settled sometime before 0 BC. The name Marshall Islands was proclaimed in 1788 when the British sea captain William Marshall sailed through the atolls. During the late 19<sup>th</sup> Century Germany claimed sovereignty, then Japan after the First World War until 1945 when the US took control under a United Nations Trusteeship. A sovereign government was established in 1979 with a Compact of Free Association, giving independent nation status in 1986.

### Game Fishing Facilities

<b>Main Fishing Grounds</b>	Around Majuro, Kwajlien and Amo atolls as well as around a FAD off Majuro.
<b>Marinas</b>	There are government owned facilities as well as some private ones
<b>Boat Ramps</b>	
<b>Jetties</b>	Government owned facilities
<b>Number of Charter Vessels</b>	One
<b>Game Fishing Club</b>	Marshalls billfish club <a href="http://www.destmic.com/marshall.html">http://www.destmic.com/marshall.html</a>
<b>Approximate number of private fishing vessels</b>	Around 50
<b>Tournaments</b>	In the 3 <sup>rd</sup> quarter of the year and the Micronesian championship in July.

<b>Fisheries management contacts</b>	Danny Wase – Marshall Islands Marine Resources Authority
<b>Game fishing and tourism contacts</b>	Marshall islands visitors authority <a href="mailto:tourism@ntamar.com">tourism@ntamar.com</a> , International angler <a href="mailto:worldfish@aol.com">worldfish@aol.com</a> Marshall billfish club <a href="mailto:amisales@ntamar.com">amisales@ntamar.com</a> , <a href="mailto:amieng@ntamar.com">amieng@ntamar.com</a>

### Target Species

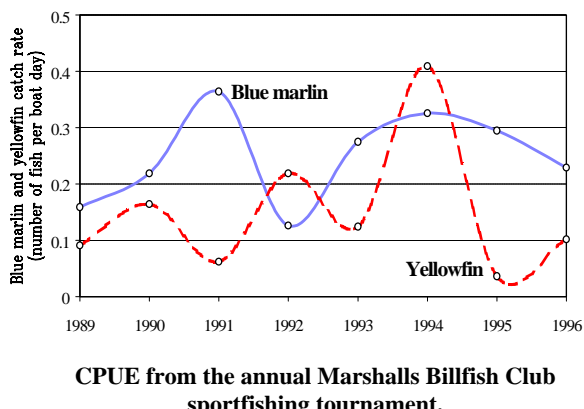
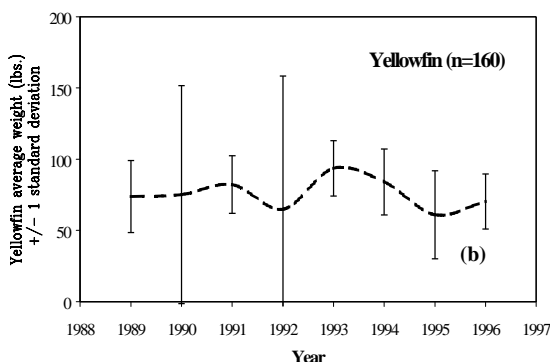
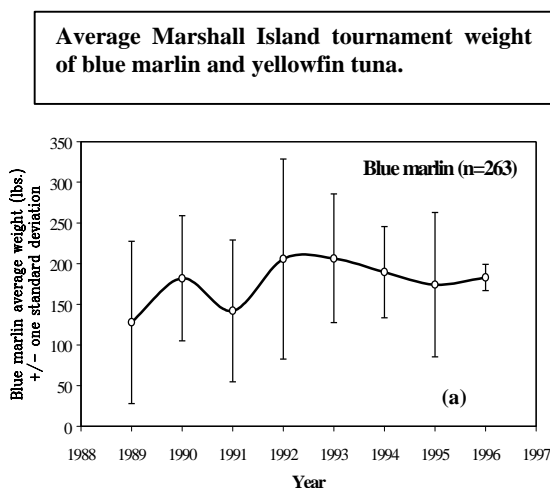
<i>Blue Marlin</i>	<i>Black Marlin</i>	<i>Striped Marlin</i>	<i>Sailfish</i>	<i>Swordfish</i>	<i>Short bill spearfish</i>
X	X		X		

<i>Yellowfin Tuna</i>	<i>Skipjack Tuna</i>	<i>Other Tunas</i>	<i>Wahoo</i>	<i>Mahi mahi</i>	<i>Shark</i>
X	X	X	X	X	

### Game fish seasonality

Unfortunately there is little gamefish data to provide information on the seasonality of the main species. There is some information on the annual variability of catches, which shows that there can be significant changes for yellowfin tuna as well as blue marlin. Other information obtained from the billfish club seems to indicate that there is little change (if any) in the average weight of yellowfin tuna or blue marlin caught from 1988 to 1997.



Longline CPUE data shows that yellowfin tuna are caught fairly constantly through the year but showing a slight increase in CPUE from July to November. Blue marlin, though caught in much lower numbers, tend to show a slight rise in CPUE from May to August. Striped marlin catch rates are very low and don't show any marked seasonality. Other game fish species are not recorded in longline data.

### Nauru

Population	10,500	Land Area (km <sup>2</sup> )	21
EEZ area (km <sup>2</sup> )	320,000	Population per 100 km <sup>2</sup> of EEZ	3.281
% off EEZ area as land	0.007	Coastal fish catch/capita (kg)	35.81

“The smallest republic on earth”. Nauru was first visited in 1798 by the British whaling ship the ‘Hunter’ and was subsequently named the ‘Pleasant Island’. It wasn't until 1881 that the island came under the German sphere of interest and reverted to its native name of Nauru. After the First World War Australia administered the island under a

League of Nations mandate. The island has a circumference of just 12 miles with the main industry being phosphate, though these reserves are running out.

### Game Fishing Facilities

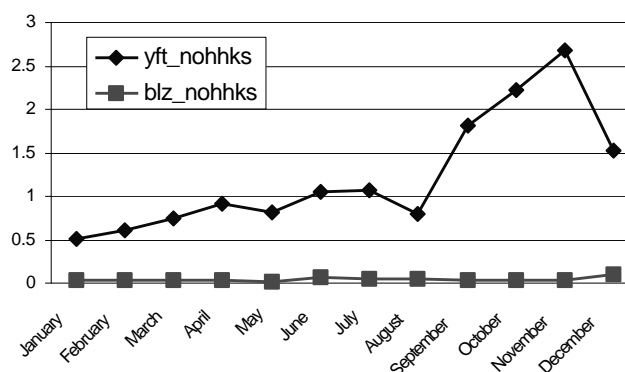
<b>Main Fishing Grounds</b>	Most fishing is out of Yaren – there is presently one FAD that is used occasionally.
<b>Marinas</b>	Presently there is a boat harbour but without any ramp – a crane is used to launch boats. It is thought that there may be a new harbour constructed soon.
<b>Boat Ramps</b>	There is limited boat access via 2 channels, one at Aiwo, which can be used all year and one at Anibare that is only used during monsoons with a westerly wind.
<b>Jetties</b>	Minimal boat harbour
<b>Number of Charter Vessels</b>	Two charter vessels operated by the one company (Equatorial game-fish charters Fax – 674-4443759).
<b>Game Fishing Club</b>	Nauru Fishermen’s Association meets once or twice per year
<b>Approximate number of private fishing vessels</b>	??
<b>Tournaments</b>	??
<b>Fisheries management contacts</b>	Anton Jimwereiy and Tery Amram – Nauru Fisheries and Marine Resources Authority
<b>Game fishing and tourism contacts</b>	Sean Oppenheimer – Pacific & Occidental Co

### Target Species

Blue Marlin	Black Marlin	Striped Marlin	Sailfish	Swordfish	Short bill spearfish
X	X	X	X		X
Yellowfin Tuna	Skipjack Tuna	Other Tunas	Wahoo	Mahi mahi	Shark
X	X	X	X	X	X

### Game-fish seasonality

Gamefishing is carried out throughout the year, though best fishing occurs from September to January. Longline CPUE data seems to indicate that there is not a lot of variability in catch rate through the year, though it appears as if yellowfin tuna tend to peak around October to November, which agrees with the anecdotal game-fish information. Blue marlin are caught all year with no apparent seasonality. While the longline data shows no apparent seasonality, this data does not necessarily represent what occurs close to shore where the game-fish vessels fish.



## New Caledonia

Population	182,200	Land Area (km <sup>2</sup> )	19,103
EEZ area (km <sup>2</sup> )	1,740,000	Population per 100 km <sup>2</sup> of EEZ	10.471
% off EEZ area as land	1.098	Coastal fish catch/capita (kg)	19.11

The New Caledonian archipelago belongs to Melanesia. The mainland (Grande Terre) is the principle island with the other main islands are the Loyalty islands (Lifou, Mare, Ouvea and Tiga) as well as the Isle of Pines. New Caledonia is the third largest island in the South Pacific. The land was first discovered by the Melanesians and enriched by contact with Papuans, Asians and Polynesians. James Cook (1774) visited but it wasn't until 1853 when the French took possession. It became a French Overseas Territory in 1946. The main island is surrounded by the world's second largest coral reef (2<sup>nd</sup> only to the Australian Great Barrier Reef).

### Game Fishing Facilities

<b>Main Fishing Grounds</b>	Most fishing occurs outside the surrounding reef at Noumea including some of the passes. Fishing grounds (for Spanish mackerel) are only about 10 minutes out of Noumea. There is also good fishing on the outside of the surrounding coral reefs around the whole island
<b>Marinas</b>	There are 2 main marinas in Noumea and 2 smaller ones
<b>Boat Ramps</b>	There are 6 main boat ramps in Noumea proper as well as a number of other sites where boats can be launched. There are numerous other boat ramps and 'beaches' where boats can be launched around the 'Grande tere'.
<b>Jetties</b>	There are a number of jetties in Noumea as well as large wharf areas for ocean liners, cargo ships and commercial fishing vessels
<b>Number of Charter Vessels</b>	There are 7 main 'charter' operations operating out of Noumea as well as 'pilot-your-own' charter boats. There are also charter operations based on the island of Lifou, Mare' and Isle of Pines. Noumea: Pacific charters <a href="mailto:pachart@canl.nc">pachart@canl.nc</a> , <a href="http://www.pa.nc/pacharter">www.pa.nc/pacharter</a> Lifou: Loyalty Fishing charter <a href="http://www.canl.nc/noumea.com/loyaute/html/lfmaring.htm">http://www.canl.nc/noumea.com/loyaute/html/lfmaring.htm</a> Mare: Ténané Edmond Laene 45.45.00
<b>Game Fishing Clubs</b>	Noumea: Section Peche au Gros – part of the Club Nautique Caledonie. <a href="http://www.new-caledonia.com/eng.htm">http://www.new-caledonia.com/eng.htm</a>
<b>Approximate number of private fishing vessels</b>	More than 500. Supposedly New Caledonia has the highest boat ownership per capita in the pacific.
<b>Tournaments</b>	Monthly club tournaments as well as one or two international tournaments each year. There are also 'inter-club' tournaments with other pacific countries.
<b>Fisheries management contacts</b>	Richard Farman – Direction des Ressources Naturelles
<b>Game fishing and tourism contacts</b>	M. Millet & W. Joop – Section Espadon (CNC).

### Target Species

Blue Marlin	Black Marlin	Striped Marlin	Sailfish	Swordfish	Short bill spearfish
X	X	X	X		
Yellowfin Tuna	Skipjack Tuna	Other Tunas	Wahoo	Mahi mahi	Shark
X	X	X	X	X	X

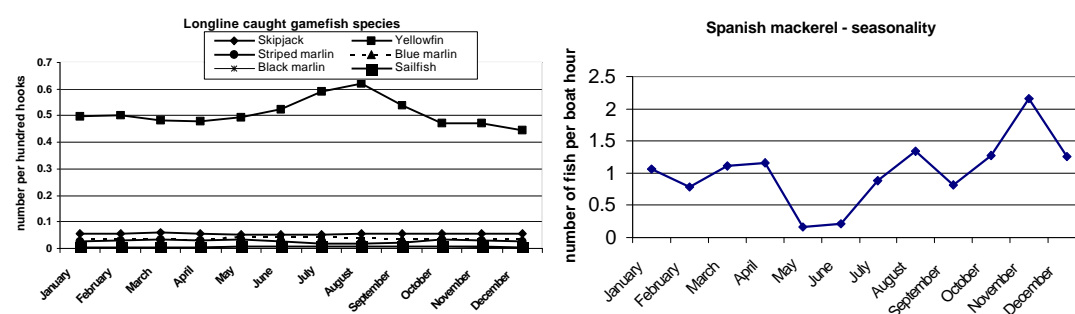
## World Records

Common Name	Species name	Line class	Weight (kg)	Place	Date
Dogtooth tuna	<i>Gymnosarda unicolor</i>	M – 15	66.00	Passe de Dumbea, Noumea	6/10/90

## Gamefishing seasonality

Like most game fishing areas in the Pacific, there is a distinct seasonality to most of the targeted species. Spanish mackerel (Tazar), which are the mainstay of the fishing boats in New Caledonia, can be caught all year, but show peaks in August and November (spawning) and are caught all summer.

Dogtooth tuna can be caught all year (more in the summer months) while longline data shows that most of the marlin species are caught throughout the year. Yellowfin tuna appear to show a bit of a peak from July to September, but are fairly common all year.



## Niue

Population	2,000	Land Area (km <sup>2</sup> )	259
EEZ area (km <sup>2</sup> )	390,000	Population per 100 km <sup>2</sup> of EEZ	0.513
% off EEZ area as land	0.066	Coastal fish catch/capita (kg)	57.50

Niue is claimed as the world's largest coral island. It was initially settled by Polynesians from Tonga, Samoa and Pukapuka Island in the Cook group and was later sighted by James Cook in 1774. Unfortunately he was refused landing and so called it the Savage Island. In 1900 Niue gained British protection and in 1901 were annexed to New Zealand. In 1974 Niue attained the status of self-government in free association with New Zealand.

## Game Fishing Facilities

<b>Main Fishing Grounds</b>	Offshore around 200-300m outside the reef on the western (lee) side for all species, though the exposed eastern side is preferred when weather permits, especially for wahoo.
<b>Marinas</b>	None
<b>Boat Ramps</b>	Two, though most boats launch via a gantry at the wharf. The ramps are only suitable for boats <16'. All launchings are subject to favourable weather conditions.
<b>Jetties</b>	One with a gantry for boat launching for vessels up to 30'.
<b>Number of Charter Vessels and contacts</b>	Two. Wahoo Fishing charters (Ph/fax 683 4345, wahoo@sin.net.nu) and Horizon charters (ph 683-4067/4106, Fax 683-4010)
<b>Game Fishing Clubs</b>	There are 2 'associations', both members of IGFA?, being the Niue Island Fishermen's Assoc. (ph 683-4106) and the Niue Island sportfishing club (ph/fax 683-4345).
<b>Approximate number of private fishing vessels</b>	There are around 30-40 small commercial and semi-commercial vessels (12-16 footers)

<b>Tournaments</b>	There are no ‘International’ tournaments, though local tournaments are held regularly.
<b>Fisheries management contacts</b>	Brendan Pasisi – Ministry of Agriculture, Forestry and Fishery
<b>Game fishing and tourism contacts</b>	Paul Pasisi

#### Target Species

Blue Marlin	Black Marlin	Striped Marlin	Sailfish	Swordfish	Short bill spearfish
X	X	X	X	X	
Yellowfin Tuna	Skipjack Tuna	Other Tunas	Wahoo	Mahi mahi	Shark
X	X	X	X	X	

#### Gamefish Seasonality

Wahoo are the main target species, which are caught mainly from May to October followed by yellowfin and skipjack tuna. Most fishing for these is around FAD’s. Mahi-mahi occur around the island. Billfish are caught mainly July – March, Sailfish are also commonly targeted followed by mahi mahi and marlin species (mainly blue). Gamefish species caught by longline show that yellowfin are caught more in the winter months of April to August, while blue marlin are caught more in the summer months of January to April.

#### Northern Mariana Islands

<b>Population</b>	<b>56,700</b>	<b>Land Area (km<sup>2</sup>)</b>	<b>478</b>
<b>EEZ area (km<sup>2</sup>)</b>	<b>770,000</b>	<b>Population per 100 km<sup>2</sup> of EEZ</b>	<b>7.297</b>
<b>% off EEZ area as land</b>	<b>0.062</b>	<b>Coastal fish catch/capita (kg)</b>	<b>52.31</b>

The Commonwealth of the Northern Mariana Islands is made up of 14 islands which occupy a total land area of 478 sq. km. Formerly a colony of Spain (1521-1898) it was purchased by Germany (1899–1914), colonised by Japan (1941–44), conquered by the US and then placed under the United Nation’s Security Council and administered by the US as part of the Trust Territory of the Pacific Islands (1945–78). It became self-governing in 1978 and today is a US Commonwealth.

#### Game Fishing Facilities

<b>Main Fishing Grounds</b>	Mostly within 20mls of Saipan and Tinian where FAD fishing occurs (when present). Most fishing occurs between the northern and SW parts of the islands.
<b>Marinas</b>	Two marinas with permanent weigh stations – on-site launching ramps.
<b>Boat Ramps</b>	Two additional ramps at other sites.
<b>Jetties</b>	
<b>Number of Charter Vessels</b>	5-10
<b>Game Fishing Club</b>	<a href="http://www.klaro.net/etenda/">www.klaro.net/etenda/</a>
<b>Approximate number of private fishing vessels</b>	Around 60-80 mostly fiberglass with outboards.
<b>Tournaments</b>	Saipan International fishing Tournament.
<b>Fisheries management contacts</b>	Richard Seman – Division of fisheries and Wildlife.
<b>Game fishing and tourism contacts</b>	Norman Tenorio – IGFA John Sam Nicolas – Saipan Sports Fish Association.

### Target Species

Blue Marlin	Black Marlin	Striped Marlin	Sailfish	Swordfish	Short bill spearfish
X	X				

Yellowfin Tuna	Skipjack Tuna	Other Tunas	Wahoo	Mahi mahi	Shark
X	X		X	X	X

### Palau

Population	16,500	Land Area (km <sup>2</sup> )	488
EEZ area (km <sup>2</sup> )	629,000	Population per 100 km <sup>2</sup> of EEZ	2.623
% off EEZ area as land	0.078	Coastal fish catch/capita (kg)	90.00

The republic of Palau is an archipelago of more than 300 islands, of which only nine are inhabited. Spain controlled Palau from 1895–1899 when it was then sold to Germany. After the First World War the islands passed to Japan until the 2<sup>nd</sup> World War when it became a United Nations Trust Territory. Palau eventually gained independence in 1994.

### Game Fishing Facilities

Main Fishing Grounds	Inshore and offshore all year – No FADs
Marinas	Public fisheries dock as well as 3 marinas
Boat Ramps	
Jetties	
Number of Charter Vessels	Three, though a number of dive tours also provide this service
Game Fishing Club	<a href="http://www.samstours.com/fishing.html">http://www.samstours.com/fishing.html</a> <a href="http://www.visitpalau.com/">http://www.visitpalau.com/</a> - Palau sports fishing association
Approximate number of private fishing vessels	
Tournaments	Annual derby in April each year. Also the Rotary fishing tournament 18 November 2000.
Fisheries management contacts	
Game fishing and tourism contacts	Sam Scott – Palau Sports Fishermen Association.

### Target Species

Blue Marlin	Black Marlin	Striped Marlin	Sailfish	Swordfish	Short bill spearfish
X	X		X		

Yellowfin Tuna	Skipjack Tuna	Other Tunas	Wahoo	Mahi mahi	Shark
X	X	X	X	X	X

### Papua New Guinea

Population	4,042,400	Land Area (km <sup>2</sup> )	462,840
EEZ area (km <sup>2</sup> )	3,120,000	Population per 100 km <sup>2</sup> of EEZ	129.564
% off EEZ area as land	14.835	Coastal fish catch/capita (kg)	6.32

In 1545 the Spanish christened the island New Guinea but it wasn't until the 1870's that the first European traders arrived. Towards the end of the 19<sup>th</sup> C the country was divided into three zones, Dutch, German and British. In 1906 Australia administered the British zone while the Dutch controlled zone was

taken over by Indonesia in the 1960's (Irian Jaya). Independence resulted in internal self-government in 1973 and full independence in 1975 whereupon the country became known as Papua New Guinea.

#### Game Fishing Facilities

<b>Main Fishing Grounds</b>	Off the main centres all year depending on weather. FADs used off Lae, Kavieng, Port Moresby and Rabaul
<b>Marinas</b>	Large marina at Port Moresby. One each at Madang and Lae. One planned for Rabaul.
<b>Boat Ramps</b>	Port Moresby, Lae and Rabaul
<b>Jetties</b>	Port Moresby
<b>Number of Charter Vessels</b>	One full time in Madang. Several other vessels at Port Moresby and Lae
<b>Game Fishing Club</b>	<a href="http://www.royalpapua-yc.com.pg/default.htm">http://www.royalpapua-yc.com.pg/default.htm</a> A total of 5 clubs active – Port Moresby, Madang, Rabaul (New Britain), Lae and Kimbe.
<b>Approximate number of private fishing vessels</b>	At least 50 larger boats. Smaller bananaboat style vessels in Port Moresby and Lae
<b>Tournaments</b>	Large annual tournament in April 2000, rotates among clubs – National Gamefish Titles. Club tournaments through year.
<b>Fisheries management contacts</b>	Joel Opnai – National Fisheries Authority.
<b>Game fishing and tourism contacts</b>	Robert O’Dea – Port Moresby GFC John Cross – GFA PNG. Niuguini Tourism

#### Target Species

Blue Marlin	Black Marlin	Striped Marlin	Sailfish	Swordfish	Short bill spearfish
X	X		X	X	

Yellowfin Tuna	Skipjack Tuna	Other Tunas	Wahoo	Mahi mahi	Shark
X	X	X	X	X	X

#### World Records

Common Name	Species name	Line class	Weight (kg)	Place	Date
Mackerel, narrowbarred	<i>Scomberomorus commerson</i>	M – 37	38.00	Pig Island	17/3/85
Mackerel, narrowbarred	<i>Scomberomorus commerson</i>	W – 1	0.5	Avoro Island	14/4/82
Trevally, bigeye	<i>Caranx sexfasciatus</i>	W – 2	3.04	Mosquito Island	27/11/88
Trevally, bigeye	<i>Caranx sexfasciatus</i>	W – 3	2.8	Duke of York Island	6/12/81
Trevally, giant	<i>Caranx ignobilis</i>	W – 2	4.94	Singaua	24/9/89
Dogtooth tuna	<i>Gymnosarda unicolor</i>	W – 60	41.20	Linden Harbour	13/1/93

## Pitcairn

Population	50	Land Area (km <sup>2</sup> )	5
EEZ area (km <sup>2</sup> )	800,000	Population per 100 km <sup>2</sup> of EEZ	0.006
% off EEZ area as land	.001	Coastal fish catch/capita (kg)	160

Pitcairn is made up of five islands being Pitcairn, Oeno, Sandy, Henderson and Ducie of which only the island of Pitcairn is inhabited (due to lack of water on the other islands). Access to Pitcairn is possible only by sea that limits access to the island. Population is close to fifty at present and everyone lives in a single, slightly scattered settlement called Adamstown.

### Game Fishing Facilities

Main Fishing Grounds	
Marinas	
Boat Ramps	
Jetties	
Number of Charter Vessels	
Game Fishing Club	
Approximate number of private fishing vessels	
Tournaments	
Fisheries management contacts	
Game fishing and tourism contacts	

### Target Species

Blue Marlin	Black Marlin	Striped Marlin	Sailfish	Swordfish	Short bill spearfish
Yellowfin Tuna	Skipjack Tuna	Other Tunas	Wahoo	Mahi mahi	Shark

## Samoa

Population	163,400	Land Area (km <sup>2</sup> )	2,381
EEZ area (km <sup>2</sup> )	120,000	Population per 100 km <sup>2</sup> of EEZ	136.137
% off EEZ area as land	2.359	Coastal fish catch/capita (kg)	21.35

Samoa consists of two main islands, Upolu and Savaii, with several smaller adjacent islands. In the 18thC the French Navigator named them the Navigator islands but for 2000 years these islands had been known as Samoa. Samoa became the first South Pacific Island nation to achieve independence (1962).

### Game Fishing Facilities

Main Fishing Grounds	Around Upolu, mainly on the north western side and near Manono island.
Marinas	A new marina is being developed in Apia

<b>Boat Ramps</b>	Two to three in Apia
<b>Jetties</b>	Wharf catering to smaller boats near the fish market.
<b>Number of Charter Vessels</b>	There are around 20 vessels that can be chartered. These range from 14' aluminium runabouts, through alia's (catamarans), to 80' longliners.
<b>Game Fishing Club</b>	Samoa International Game Fishing Association (SIGFA). <a href="http://www.samoa.net.ws/sigfa/">http://www.samoa.net.ws/sigfa/</a>
<b>Approximate number of private fishing vessels</b>	
<b>Tournaments</b>	SIGFA 2000 tournament 14-19 <sup>th</sup> August.
<b>Fisheries management contacts</b>	
<b>Game fishing and tourism contacts</b>	Peter Meredith - SIGFA

#### Target Species

Blue Marlin	Black Marlin	Striped Marlin	Sailfish	Swordfish	Short bill spearfish
X	X	X	X		

Yellowfin Tuna	Skipjack Tuna	Other Tunas	Wahoo	Mahi mahi	Shark
X		X	X	X	

#### Solomon Islands

<b>Population</b>	<b>367,800</b>	<b>Land Area (km<sup>2</sup>)</b>	<b>28,370</b>
<b>EEZ area (km<sup>2</sup>)</b>	<b>1,340,000</b>	<b>Population per 100 km<sup>2</sup> of EEZ</b>	<b>27.448</b>
<b>% off EEZ area as land</b>	<b>2.117</b>	<b>Coastal fish catch/capita (kg)</b>	<b>30.32</b>

The Solomon Islands are the second largest island chain in the region and are spread over nearly one and a half million square kilometres (EZ). The main island group, including Guadalcanal, Santa and Choiseul, lie in the north-west section of the EZ with the smaller Santa Cruz and Duff islands lying to the south-east. Colonised in 1893 by the British and declared a protectorate, the island nation gained independence on the 7<sup>th</sup> of July 1978.

#### Game Fishing Facilities

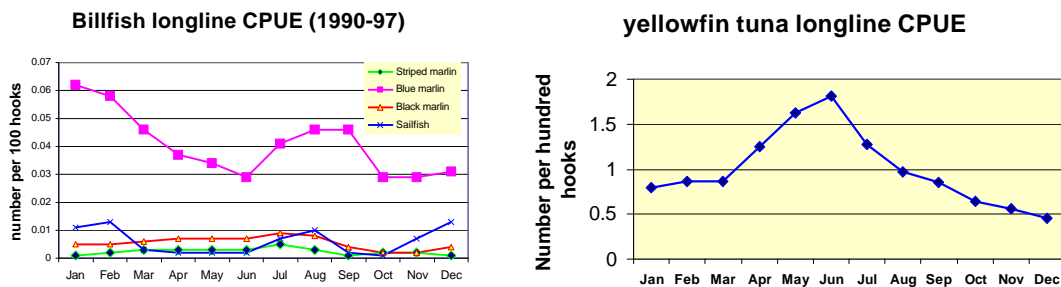
<b>Main Fishing Grounds</b>	Mostly out of Honiara, Tambea and Gizo, both bluewater and reef fishing
<b>Marinas</b>	One marina at Gizo and Point Cruz yacht club in Honiara
<b>Boat Ramps</b>	
<b>Jetties</b>	Point Cruz yacht club in Honiara
<b>Number of Charter Vessels</b>	One at Lola resort in Honiara plus a couple of other charter vessels, one in Tambea and Gizo.
<b>Game Fishing Club</b>	Point Cruz Yacht club
<b>Approximate number of private fishing vessels</b>	There are a number of different types ranging from dugout canoes, motor canoes and sport fishing craft.
<b>Tournaments</b>	Normally 2 main tournaments each year
<b>Fisheries management contacts</b>	Sylvester Diake – Dept. of Agriculture and Fisheries.
<b>Game fishing and tourism contacts</b>	Point Cruz yacht club in Honiara

### Target Species

<b>Blue Marlin</b>	<b>Black Marlin</b>	<b>Striped Marlin</b>	<b>Sailfish</b>	<b>Swordfish</b>	<b>Short bill spearfish</b>
X	X	X	X		
<b>Yellowfin Tuna</b>	<b>Skipjack Tuna</b>	<b>Other Tunas</b>	<b>Wahoo</b>	<b>Mahi mahi</b>	<b>Shark</b>
X	X		X	X	X

### Gamefish seasonality

The Solomons have a large EEZ which extends from 5°S to 15° S and as such the seasonality of the various gamefish species will vary depending on the latitude and the prevailing oceanographic conditions. Blue marlin, which is the prevalent billfish species in the area, shows a distinct seasonality in CPUE with the peak period during



the summer months of November to March as well as a peak around July to September. The other billfish species, while caught in lower numbers, show a similar pattern in catchability, again this will depend on latitude and annual environmental conditions. Yellowfin tuna, which are caught in much larger numbers by longliners, show a peak around May to July i.e. the winter months.

### Tokelau

<b>Population</b>	<b>1,500</b>	<b>Land Area (km<sup>2</sup>)</b>	<b>12</b>
<b>EEZ area (km<sup>2</sup>)</b>	<b>290,000</b>	<b>Population per 100 km<sup>2</sup> of EEZ</b>	<b>0.517</b>
<b>% off EEZ area as land</b>	<b>0.004</b>	<b>Coastal fish catch/capita (kg)</b>	<b>127.33</b>

Tokelau, a territory of New Zealand, consists of three large atolls 480km north of Samoa. In British colonial times it was known as the Union Group. The three main atolls are Nukunonu, Atafu and Fakaofu. At no point does the land rise more than five metres above the sea.

### Game Fishing Facilities

<b>Main Fishing Grounds</b>	Most trolling around the reef with some FAD fishing
<b>Marinas</b>	
<b>Boat Ramps</b>	
<b>Jetties</b>	
<b>Number of Charter Vessels</b>	
<b>Game Fishing Club</b>	
<b>Approximate number of private fishing vessels</b>	Around 30 outboard powered dinghies.
<b>Tournaments</b>	

<b>Fisheries management contacts</b>	Mose Pelasio – Department of Natural Resources and Environment.
<b>Game fishing and tourism contacts</b>	

#### Target Species

Blue Marlin	Black Marlin	Striped Marlin	Sailfish	Swordfish	Short bill spearfish
	X		X	X	

Yellowfin Tuna	Skipjack Tuna	Other Tunas	Wahoo	Mahi mahi	Shark
X	X	X	X	X	X

#### Kingdom of Tonga

<b>Population</b>	<b>98,200</b>	<b>Land Area (km<sup>2</sup>)</b>	<b>780</b>
<b>EEZ area (km<sup>2</sup>)</b>	<b>700,000</b>	<b>Population per 100 km<sup>2</sup> of EEZ</b>	<b>14.029</b>
<b>% off EEZ area as land</b>	<b>0.111</b>	<b>Coastal fish catch/capita (kg)</b>	<b>24.05</b>

Tonga consists of three groupings of small islands – the Vava’u, Ha’apai and Tongatapu groups. Tonga is the last remaining Polynesian kingdom and has been settled since the 5<sup>th</sup> C BC. Tonga was first visited by Europeans in 1616 (Dutch) and named the ‘Friendly Islands’ by Cook in 1773. In 1900, under a Treaty of Friendship and Protection, Great Britain agreed to look after Tonga’s foreign interests and protection. So while remaining completely autonomous, it became a protected state (not a protectorate) of the UK. In 1968 Tonga assumed full responsibility for her own internal affairs.

#### Game Fishing Facilities

<b>Main Fishing Grounds</b>	Most of the fishing in the northern Vava’u group occurs on the western side protected from the prevailing wind. There are 3 FADs situated on the western side also. Fishing in the south occurs around Nuku’alofa. There is also limited fishing in the central Ha’apai group.
<b>Marinas</b>	One marina in Nuku’alofa
<b>Boat Ramps</b>	A couple in Vava’u and Nuku’alofa.
<b>Jetties</b>	Numerous jetties in both Vava’u and Nuku’alofa
<b>Number of Charter Vessels</b>	2 to 3 in Nuku’alofa with another 10 or so in Vava’u (some only part year)
<b>Game Fishing Club</b>	Tongan International Game Fishing Association
<b>Approximate number of private fishing vessels</b>	Approximately 50
<b>Tournaments</b>	A number from late June to early December. Tongan International billfish tournament. 19-23 September 2000. Royal Tongan Airlines International Tournament 18-20 October 2000. National billfish tournament 25 November, 2-4 December 2000.
<b>Fisheries management contacts</b>	Akau’ola – Ministry of Fisheries
<b>Game fishing contacts</b>	TIGFA – president - Neil Dalgety, Vice president – Dany Amanaki.

### Target Species

Blue Marlin	Black Marlin	Striped Marlin	Sailfish	Swordfish	Short bill spearfish
X	X	X	X		X
Yellowfin Tuna	Skipjack Tuna	Other Tunas	Wahoo	Mahi mahi	Shark
X		X	X	X	

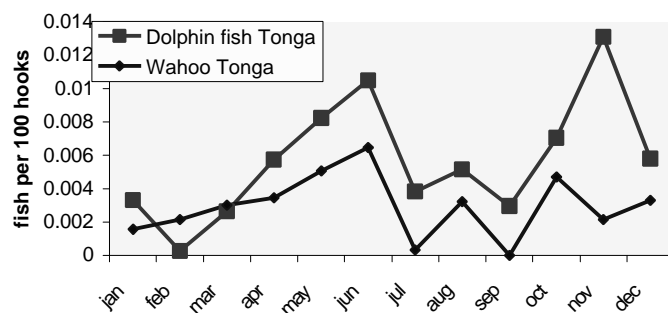
### World Records

Common Name	Species name	Line class	Weight (kg)	Place	Date
Pacific sailfish	<i>Istiophorus platypterus</i>	M – 24	95.5	Eua Island	

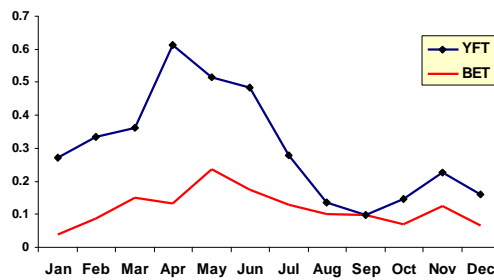
### Game fish seasonality

Longline derived data shows that there tends to be peaks in catch rates for both mahi mahi and wahoo from April to June as well as November and December. Charter vessel data from around Vava'u shows monthly and annual variations in catch rates with the highest CPUE being for yellowfin tuna in the warmer summer months along with mahi mahi. Blue marlin also appear to show a peak in the warmer summer months, though this is also when most fishing occurs.

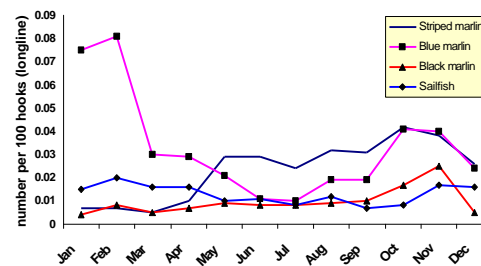
Longline catch rate - Tonga



Seasonality of tuna catches Tonga



Game fish Seasonality Tonga



### Tuvalu

Population	9,500	Land Area (km <sup>2</sup> )	24
EEZ area (km <sup>2</sup> )	900,000	Population per 100 km <sup>2</sup> of EEZ	1.056
% off EEZ area as land	0.003	Coastal fish catch/capita (kg)	97.58

Tuvalu, formerly known as the Ellice Islands, is a cluster of nine low-lying atolls to the north of Fiji. European traders first arrived in the 1820's though the first known European sighting was by the Spanish in 1565. In 1819 it was 'rediscovered' and named the atoll Ellice. Tuvalu first came under British jurisdiction in 1877 and in 1892 became part of the British Protectorate of the Gilbert and Ellice Islands and then became a colony in 1916. Tuvalu was legally separated from the Gilbert islands (Kiribati) in 1975 and became an independent constitutional monarchy in 1978.

Tuvalu is fairly under-developed in regard to organised charter gamefishing, though does have good resources in most of the pelagic species. The main ‘tournaments’ which are carried out are in conjunction with the commercial troll fisheries and basically consist of a competition between the commercial vessels as to who can catch the first fish of the day and the most. Tuvalu fishermen, especially in the outer islands, still use hand made (usually out of shell) traditional lures. These still work extremely well.

#### Game Fishing Facilities

<b>Main Fishing Grounds</b>	
<b>Marinas</b>	
<b>Boat Ramps</b>	
<b>Jetties</b>	Boats carried ashore by hand, though the Fisheries Dept. has a slipway for bigger boats.
<b>Number of Charter Vessels</b>	
<b>Game Fishing Club</b>	<a href="http://members.xoom.com/_XMCM/tuvaluonline/index.htm">http://members.xoom.com/_XMCM/tuvaluonline/index.htm</a>
<b>Approximate number of private fishing vessels</b>	>100 outboard boats
<b>Tournaments</b>	Occurs on special occasions throughout the year.
<b>Fisheries management contacts</b>	Malaki Tihala – Fisheries Department.
<b>Game fishing and tourism contacts</b>	

#### Target Species

Blue Marlin	Black Marlin	Striped Marlin	Sailfish	Swordfish	Short bill spearfish
			X	X	
Yellowfin Tuna	Skipjack Tuna	Other Tunas	Wahoo	Mahi mahi	Shark
X	X		X		X

#### Vanuatu

<b>Population</b>	<b>164,100</b>	<b>Land Area (km<sup>2</sup>)</b>	<b>12,190</b>
<b>EEZ area (km<sup>2</sup>)</b>	<b>680,000</b>	<b>Population per 100 km<sup>2</sup> of EEZ</b>	<b>24.132</b>
<b>% off EEZ area as land</b>	<b>1.793</b>	<b>Coastal fish catch/capita (kg)</b>	<b>15.31</b>

Formerly known as the New Hebrides, it is a group of over 80 islands strung out in the shape of a Y. The first settlers, mainly from Papua New Guinea via the Solomons arrived in Vanuatu 3500 years ago. The first European was in 1605 while in 1768 the islands were named the ‘Great Cyclades’. In 1776 they were renamed the New Hebrides by James Cook. They eventually received their present name of Vanuatu in 1980 when it achieved independence after 74 years of joint rule by Britain and France.

#### Game Fishing Facilities

<b>Main Fishing Grounds</b>	Most fishing occurs to the south and south-west of Port Vila, usually within close proximity. Game fish have been caught directly out of the harbour area.
<b>Marinas</b>	None
<b>Boat Ramps</b>	There are a number of ‘coral ramps or beach access areas’ around Efate (island with Port Vila) as well as a concrete ramp in Port Vila.

<b>Jetties</b>	There are a number of jetties in Port Vila. Vessels are also able to 'tie-up' to the extensive main harbour wall.
<b>Number of Charter Vessels</b>	Approximately nine charter vessels operated by six companies. <a href="mailto:Tourism@vanuatu.com.vu">Tourism@vanuatu.com.vu</a> <a href="http://www.vanuatu.net.vu/-nto.htm">www.vanuatu.net.vu/-nto.htm</a>
<b>Game Fishing Club</b>	Port Vila game-fishing club. Meetings held at the Waterfront Bar. <a href="mailto:Waterfnt@vanuatu.com.vu">Waterfnt@vanuatu.com.vu</a>
<b>Approximate number of private fishing vessels</b>	40–50
<b>Tournaments</b>	Late November – International Vanuatu game-fishing tournament. Other tournaments are held through the year, including Easter.
<b>Fisheries management contacts</b>	Moses Amos – Department of Fisheries
<b>Game fishing and tourism contacts</b>	Sandrino Traverso – Port Vila Gamefishing Club.

### Target Species

Blue Marlin	Black Marlin	Striped Marlin	Sailfish	Swordfish	Short bill spearfish
X	X	X	X		X

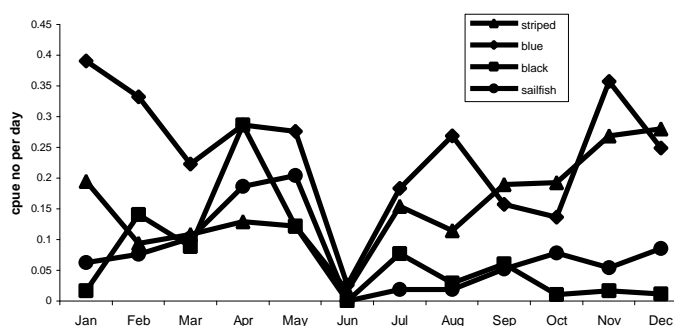
Yellowfin Tuna	Skipjack Tuna	Other Tunas	Wahoo	Mahi mahi	Shark
X	X	X	X	X	X

### World Records

Common Name	Species name	Line class	Weight (kg)	Place	Date
Trevally, giant	<i>Caranx ignobilis</i>	W – 60	40.50	Port Vila	12/12/88

### Game-fish seasonality

Both black and blue marlin tend to be caught more in the summer months of November to May while striped marlin, while being caught all year, are caught more from October to December. Sailfish are caught in lesser numbers all year. All the billfish species show a drop in longline catch rates during June. Wahoo and mahi mahi tend to be caught more in the winter months. Dogtooth tuna, barracuda and giant trevally are also caught all year.



### Wallis & Futuna

Population	14,400	Land Area (km <sup>2</sup> )	255
EEZ area (km <sup>2</sup> )	300,000	Population per 100 km <sup>2</sup> of EEZ	4.800
% off EEZ area as land	0.085	Coastal fish catch/capita (kg)	63.68

Wallis & Futuna are the smallest of France's three South Pacific territories. Although these islands were discovered by the Polynesians thousands of years ago, not until 1616 did the Dutch name them the Hoorn islands. Wallis was declared a French protectorate in 1886, Futuna in 1887. In 1924 the protectorate officially became a colony. In 1959 people voted to upgrade their status to that of an overseas territory which was granted in 1961.

**Game Fishing Facilities**

<b>Main Fishing Grounds</b>	
<b>Marinas</b>	
<b>Boat Ramps</b>	
<b>Jetties</b>	A wharf at Sigave on the South coast of Futuna.
<b>Number of Charter Vessels</b>	
<b>Game Fishing Club</b>	
<b>Approximate number of private fishing vessels</b>	
<b>Tournaments</b>	
<b>Fisheries management contacts</b>	
<b>Game fishing and tourism contacts</b>	

**Target Species**

<b>Blue Marlin</b>	<b>Black Marlin</b>	<b>Striped Marlin</b>	<b>Sailfish</b>	<b>Swordfish</b>	<b>Short bill spearfish</b>
<b>Yellowfin Tuna</b>	<b>Skipjack Tuna</b>	<b>Other Tunas</b>	<b>Wahoo</b>	<b>Mahi mahi</b>	<b>Shark</b>

## Conclusions

It is apparent from developing this paper that there is a major deficiency in the amount and quality of game-fish data available from many countries. It is in the interest of developing game-fish industries to be able to base their forward projections on reliable historic data, especially in regard to species abundance and seasonality. There is a need for the collection and archiving of game-fish data on a central database. This database has now been developed at SPC and is available for data entry. It is the intention to continually update this data-base with information provided by the member countries.

It is hoped that member countries will provide further information to update the information in this paper.

## Acknowledgements

Thanks go to all the country representatives who provided information for this report as well as to staff of the SPC who provided much of the information used here. Information was not only provided by government organisations, but also numerous non-government organisations including International Game fishing Association representatives in individual countries, sportfishing clubs and individuals.

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