Tuna Longlining by China in the Pacific Islands: A Description and Considerations for Increasing Benefits to FFA Member Countries

March, 2005
M. A. McCoy and R. D. Gillett

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GILLET, PRESTON AND ASSOCIATES INC.
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## KEY FINDINGS

### Nature of operations of the Chinese longline fleets in the FFA region

It is estimated that during 2004 there were a total of about 110 Chinese tuna longline vessels locally licensed and based in five Pacific Island countries: Fiji, Marshall Islands, FSM, Tonga, and Palau.

Those in the Micronesian area target bigeye and to a lesser degree yellowfin for the fresh sashimi market. Vessels based in Fiji and Tonga catch primarily albacore for the canning market.

There are probably 20 to 30 large-scale Chinese longline vessels that use Fiji as a base but do not have access to the Fiji EEZ.

There has been a steady increase in the number of Chinese vessels based in the Pacific Islands since 1999. There has also been an increase in the variety of arrangements under which those vessels operate.

### Flag state regulations (China)

In June, 2003 new regulations came into force governing Chinese fishing activity on the high seas and in the EEZs of other countries.

Chinese enterprises must obtain government approval and various operational certificates before their vessels can be based overseas.

Once overseas, there are no restrictions on movement of vessels from one base to another in the Pacific Islands.

### Trends in level of technology employed by the Chinese fleet

The most noticeable technological trends in the Chinese longline fleet based in the PICs are (1) increased use of hydraulic longline reels and line setters, with a corresponding reduction in the use of the more traditional basket gear; (2) less use of wooden and ferro-concrete hulled vessels towards more steel vessels as well as the introduction of FRP as a hull material.

Without a long history in tuna longlining, China has adapted utilitarian designs used in other fisheries in coastal China as tuna longliners. A few new vessels are now being built specifically as longliners for basing in the Pacific Islands.

### Relationships and Arrangements for Vessel Operation

Most vessels have charter or other arrangements with locally-based domestic or foreign agents who have contractual or other arrangements to handle transshipment of fish to foreign markets and the handling of payments received from sales. Such agents can also buy fish, and/or supply items such as bait, fuel, food, and fishing gear. One important function is to procure fishery access licenses.

In some cases, the beneficial vessel ownership of Chinese longliners based in the Pacific Islands is fairly straightforward, such as when ownership is vested in state owned enterprises. In other situations, however, identification of beneficial owners may not always be clear from documentation made available to PIC government officials.
## TOPIC 
Sources of financial support

### KEY FINDINGS

Vessels are owned either by state owned enterprises in China or by private investors.

Some vessel owners are provided loans from agents for the purpose of refurbishing and equipping their vessels in China prior to departing for the Pacific Islands.

These same agents may provide loans to assist in transit costs from China to the Pacific Islands

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### Indications of level(s) of direct subsidies

Very little direct evidence was found for specific subsidies to Chinese longline fishing in the FFA region.

The circumstantial evidence, however, points to an undetermined level of assistance from the government to further develop overseas-based fisheries, including tuna fisheries.

Subsidies in the past have been available only to state owned enterprises, and not the private sector.

There is indication that there is some subsidy for the introduction of new designs and new types of vessels used for longlining.

There are also indications of an absence of subsidies to operating costs, or at least subsidies significant enough to enable vessels to overcome financial adversity.

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### Factors in China contributing to or detracting from attractiveness of FFA region

A significant reduction of fishing opportunities for domestic vessel operators in China due to resource depletion problems have led to reductions in the number of vessels allowed to operate, restrictions on the building of new vessels, and specific closed areas during certain times of the year.

Recent conclusion or renewals of fishery delimitation agreements with China’s neighbors in both the north and south has resulted in shrinking opportunities for its domestic fleet.

China’s emergence as a world superpower has included focusing on advancing its strategic interests and sphere of influence in Oceania.

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### Potential for increasing direct and indirect benefits to FFA member Countries

Some elements of the business and regulatory environment in FFA member countries that detract from the region’s attractiveness from the perspective of Chinese vessel operators are:

- Lack of control over and sometimes high expenses for offloading, packing and shipping the catch.

- Certain individual PIC government policies, regulations or requirements such as a ban on shark finning or the need to obtain port clearances for each fishing voyage.

- Difficulty in obtaining US visas for transit to some PICs

- High cost of VMS relative to other electronics on some vessels and sometimes harsh or strict
TOPIC  KEY FINDINGS

enforcement of VMS requirements

A case study of one PIC indicates that expenditures by the Chinese vessels and agents were about US$4.4 million in 2004. The government received direct revenue of about 16% of the total in access fees, other fees and taxes. The most likely means by which the government would increase direct revenue would be by increases to these fees and taxes.

In the case study, payments to the private sector were found to be greater than payments to government, with fuel being about 59% of total expenditures. There appear to be few opportunities to increase benefits to the private sector, other than by increasing the number of vessels based in the country which may provide proportional increases in all or most expense categories.

Understanding the relationships between agents and vessels, and agents and marketing systems will help in understanding how costs and profits in the industry are distributed. This is crucial for those PICs wanting to maximize direct revenue from locally-based foreign fleets.

Possible future developments

Fiji stands out as one FFA member country that has become a focus for Chinese tuna fishing. As one of the larger countries in the region, it has infrastructure to support fleets, a cannery to purchase the production of Chinese longliners, and air connections to sashimi markets.

Possible revaluation of Chinese currency and increased emphasis on profitability of state owned enterprises could change some of the economic conditions under which Chinese vessels currently operate.

China will most likely continue to try and increase its presence in the Pacific Islands through (1) expansion of longline basing arrangements and (2) formal bilateral fishery agreements with more Pacific Island countries.
### Acronyms and Abbreviations

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<th>Description</th>
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<tr>
<td>CNFC</td>
<td>China National Fishing Corporation</td>
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<tr>
<td>EEZ</td>
<td>Exclusive Economic Zone</td>
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<tr>
<td>FDI</td>
<td>Foreign direct investment</td>
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<tr>
<td>FFA</td>
<td>Forum Fisheries Agency</td>
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<tr>
<td>FOC</td>
<td>Flag(s) of Convenience</td>
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<tr>
<td>FRP</td>
<td>Fiberglass reinforced plastic</td>
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<tr>
<td>FSM</td>
<td>Federated States of Micronesia</td>
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<tr>
<td>GPS</td>
<td>Global positioning system</td>
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<tr>
<td>gt</td>
<td>Gross tons</td>
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<tr>
<td>IUU</td>
<td>Illegal, unregulated, unreported</td>
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<tr>
<td>JETRO</td>
<td>Japan Export Trade Promotion Organization</td>
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<td>LTFV</td>
<td>Luen Thai Fishing Venture</td>
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<td>MFV</td>
<td>Micronesian Fishing Venture</td>
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<tr>
<td>MIFV</td>
<td>Marshall Islands Fishing Venture</td>
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<tr>
<td>OPRT</td>
<td>Organization for the Promotion of Responsible Tuna Fishing</td>
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<tr>
<td>PFC</td>
<td>Pohnpeii Fisheries Corporation</td>
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<tr>
<td>PIC(s)</td>
<td>Pacific Island Country(s)</td>
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<tr>
<td>PITI</td>
<td>Palau International Traders, Inc.</td>
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<tr>
<td>PMIC</td>
<td>Palau Maritime Industries Corporation</td>
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<tr>
<td>RSW</td>
<td>Refrigerated sea water</td>
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<tr>
<td>SCTB</td>
<td>Standing Committee on Tuna and Billfish</td>
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<td>SOE</td>
<td>State Owned Enterprise</td>
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<td>SPC</td>
<td>Secretariat of the Pacific Community</td>
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<td>ULT</td>
<td>Ultra low temperature</td>
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<td>WCPO</td>
<td>Western and Central Pacific Ocean</td>
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<td>WTO</td>
<td>World Trade Organization</td>
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INTRODUCTION

Background to the Study
Longline vessels from China have been based in some Forum Fisheries Agency (FFA) member countries for over 15 years, with their activities initially concentrated in the waters of Palau, Federated States of Micronesia (FSM) and the Marshall Islands. More recently, other fleets have expanded China’s operations to include the waters of Fiji and Tonga; and there are plans for fishing activities to commence in one or more FFA member countries in the near future.

It is recognized that fishery managers require economic and operational information as well as that from other disciplines such as marine biology and oceanography for effective management of their tuna fisheries. The efforts of fisheries managers can benefit from information on the policy and business environment, and the relationships between owners, operators, agents, and marketers, among others. In addition, knowledge of operating patterns, regulations in the flag (home) state of vessels based or operating in the region, and trends in technology employed by foreign fleets, can all contribute to more effective management of the fishery.

Efforts to address these subjects have been undertaken in the past at FFA, but have focused on fleets other than those from China currently fishing in the region. To lessen this gap in information and analysis, FFA commissioned a study on the subject of China’s tuna longline fleets based in member countries. This report is the result of that study.

Purpose of the Study
The purpose of the study is to provide current information on the activities and business structure of Chinese tuna longline tuna fishing activities in the FFA region, and to investigate the potential for increasing the benefits to FFA member countries from those activities.

Since this report is one of the first attempts in the region to investigate these subjects in any great detail, it should be considered as a starting point rather than a complete analysis of all subjects presented. The report demonstrates where additional information is needed, and identifies subjects for further scrutiny. Although it does not purport to be comprehensive in all aspects, on the subjects covered the report provides relevant and important background as well as analysis based on available data and information, followed by some conjecture on likely future developments.

Organization of the Report
Key findings have been presented at the beginning of the report. The first four sections provide macroeconomic background, information on China’s government policies as they relate to tuna fishing, and a description of organization of the commercial sector. The fifth section describes China’s longline fleets in the FFA region, including an appraisal of factors that contribute or detract from the attractiveness of the region to China’s longline activities. A subsequent section explores the potential for increasing benefits from fishing activities. The seventh section discusses possible future developments, taking into account activities in China as well as in the Pacific Islands. A final section presents the study’s conclusions.

Methodology
In carrying out this study the consultants researched the activities of Chinese longlining during the period November, 2004 to January, 2005. Site visits were conducted in Fiji,
Tonga, FSM, and the Marshall Islands to gather data and information in those countries. A short trip was also taken to attend the 2004 China Fisheries and Seafood Expo in Qingdao to assess the current status of marketing tuna in China, and to meet with relevant industry representatives.

Terminology and Abbreviation Usage
Throughout the report, the term Pacific Island Countries (PICs) is used when referring to FFA member countries for sake of brevity.

References to the Western and Central Pacific Ocean (WCPO), generally refers to fishing in high seas areas as well as the exclusive economic zones of FFA member countries. It does not include fishery waters of China or other Asian nations.

When speaking of the "Micronesian area" or Micronesian region" the reference is to the three countries where Chinese vessels are currently based: Palau, FSM, and does not include the Micronesian countries of Kiribati and Nauru.

In the context of tuna fishing in the western and central Pacific, the term "base" is used quite loosely and can mean several things: the main port utilized where the bulk of the supplies are obtained, where the catch is offloaded, or varying degrees of both in combination. It can also include the location where the business of the vessel is conducted; i.e. its management office, or even the home port of a particular country adopted for business, taxation, fishery access, or other reasons. In this report the terms base or based in refer to ports or countries where longline vessels habitually offload to processing facilities or transship to markets elsewhere, as well as procuring most of their supplies.

Political and geographic realities must be taken into account when referring to China. In this report, wherever China is mentioned the reference is to the Peoples’ Republic of China, including the special administrative regions of Hong Kong and Macau. Chinese statistical and financial data excludes Hong Kong and Macau, however, unless otherwise noted. Taiwan, although considered a renegade province by China, is referred to as a separate political entity.

Diacritical marks are important in determining the pronunciation of many Chinese words, but have been omitted here. Place names and other references are spelled in their most common usage in what is termed the Pinyin system of writing Chinese in the English alphabet. This is done because most translated texts of Chinese diplomatic documents as well as Chinese magazines published in foreign languages use this system for spelling names and places.

Constraints
Some subjects discussed in the report mirror the country in their vastness and complexity. Compounding this is the fact that China’s economic development is evolving so quickly that published information on specific topics within the country can become quickly outdated.

Information from China on current Chinese fishing activities in the Pacific Islands is often not available. Where such information is available it can be unclear, fragmentary or contradictory in nature. During research for this study, it became evident that in situations where information was not known or readily available, some responses to questions asked of business, academic or government officials were given purely to save “face”.

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1 The report focuses on longline fishing for tunas in the Pacific Islands region carried out by vessels of the Peoples Republic of China. Unless otherwise stated, the information or data presented do not refer to activities of vessels from Taiwan.
Information in the Pacific Islands on Chinese fishing activities was likewise difficult to obtain. Business information specific to the operations of Chinese or joint venture companies or enterprises is mostly confidential.

Acknowledgements

The authors gratefully acknowledge the assistance of the FFA Director and his staff in providing support during the project. In China, Dr. Xu Liu-Xiong, Dean and Professor, and Dr. Dai Xiaojie, Associate Professor of Shanghai Fisheries University are thanked for their assistance and hospitality. The assistance of Mr. Rohan Ellis, Trade Representative at the Pacific Island Trade Office, Beijing, and Mr. Yang Gang, Export Manager of that office, is also gratefully acknowledged. Thanks are also due to Ms. Xue Zhang of the China Council for the Promotion of International Trade for assistance in Qingdao.
1 BACKGROUND

As the most populous country in the world (approaching 1.3 billion people) statistical information about China is often reduced to a series of very large, mind-numbing numbers: 9,596,960 square kilometers in area (the third largest country in the world), about 900,000,000 million people (over 70 percent of the total population) living in rural areas, 38 cities of over 1 million, including Shanghai (13.3 million), the capital, Beijing (10.8 million) and Tianjin (8.8 million). Some cities, like Chengdu in the interior of the country may not be well-known to outsiders, but with a population of over 10 million people it has about 2.5 times the population of Sydney.

The country has a workforce of around 780 million, of which about half are involved in agriculture with 24 percent employed in industry. Even the relatively low official urban unemployment figure of 4.3 percent means over 17 million people are out of work, roughly about 3 times the total populations of all Pacific Island countries combined².

For administrative purposes, China is composed of four municipalities (Beijing, Tianjin, Shanghai and Chongqing), 23 provinces, 5 autonomous regions, and two special administrative regions (Hong Kong and Macau). The four special municipalities belong to no province, which gives some degree of autonomy, but are also closely administered by the central government. Figure 1 is a political map depicting the country, its closest neighbors, and the three areas where much domestic Chinese fishing takes place: the Yellow Sea, East China Sea, and South China Sea.

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² The Economist (2004) notes that the unemployment rate in China grossly underestimates the figure because it represents only those who are registered urban residents and does not include those who have been laid off from state owned enterprises and who get a 3 year stipend, or migrant workers from the countryside who are not classified as urban dwellers.
Numbers such as those cited above provide some perspective on China, but in order to better understand its tuna fishing and related activities in the FFA region, it is useful to review some of the more pertinent facts about the country, its economic system, and policies governing Chinese fisheries development overseas.

1.1 Government Policy and Macroeconomic Background

Beginning in the late 1970s, China began a dramatic and massive transformation of its economy. Major reforms and restructuring have been undertaken over the past 25 years that have significantly altered the face of the Chinese economy and China’s trade relations with the rest of the world. Included in these reforms were such things as the abolishing of trade plans, decentralization of trade, greatly reduced tariffs and unification of a former system of dual foreign exchange rates, among others.
In 2000 China was ranked as the sixth largest trading nation in the world, up from about thirtieth in the late 1970s (Adhikari and Yang 2002). After joining the World Trade Organization in 2001, China accelerated its economic growth (currently about 9 percent per annum) and has become a major economic force, registering nearly a 36 percent surge in foreign trade in 2004 (imports and exports). It now claims to be the world’s third largest trading power behind the United States and Germany.

China retains a highly centralized political system, but in many respects the economic system is becoming increasingly more decentralized. Along with decentralization has been the introduction of a process of increasingly allocating financial and human resources within state-owned enterprises according to market forces, and a consequential reduction in such allocation by government administration. There has also been a transformation of some formerly state-owned enterprises into non-state owned or non-public enterprises (euphemisms used to denote private enterprise in various forms) through a variety of mechanisms. The economic system that has developed in China since the late 1970s is often referred to by the Chinese leadership as a “socialist market economy” (Lehman Brown 2005).

It is not always possible to easily determine the type of business form for a given enterprise from available information. The Asian Development Bank Institute identifies 15 different classifications of enterprises in China, based on registration status with the government (Kanamori and Zhou 2004). These forms are listed in detail in Appendix 1, where the potential complexity of the situation is readily apparent. Not only are there many different classifications of enterprises, but different forms are governed by different laws and regulations including, presumably, taxation.

According to the Asian Development Bank Institute (Kanamori and Zhao 2004), enterprises in China can be classified in three categories on the basis of the sources of capital:

- Domestic-funded enterprises
- Enterprises with investment from Hong Kong, China, Macau and Taipei, China:
  - Enterprises with foreign investment

Domestic–funded enterprises can be state-owned enterprises, collective enterprises, cooperative enterprises, joint ownership enterprises, limited liability corporations, share-holding corporations, private enterprises and other enterprises.

Enterprises with foreign investment are limited to joint-venture enterprises, cooperative enterprises, sole investment enterprises and share-holding corporations. Investment from Hong Kong, China, Macau and Taipei, China are considered foreign investments but for some purposes may be treated differently than other foreign investments.

Two important themes appear consistently in China’s current evolution and are relevant to overseas tuna fishery development: the ongoing adjustment of roles in the private and public sectors, and the focus on food security. As the private sector grows, it requires access to funds necessary to finance its expansion, and in tuna fisheries this appears to come from both domestic and international sources.

### 1.1.1 Adjustments to the Public Sector

The public commercial sector in China consists of state owned enterprises (SOE) (including provincial enterprises) and a variety of some of the other forms of business described in

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4 The term here is used to denote transfer of control and decision-making from central or State control to regional, provincial or smaller political units.
Appendix 1, including some at the county and village level. Of note is the opening of some SOEs to private investment through shareholding.

As of the end of 2001, China had 174,000 SOEs. According to the World Bank (2003) some of the larger SOEs, including some listed on Hong Kong and New York stock exchanges were reasonably profitable, but just over half of China’s SOEs were loss-making and the great majority of those were small and medium SOEs.

Over the past few years there have been major efforts aimed at restructuring the SOEs, which have accumulated large debts while contributing a reduced percentage of the gross domestic product. As a result of new policies aimed at small and medium-sized SOEs, many were sold off, contracted out or closed down and around 27 million SOE workers lost their jobs. Meanwhile, many large scale SOEs were converted into multiple-shareholding entities (Zhang 2003).

While the large SOEs continue to primarily shoulder the national tax burden, the Chinese government has made numerous statements that the private or non-public sector is an important component of China’s socialist market economy, and that the government has a duty to encourage, support and guide the private sector while at the same time strengthening and developing the public sector. It has been reported that in 2003 approximately 570,000 new privately-owned enterprises were set up in China, with a total registered capital equal to US$120 billion (Fu 2004).

Complete state control is retained over what are considered key industries such as those involved with defense, petroleum, telecommunications, aviation and other sectors. Relative freedom is given to many other areas, including electronic and auto parts manufacturing, service industries such as hotels, home and cottage businesses, and small retailers (the list grows almost daily). At least one commentator remarked that while the government’s objective is strong economic growth, it clearly intends to retain control of the economy rather than privatize. In this view, the main goal is not to reduce state control of the economy, but to make state control of the economy more efficient (Kroeber, 2004).

1.1.2 Food Security

A second important theme in China’s development is the role of food security. Food security means that food is available at all times; that all persons have access to it; that it is nutritionally adequate in terms of quantity, quality and variety; and that it is acceptable within a given culture (Hotta 2000). One can understand the obsession with the topic, given that the country contains 1.3 billion people, has experienced serious famines in the past, and has only about 20 percent of its vast land suitable for intensive agriculture⁵.

Food security issues are addressed in all fishery sectors: marine capture fisheries, freshwater capture fisheries, and aquaculture. In spite of the rapid development of coastal cities and export-oriented manufacturing, the country remains essentially an agricultural one with food security a top priority. Technology is relied upon to increase growth in the food supply from the domestic agricultural sector, while China’s ever-increasing role in international trade allows a reduction in reliance solely on domestic production, and results in increasing links to the total world food supply (Li and Wang 2002).

In the late 1990s FAO concluded that while there was room for expansion in aquaculture production in China contributing to food security, traditional marine capture fisheries did not

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⁵ Although China is the third largest country in the world (after Russia and Canada), about two-thirds is mountain, desert, or otherwise unfit for cultivation. Excluding the mostly marginal agriculture found in regions of Inner Mongolia to the north, Xinjiang and the Tibet-Qinghai Plateau on the west results in the 20 percent estimate.
appear to offer any significant growth potential. The conclusion was that coastal fish resources needed to be carefully managed, and future increases in landings would probably depend on distant-water fishing (Hotta 2000).

1.1.3 Finance

The availability of capital is a necessary element in fostering economic growth, whether by private or state owned enterprises. Finance for large-scale industrial activities in China is mainly provided by banks, with the largest and most important of those still owned by the state. The main customers of these banks have traditionally been the large state-owned enterprises. The central bank, the Peoples Bank of China, raised interest rates in 2004 for the first time in 9 years, so that the benchmark one-year lending rate stands at about 5.5 percent. Until that rise in rates and a concurrent shift in policy, most banks were limited in what they could charge on loans to a rate that was at most one and three-quarter times the base lending rate set by the central bank. Such ceilings have now been removed, giving banks the ability to price loans more appropriately to reflect risks, and encourage loans to what are termed “small and medium-sized private enterprises” (IMF 2004).

Large, government-owned banks are acknowledged to have a large proportion of their loans categorized as non-performing, meaning that they are behind in repayments to a point where they may be uncollectible. The high degree of non-performing loans in the portfolios of the largest state-owned banks is seen by many observers and economists as a major obstacle for China to overcome in its drive towards a market-oriented economy (Kwan 2004).

Many smaller enterprises are said not to have access to financing through state-owned banks (which typically ignore small private ventures). This creates a phenomenon described by one writer as “shadow banks” which, although technically illegal, operate in a gray market of unregulated lenders, including associations made up of citizens who pool their savings to invest and lend among themselves, and informal lending between firms. This type of financing appears to be more prevalent in the capitalist enclaves of southern China, particularly in Zhejiang and Guangdong provinces (Forney 2004).

A further source of finance of enterprises in China is foreign direct investment (FDI). The pattern of foreign investment links to China related to tuna fisheries is believed to follow that in other sectors, including agriculture and food processing. There is little direct information on the current status of such investment. The three major tuna-catching nations in the western Pacific, Taiwan, Korea and Japan, are all sources of FDI in China. Both Japan and Korea are known to have heavily invested in food processing, including some processing of deep-frozen tuna for sashimi markets (Japan) and canning (Korea).

Much of Taiwan’s FDI is in Fujian Province and other regions in the south. Fujian is considered the ancestral home of many Taiwanese, and while Mandarin is spoken widely in both places, the Fujian dialect is very similar to Taiwanese. The province has enacted regulations aimed specifically at encouraging overseas investment, and targets investment from Taiwan and elsewhere in fisheries and aquaculture by offering tax holidays and other benefits (APEC 2000).

Northern China hosts significant foreign investment from South Korea in several sectors. In tuna fisheries this is evident in such activities as the manufacturing of fishing equipment in Shandong Province, and cooperation on marketing and manufacturing with the Korean firm Dongwon in the northern provinces of Shandong and Liaoning.

Both Taiwan and South Korea have much to offer China in addition to foreign direct investment in tuna fishing. Successful companies in both capitalist countries have technology, experience, and managerial expertise that is vital to the rapid expansion of this portion of China’s fishing sector. For example, several of the used tuna purse seiners
purchased by Chinese companies have come from Taiwanese firms, and it is believed that both Taiwanese and Korean captains are employed on some Chinese longliners. It is doubtful that there is much FDI from the major tuna fishing nations in smaller Chinese fishing enterprises such as those that are based in the PICs. The fishing industry in general is considered one of high investment risk and not usually attractive to institutional investors. Foreign investment in the tuna fishing sector of new and upcoming fishing nations has in the past been mainly from trading houses that stand to benefit from marketing and not necessarily from fishing operations. The relatively limited volumes produced by activities based in the PICs, and their targeted markets would not make such investments very attractive to trading houses. On the other hand, foreign investment in Chinese tuna vessels could be directed towards purse seining or distant water longlining, where the volumes and resultant value of catches are large enough that potential investors would be more likely to profit from gains or obtain advantages in the market for the products produced by those fleets.

It is not known the degree to which tuna fishery enterprises active in the FFA region have utilized traditional bank financing, gray market “shadow banks”, or other means of finance. Many of the Chinese vessels, particularly those active in the Micronesian area, come from southern ports in the provinces of Fujian, Zhejiang, and Guangdong. A significant amount of the economic development and change in China has occurred in these coastal provinces over the past two decades. As a result, it can be expected that the high levels of economic activity in southern provinces (and perhaps elsewhere) has resulted in the availability of investment capital outside of normal banking channels.

The relatively strong private sector in these southern provinces, particularly Guangdong, is evidenced by the fact that in 2004, Forbes magazine reported that Guangdong led the magazine’s list of the “200 richest people in China” (described as those with individual net worth over US$150 million) with 35 names. Shanghai and Beijing had 22 each, and Zhejiang Province had 20 (Forbes 2004).

A good example in the rampant development and accumulation of wealth in the south relative to many other parts of the country is Shenzen County in Guangdong Province, near Hong Kong. A maxim of today’s China has been quoted as, “You think you’re brave until you go to Manchuria, you think you’re well read until you reach Beijing, and you think you’re rich until you set foot in Shenzen” (Harper, et al. 2002). Shenzen was lucky enough to have been chosen as the site for one of the earliest Special Economic Zones in 1980. It has developed extensively since then, and has grown from being just a small fishing village to a city with a population of over 1 million. An idea of the impact of the changes brought about by economic development is the fact that as of 2002, the northern part of the Special Economic Zone was separated from the rest of China by an electrified fence to prevent smuggling and prevent people from trying to emigrate illegally into Shenzen (and thence to Hong Kong).

Currently, China tightly controls its currency and prohibits the yuan (known also as renmenbi or renminbi, literally “peoples’ money”) from being freely converted for remittance purposes. Because the currency is not fully convertible, arrangements (sometimes elaborate) can be

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6 It can be expected that Taiwanese and Korean captains would serve on larger Chinese ships such as purse seiners; however there is also information that some captains of Chinese longliners in Fiji are also Taiwanese and Korean.
7 This did not happen by accident. Economic growth and liberalization policies favored mainly the southern provinces during the early economic reform process. Special economic zones geared to exporting manufactured goods have been established since 1980 in Guangdong (Shenzen, Zhuhai and Shantou) and Fujian (Xiamen). Coastal cities were the first opened to foreign investment in 1984 and it was not until 1992 that this was extended to all inland provincial capitals and autonomous regions.
8 The highest ranking people were reported by Forbes to have made their fortunes in real estate, information technology and food processing.
made between various entities to minimize tax liabilities and free up foreign exchange offshore\(^9\).

No specific information was found during the study on the rates of domestic taxation applied to fishing ventures overseas. Foreign investment enterprises within China are reportedly taxed at the rate of 33%, consisting of a national rate of 30% and the local tax rate of 3%. (Lehman Brown 2005).

It is not difficult to find many diverse opinions on China’s overall economic objectives. According to various state publications and pronouncements, the objectives include the further liberalization of business while maintaining state control, and ensuring the stability of its currency through foreign income earnings. The development of light industry is seen to be encouraged as a vehicle meeting both these ends. Priority sectors identified for investment include transportation, telecommunications, power generation, agriculture and food processing. Fishing is generally grouped with agriculture, although it obviously contains many factors that as an industry make it a special case.

### 1.2 Domestic Fisheries Activities

The two overriding features of fisheries within China are the increasingly large volume and value of fishery exports, and a large problem of domestic overfishing. That exports continue to increase while resources dwindle is a direct result of an ever-increasing large volume of imports, primarily for processing and re-export (but also for some domestic consumption). Such imports have escalated since China joined the World Trade Organization (WTO) and subsequently reduced import tariffs on many aquatic products.

China’s catches, reportedly accounting for almost 20 percent of total world capture production in 1998, remained stable in 1999 and decreased marginally in 2000 to about 17.5 million t (FAO 2002).

Note should be made on the interpretation of some Chinese fishery statistics, particularly those concerning domestic fishery production. As with many countries, in China problems can arise in verifying claims of catches in capture fisheries. At the same time, it could be argued that there are built-in incentives in the Chinese system, particularly prior to this decade, which could cause distortion in the data.

In 2001, Watson and Pauly published an article in the journal *Nature* that claimed FAO’s global figures were distorted because China’s marine capture fishery for the period 1995-1999 had been overstated\(^{10}\). FAO subsequently issued a paper clarifying its own role in analyzing and publishing catch statistics, and the limitations on use of such information. In its response to Watson and Pauly, FAO acknowledged that there was a problem, and that the Watson and Pauly paper was not the first time that scientists have reported the “finding” that China’s fishery statistics overestimated production.

FAO (undated) estimates that the world’s total of fishery exports is around US$57.6 billion. In 2002, China had US$4.5 billion in exports and had overtaken Thailand to become the world’s largest exporter of fish and fishery products. Lem (2004) reported that the Chinese processing industry benefits from large and very efficient units with extremely competitive labor and production costs. As a result, it has come to play a crucial role in supplying international markets for processed fish products such as fish fillets and processed shrimp (Lem, 2004).

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\(^9\) For an example of advice given by legal professionals in these areas of finance, see Gregaras and Liu (2003).

\(^{10}\) The claim was part of a larger argument the authors were making about the decline of global marine capture fishery production (except for Peruvian anchoveta) since 1988.
The relative amounts of tuna imported and exported in China are still so small compared to other fish and fish products, that available information on China's imports and export breakdowns for these items do not separately list tuna. It is presumed to be included in the “other” category, but this is not verified. International compilations of tuna trade volumes such as FAO’s Globefish assign export status to the country in which the shipment originated, so therefore tuna caught by Chinese flag vessels and exported via air from FFA countries are attributed to those countries.

While fishery exports have been booming with the help of increased imports, overfishing in domestic waters is said to be the biggest concern of the Bureau of Fisheries of the Ministry of Agriculture. As a result, beginning in 2002 a program to reduce domestic fishing capacity by the scrapping of excess vessels began. A Fisheries Bureau official was quoted as saying that “at least 7,950 fishing boats had withdrawn from China’s offshore waters by November, 2004” (Zhou 2004). The reduction plan, originally reported as lasting five years and reducing the number of domestic vessels by seven percent (Anon. 2003) is now reported to last for eight years until 2010 and cut the number of China’s offshore fishing vessels by 10 percent, from 222,000 at the end of 2002 to 192,000 in 2010 (Zhou 2004). As part of the capacity reduction program, regulations mandate that new fishing vessels cannot be built unless the new unit will replace an existing vessel (Anon. 2003).

In concert with capacity reduction, China is also seeking to reduce the total number of fishermen employed in domestic fisheries. It is estimated that 5 million people work in wild capture fisheries, with another 20 million in aquaculture. One report indicates that this is a difficult problem to solve, because “the increasing mobility of China’s labor force also contributes directly to the oversupply of fishermen and consequently overfishing” (Anon. 2003). Although the average income for a domestic fisherman is said to be in the US$500 to US$800 range, in 2003 this was as much as double what a farmer might earn. By the end of 2004 an official of the Bureau of Fisheries announced that 40,000 fishermen had been transferred to other jobs during the year (Zhou 2004).

In addition to capacity reduction, the Bureau of Fisheries imposed several regular closed seasons for all fishing in certain areas. The closures are for three months each year, from June 15 to September 15 in the Yellow Sea and the East China Sea, and two months each year (June 1 to July 31) in the South China Sea from the Taiwan Strait to 20 degrees North latitude (Anon. 2003). There are apparently no plans to re-open any of these areas. Expansions of closed areas including portions of the sea around Hong Kong are currently being considered.

2 TUNA FISHING BY CHINA IN THE WCPO

2.1 Development of Chinese Longline Tuna Fishing

Fishermen in southern China are the most familiar with tuna. Several species are known to be present in some areas of the East and South China Seas during certain periods of the year and historically were fished to some degree in areas close to the provinces of Fujian and Guangdong, the Spratley and Paracel Islands, and in the gulf north of Hainan. INFOYU, the market news service sponsored by FAO and others reports that today there are no vessels specialized in tuna fishing operating along the China coast (Gillett 2004).

Much of the information available in English on the recent history of Chinese tuna longline fishing up to the mid 1990s comes from a single source, a report by the former Japanese

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11 The sizes and types of vessels involved were not stated, nor is there a definition of “offshore” in the reports.
External Trade Organization, JETRO. According to JETRO (1995), China built one wooden longliner of 24.5 meters in length in 1954-1955 that carried out experimental fishing in the South China Sea. Later, Guangdong Province obtained two larger used longliners from Japan during the early 1970s for fishing in the South China Sea. A few years later, in 1977-1978 further experimental fishing was conducted in the South China Sea that resulted in catches that were 88 percent yellowfin.

The first commercial attempts at tuna fishing outside of China reportedly took place in 1987-1988. In one case, a provincial enterprise formed in Liaoning Province purchased a used, ultra-low temperature (ULT) longliner from Japan in 1983, but it wasn’t until 1988 that the vessel began overseas operations at Mauritius in the Indian Ocean. That same year, seven trawlers refitted as tuna longliners arrived in WCPO waters to fish for tuna in what were described as “trial fishing experiments” (Xu 2002).

The number of Chinese longline vessels fishing in the WCPO and based in the PICs increased rapidly during the early 1990s, peaking at 457 vessels in 1994 (Song et al. 2004). It is believed that all of these vessels arrived throughout the Micronesian area to deliver fish to bases operated by the Taiwanese Ting Hong fishing company for transshipment by air to Japan. After Ting Hong’s demise in 1996, more than 100 remained and operated in the area until the end of the decade under various other arrangements. Numbers declined, however, until only 66 remained in 1999. The decline, even after Ting Hong departed, has been attributed to “inefficient fishing and poor returns” (Song et al. 2004).

Using data as they are presented in the 2003 Tuna Yearbook (SPC (2004) Figure 2 depicts the total number of Chinese longline vessels active in the WCPO, 1988-2003. It can be seen that the number of vessels became relatively stabilized from the late 1990s until 2002 when vessel numbers rose once again. According to Song et al. (2004) there was an increase of 56 vessels after 2002.

![Figure 2 Number of Chinese Longline Vessels Active in the WCPO, 1988-2003](image)

Source: SPC Tuna Yearbook 2003

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12 References do not indicate where the vessels were based, but it is likely they were the vanguard of many more vessels to arrive in Palau and in ports in FSM in subsequent years.

13 A discrepancy exists with respect to the number of vessels active in the WCPO in 1999 as reported by China in various documents presented at the Standing Committee on Tuna and Billfish and that contained in the SPC 2003 Tuna Yearbook. The Chinese reported 66 vessels, but the number in the 2003 Yearbook is 115, even though both sources give the same total catch as 8,333 t.
Total reported catches of the vessels active during the period 1988-2003 are shown in Figure 3. The catch amounts do not include albacore caught in temperate seas (SPC 2004).

The annual catches shown indicate a significant increase for 2003, attributable in part to a large increase in the catch of bigeye, albacore and "others". It was reported by China at the 2004 meeting of the Standing Committee on Tuna and Billfish (SCTB) that in 2003 the longline catch for China increased by 13,958 t over 2002 (Song et al. 2004). A significant portion of the increase (9,031.7 t) was attributed to "the catch of a part of the deep freezer large scale longliners". It is not clear, however, if a subsequent statement in Song et al. (2004) also attributing the catch increase to an "increase of the fleet (56 longliners more than 2002)" includes those deep freezer large scale longliners.

2.2 Other Tuna Fishing and Related Activities

In order to obtain a more complete picture of the development and current status of Chinese longlining based in the PICs, it is useful to briefly review other activities in tuna fishing and related fields being undertaken by China in the WCPO.

Longline fishing afforded the Chinese a relatively quick inexpensive means of entering tuna fisheries in the WCPO during the last decade. Vessels from some other fisheries were easily adapted, and the time required to build up the number of vessels in operation was relatively short.

By the late 1990s the mixed economic results of various enterprises resulted in stagnation in the number of vessels active in the region. Meanwhile, events in other WCPO tuna fishery sectors, increasing expansion of the Chinese economy, and other factors combined to focus Chinese attention on the full potential of the tuna resource, and developments in tuna purse seineing.

Beginning in 2001, China entered the purse seine fishery in the WCPO and slowly increased their fleet through the purchase of used vessels from Korean, USA, and Taiwanese interests. By January, 2005 there were a total of 8 purse seine vessels licensed bilaterally by
some PICs and operating in the WCPO. According to Song et al. (2004), the increase in vessel numbers resulted in the nominal catch of China’s purse seiners to rise from 3,090 t (one vessel) in 2001 to 23,661 t (4 vessels) in 2003.

China’s entry into the purse seine fishery has probably been made somewhat easier by the existence of trained crewmen who have served on Korean purse seiners. Some Korean companies have been known to have employed Chinese citizens of Korean descent on purse seine vessels since the mid-1990s (Gillett and McCoy, 1997). Although none of those employed were officers, having trained deck crew available would have been a benefit to companies starting up in the industry.

Large-scale longlining by China, defined in one SCTB report from China as fishing by vessels over 40 meters length (Song et al. 2004), has also increased worldwide. Prior to 2001 all such longliners were built outside China, but it is believed vessels are now being built in the country. Not much detail is known of the operations of vessels of this size in the WCPO, but it is believed that most are ULT vessels that may have also operated in the Indian, Eastern Pacific or Atlantic Oceans.

Chinese tuna longliners are also based in areas outside the WCPO. For example, a major government-owned enterprise from Guangdong had about 12 to 15 vessels of the sizes usually seen in the Pacific Islands, i.e. 100 to 175 gross tons, based in the Maldives in 2004. Large-scale longliners active in the Atlantic Ocean often call at Las Palmas in the Canary Islands.

In April, 2003 China joined the Organization for the Promotion of Responsible Tuna Fisheries (OPRT), a non-governmental organization based in Japan. OPRT is comprised of tuna longline producers from the major fishing nations, and backed by Japan’s tuna industry to address resource conservation, and market issues linked to illegal, unregulated and unreported (IUU) fishing, and use of flags of convenience (FOC). OPRT has introduced a “positive list” or register of vessels approved for export of sashimi-grade tunas to Japan that covers frozen tuna vessels over 24 meters in length.

According to OPRT, the entire Chinese fleet of large scale distant water tuna longline vessels (103) are now registered with OPRT and have been placed on the positive list (OPRT 2003a). Vessels range from 39 to 84 meters in length, averaging 48 meters. It is believed that there were about 20 to 25 of these vessels active in the WCPO in 2004, fishing predominantly for albacore in high seas areas. Following the pattern of Taiwanese longliners capable of producing both cannery-grade and sashimi tuna, at least some of these vessels would be expected to deliver their catch to canneries in the region, and to transship sashimi-grade tuna at sea to ultra low temperature carrier vessels. Figure 4 shows such a vessel in Suva during early 2004.

![Figure 4 Large Scale Distant Water Chinese Longliner, Suva Harbor February, 2004](image-url)
China, particularly Hong Kong but increasingly other parts of China, is the largest market for shark fins in the world. One therefore might expect a large number of longline ventures targeting sharks in the PICs. There has, however, only been one known Chinese shark longline operation based in the PICs, and that occurred in the Marshall Islands. The enterprise employed three to five Chinese vessels during various stages of its existence. The company operated in the Marshall Islands based from Majuro for about two years, ceasing all operations in 2003. It leased freezer space and a government-owned warehouse and processing area, but finally ceased operations after coming under severe criticism and being fined for illegal fishing close to atolls. Two of the vessels remained in the Marshall Islands and were reportedly sold to local investors who did not plan on continuing fishing for sharks.

In addition to participation in fishing activities, some of the larger state-owned companies that own and operate purse seiners and longliners also have fish carriers that may occasionally call in regional ports such as Majuro to participate in the transshipment of purse seine-caught fish. These vessels are generally between 80 and 95 meters in length, from about 2,000 to 3,100 gross tons.

3 RELEVANT ASPECTS OF CHINA’S GOVERNMENT FISHERIES ADMINISTRATION

The government administration of fisheries in China is carried out at the national level by the Bureau of Fisheries of the Ministry of Agriculture in Beijing. The organization of the Bureau includes departments or affiliated institutions covering a wide range of subjects and responsibilities. Included in these are offices devoted to fishery management and fishing port oversight, law enforcement, the Register of Fishing Vessels, extension centers, and aquaculture. Falling under the Bureau are also the Chinese Academy of Fisheries Sciences (which operates ten research institutes, plus other divisions such as those devoted to disease research, fish and fishery product quality, and the like).
Two more of the Bureau’s divisions of direct relevance to Chinese fishing in the FFA region are the Division of Distant Water Fisheries and the Division of International Cooperation, both of which are organized directly under the Bureau of Fisheries. These are two of a total of ten divisions, including those responsible for planning, polices, conservation, aquaculture, marketing and processing, and so forth (Bureau of Fisheries 2002).

Several associations are also included in the organization of the Bureau of Fisheries, but are believed to operate as quasi-government organizations with Bureau oversight. The most relevant to fishing in the FFA region is the China Fisheries Association.

The China Fisheries Association is the umbrella organization representing participants in all fisheries in China, including international fishing activities. The Association has a Distant Water Fisheries Branch that is recognized as a separate legal entity and is composed of provincial government enterprises, semi-government organizations, scientific research and educational institutions. Some of the purposes stated by the Distant Water Fisheries Branch include:

- Strengthening the self-regulation of the distant water fisheries industry
- Liaising with the non-distant water fishing industry in China
- Developing communications with foreign organizations on a non-governmental basis
- Safeguarding of the legal rights and benefits of the Chinese fisheries industry
- Upgrading of the overall quality of the industry
- Assisting the sustainable development of Chinese distant water fisheries

3.1 Legal Regime for Fisheries

China began modernizing and updating the legal regime to manage fisheries during the 1980s. The current fishing license system to register all fishing vessels was established in 1980. In 1986, the current Fishery Law of People’s Republic of China came into effect, and the first regulations further implementing the Fishery Law were issued (Anon. 2001).

The Fisheries Law consists of 49 articles grouped into six chapters covering the subjects of: general provisions, aquaculture, fishing, increase and protection of fishery resources, legal liability (i.e. penalties) and supplementary provisions.

The law states that no licenses may be traded, leased or transferred by other means, or altered, forged or adulterated. The Bureau of Fisheries grants fishing licenses for large vessels (e.g. large trawlers and purse seiners) as well as for fishing on the high seas and must approve all licenses for those who wish to engage in fishing in the waters under the jurisdiction of other states. The law further requires licensed vessels fishing in such waters to “observe the relevant treaties and agreements signed or acceded to by the People’s Republic of China and the laws of the states concerned”.

Vessels must possess a valid fishing vessel inspection certification and a valid fishing vessel registry certificate, as well as having met other requirements of the Bureau before being eligible for basing overseas.

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14 The head of the Chinese delegation to the PrepCon talks and now vice-Chair of the Western and Central Pacific Fisheries Commission is the Chief of the International Cooperation Division.
15 Information is taken from a recent, but undated, brochure produced by the Distant Water Fisheries Branch.
A precondition to obtaining a fishing vessel registry certificate is possession of a tonnage certificate from the Division of Fishing Vessel Inspection. Of relevance to possible future efforts at capacity measurement, it should be noted that tonnage certificates for fishing vessels in China are issued under the provisions of the International Convention on Tonnage Measurement of Ships, 1969, which went into force in 1982 and standardizes measures of gross and net tonnage while eliminating older measurements of gross registered tonnage.

In June, 2003 new regulations came into force governing Chinese fishing activity on the high seas and in the EEZs of other countries. An unofficial translation containing a summary of the topics covered in those regulations is in Appendix 2.

With the expansion of Chinese tuna fishing around the globe, China has become a member of the Indian Ocean Tuna Commission (IOTC) and the International Commission for the Conservation of Atlantic Tunas (ICCAT). It also participates in the Inter-American Tropical Tuna Commission (IATTC) as a cooperating non-party. In November, 2004 China acceded to the Western and Central Pacific Fisheries Convention and the head of its delegation was selected as vice-Chairman\textsuperscript{17}.

\section*{3.2 Policies Affecting Tuna Fishing in the Pacific Islands}

Government policies in China can affect its tuna fishing activities in several ways. First and most obvious is the adoption of legal and administrative measures that enable the government to assert and maintain a large degree of control over the industry. This includes which Chinese fishing activities and vessels are approved to be based overseas and operate in foreign countries.

Prior to granting permission for an enterprise to operate overseas, the government requires the submission of a business plan and statement of qualifications which must be endorsed by authorities at the local level. An additional requirement is the provision of evidence of financial responsibility to the Chinese government before engaging in overseas activities. Other measures prohibit the registration in China of used fishing vessels from other countries (although apparently there are exceptions when certain sectors are targeted for development, such as in the case of foreign-built vessels in the purse seine and large scale longline fleets).

A second way that the government affects the direction and development of pelagic tuna fishing is by its support of the expansion of such fishing outside China. It is not fully known what such government support entails, but it likely includes subsidies or support for new ship design and/or construction; favorable treatment of requests for expansion; financial assistance to marketing efforts within China; and importantly, direct investment in public companies at the provincial or lower level.

On the surface, this support is based on the long-term need for food security in China and the perception of WCPO tuna resources as being greatly underutilized. China has targeted food processing as a major industry for development, and in order to do so an assurance of raw material supply from domestic producers may be preferable to reliance on purchases from the world market.

Government policy initiatives to increase domestic consumption of tuna appear to have begun at least as early as 2002. Later, statements in the government-controlled press by a

\textsuperscript{17} Upon acceding, China advised that the Convention would apply to the Macau Special Administrative Region, but not the Hong Kong Special Administrative Region unless the Parties were notified otherwise by China in the future. The practical effect of this is unknown, although Hong Kong possesses its own ship registry, which would possibly complicate flag state responsibility under the Convention, among other issues.
senior official in the Bureau of Fisheries indicated that there was an organized campaign to promote tuna in the domestic market\textsuperscript{18}. A recent fisheries products trade show in China featured some traders eager to introduce tuna (mostly sashimi-quality bigeye) to high-end markets in major Chinese cities. These markets target not only international travelers and businessmen visiting China, but also the newly rich and others within China who are becoming more wide-ranging in their food preferences.

Although only in its infancy, this strategy may not be as far-fetched as it seems. The development of domestic Asian markets for sashimi tuna has been successfully undertaken in the past. Prior to the 1980s, South Korea had practically no culinary history of restaurants specializing in tuna sashimi other than those few catering to Japanese tourists. As the country’s economy developed, restaurants specializing in tuna and sashimi were introduced and became popular in the business districts of major cities. The number of these restaurants increased to 500 by 1996, owned primarily by large vertically-integrated Korean companies and supplied by the Korean distant water tuna longline fleet. Combined with other means of marketing, total domestic consumption of sashimi-grade tuna in Korea was estimated to have increased to 13,000 t per annum (Lee 1997).

The Distant Water Fisheries Branch of the China Fisheries Association signed a cooperative agreement with the Federation of Japan Tuna Fisheries Cooperative Associations (Japan Tuna) in April 2003 that was reportedly to “cooperate on developing the Chinese deep sea tuna longline fisheries industry as well as the sashimi tuna market in China” (OPRT 2003b). The Japanese have a vested interest in retaining control over the total supply of sashimi-grade tuna entering their market, and assistance to countries like China in the development of domestic or alternative markets is in their best interest\textsuperscript{19}.

Other impacts on current tuna fisheries have come partially as a result of general political reforms and liberalization of Chinese society which began in the mid-1980s and are associated with the leadership of Deng Xiaoping. Among other things, this era marked a general softening of previous official attitudes in mainland China towards “elitist” foods that were discouraged during the Maoist era. Shark fin soup was categorized as one of these elitist foods and its consumption was not significant outside of Hong Kong. Government measures in 1986 allowed the establishment of shark fin processing operations in southern China, making it possible for Hong Kong to avail itself of cheaper labor for shark fin processing (a labor-intensive process), while at the same time supplying new booming markets in southern China (McCoy and Ishihara 1999).

Although shark fin has always been a minor byproduct of tuna longline fishing, its value was never very significant relative to overall catch value. The expansion of the market for shark fin, coupled with a stagnant or dwindling world supply, has greatly increased the value of shark bycatch in tuna fisheries and has resulted in the creation of a new set of problems for fishery managers\textsuperscript{20}.

\subsection*{3.3 Data Collection and Analysis}

\textsuperscript{18} Peoples’ Daily, January 17, 2003

\textsuperscript{19} For many years, the Japanese tuna industry has undertaken regular consultations with non-Japanese sources of frozen sashimi-grade tuna such as Taiwan and Korea aimed at regulating supply and minimizing disruptions in the Japanese market. The emergence of China as a major producer has now apparently added another dimension to these efforts.

\textsuperscript{20} One of the problems facing fishery managers in several PICs has been the intentional targeting of sharks by Chinese longline vessels which have been licensed to fish for tuna.
The submission of logbooks and provision of data are reportedly a condition of licenses and permission to operate overseas which operators must obtain from the Fisheries Bureau (Zhou et al. 2004).

While the requirement exists for Chinese tuna fishing vessels overseas to send catch data back to China, it apparently is not a requirement for such vessels to submit logsheets. Logsheets containing catch and effort data are said to be required only from vessels fishing on the high seas, i.e. those not licensed by other countries and which have no reporting requirements other than those of China or regional organizations of which China is a member.

The Tuna Fishery Group, one of several technical groups organized around specific topics within the Distant Water Fisheries Branch of the Association, is responsible for collecting and analyzing fish catch and effort data from Chinese tuna fisheries in the Indian, Atlantic and Pacific oceans. According to one member of the Group, China has been collecting detailed data only since 1998, the year China joined both the ICCAT and the IOTC. The Tuna Fishery Group is also the designated source of aggregated data from the WCPO provided to SPC21.

The Group also is responsible for a nascent observer program that has operated on the larger distant water longliners that operate in the Atlantic and Eastern Pacific Oceans. It is interesting that both China and Taiwan assign the data collection and compilation responsibilities to a quasi-governmental organization rather than directly to a government department (in the case of Taiwan, catch and effort data in tuna fisheries are collected by the Overseas Fishery Development Council). The reasons for this are unclear, however close cooperation between government, industry, and fishery scientists working in academic institutions appears to be one of the results of this policy.

Once catch and effort data is collected by the Group, it is collated and if necessary forwarded to the International Cooperation Division of the Bureau of Fisheries to be provided to international organizations of which China is a member or a cooperating party.

4 ORGANIZATION OF THE COMMERCIAL TUNA FISHERIES SECTOR

For the purposes of better understanding Chinese fishing based in the PICs, ownership of the entities concerned is perhaps the highest priority, as it is useful when determining control of vessels, trying to track capital flows, and assessing future possible developments. A distinction here is made between entity or enterprise ownership and vessel ownership; the latter which may be held through several corporations, including those registered in the PICs.

The situation with respect to the ownership of entities can be, however, quite complex. As noted earlier and shown in Appendix 1 there are a multitude of possible business arrangements, and the situation with respect to ownership within these arrangements can be unclear.

Of the many types of enterprise ownership allowed in China, the degree to which state owned enterprises (including provincial enterprises) and private firms comprise the commercial sector in tuna fisheries can be difficult to fully determine. The potential for the creation of different types enterprises through investment in various forms allowed in China can confuse the issue to outsiders not fully conversant with current (and still evolving) Chinese business practices. Added to these problems, it has been pointed out (but not specifically for the fisheries sector) that in China some private firms often “wear a red hat”

21 It is understood that such data are currently provided in units of tonnes only, but do not include numbers of fish as should be the case for longline.
and conceal their true identity in order to gain access to state bank loans at subsidized
interest rates and other government favors (Dorn 2003).

For the purposes of this report, those entities engaged in fishing activities in the PICs are
described in two basic groups: state owned enterprises (including provincial enterprises) and
what is believed to be private ownership. It should be recognized that private shareholding is
allowed in many state owned enterprises, although the degree to which this occurs in the
tuna industry is not known.

It is worth noting that the major SOEs involved in WCPO fisheries, or the parent companies,
are diversified with investments and operations in various sectors, and are not always limited
to primary production, or even the fisheries sector. This can have implications for integration
and cross-funding of projects within enterprises, as might be the case for any conglomerate.

4.1 State Owned Enterprises Overview

Three high profile and well known SOEs in China’s fishing sector are described below as
representative of the enterprises engaged in tuna fishing in the PICs. Two of the three, the
China National Fishery Corporation (CNFC) and the Shanghai Fisheries General
Corporation (Group) have particularly close ties to the State since they are located in two of
the four municipalities directly under State control rather than provincial administration. The
third enterprise, Guangdong Guangyuan Fishery Group Co. Ltd., while still considered a
state enterprise, is under the control of the provincial government in Guangdong.

Of the three enterprises, CNFC is the largest, with a claimed net asset value of 3 billion yuan
(about US$365 million). It is about four times larger than the next largest, Shanghai Fisheries
General Corporation, with 700 million yuan in net assets. Guangdong Guangyuan Fishery
Group Co. Ltd. is believed to be the smallest of the three, with registered capital of 100
million yuan.

4.1.1 China National Fishery Corporation

The main vehicle for promoting and engaging in distant water fisheries, including tuna
fisheries, has been the China National Fishery Corporation. CNFC began in 1984 and sent
out the first fishing fleet outside China in 1985 (to West Africa). It was the first Chinese
company to engage in trawling operations and squid fishing in the North Pacific in 1989.
Fleets of vessels owned or controlled by CNFC or its subsidiaries started arriving in Palau in
1988, and then in the Federated States of Micronesia and the Marshall Islands. CNFC
operates a resident office Fiji located at Lami where many of the country’s longliners are
based.

Information provided by CNFC explains that the corporation falls under the direct
administration of the Central Enterprise Industrialization Committee of the Chinese
Communist Party. The corporation reports that it fully owns 17 enterprises consisting of:

- Four in marine fisheries
- Six industrial enterprises engaged in vessel construction, fishing machinery and
  fishing gear manufacturing
- Five commercial and trading companies
- One harbor construction enterprise
- One general service company (i.e. real estate)
- One holding company
CNFC is reported to be the largest fishing company in the world, with over 65,000 employees. It is also reputedly one of the more successful SOEs in China (Loru 2004). CNFC’s domestic holding and shareholding companies include CNFC Overseas Fisheries Company, and Zhong Yuan Fishery Company, which are both active in the WCPO. In addition, CNFC is the controlling shareholder or shareholder in 10 other fishery companies. Among the 100+ Chinese large scale distant water tuna longline vessels on the OPRT positive list are 20 whose ownership is attributed directly to CNFC.

The President of CNFC is also the president of the Distant Water Fisheries Branch of the China Fisheries Association described earlier.

4.1.2 Shanghai Fisheries General Corporation

A second large SOE engaged in tuna fisheries is the Shanghai Fisheries General Corporation (Group). Based in Shanghai, the company (or a controlling majority of the stock) is owned by the Shanghai municipal government. Promotional material from the corporation indicates that it engages in fishing, food processing, global trade of fish and fishery products, and food processing. It also lists firms it owns or controls which are engaged in pharmaceuticals and biological engineering, aquaculture, machinery works, investment, and hotels. A wholly-owned subsidiary, Shanghai Fisheries Group Aquatic Products Marketing Centre, has begun to produce a wide variety of products from tuna on what appears to be an experimental basis in addition to frozen sashimi blocks and more standard products such as tuna steaks. These newer products include items which are already produced in Japan, such as tuna powder (from bones), tuna candy, and tuna sausage.

Through another subsidiary, Shanghai Deep Sea Fisheries Co. Ltd., the company operates an undetermined number of distant water tuna longline vessels and now has four tuna purse seiners in the WCPO. According to literature obtained from the company, it owns (through other subsidiary fishing companies) six large capacity deep sea factory trawlers, four 1,000 ton capacity squid jigging vessels, and “75 trawlers operating in foreign territorial waters”. Several of the tuna longline vessels based in Fiji are reported to be owned wholly or in part by Shanghai Deep Sea Fisheries Co. Ltd..

4.1.3 Guangdong Guangyuan Fishery Group Co. Ltd.

The third SOE that plays a role in tuna fishing in the PICs is the Guangdong Guangyuan Fishery Group Co. Ltd. Formed in 2003 by the merger of two Guangdong provincially-owned companies, the new firm subsumed the Guangdong Provincial Pelagic Fishery General Company which was among the first enterprises to send vessels to the WCPO in the late 1990s.

The new entity continues to have vessels based in the PICs as well as the Indian Ocean. According to information from the company, it has a wide range of activities based on pelagic fishing, aquaculture, fishing vessel design, fishery commodities and facilities, import and export trading, domestic trading, and aquatic products processing. The company also claims to be the one organization responsible “for organizing and coordinating deep sea fishing for the entire province.”

4.2 Private Ownership

The situation with respect to Chinese private ownership in fishing enterprises in the PICs is not fully understood for all countries covered in the study. The linkages between enterprises and the vessels that they represent, either chartered or owned, are also not fully known for Fiji and not completely clear in FSM and the Marshall Islands.
In 2003 there were about 25 separate enterprises engaged in longline fishing in Fiji, some using both company-owned Fijian registered vessels and chartered vessels of various flags. A quick head count of companies in late 2004 indicated only 7 were involved with Chinese vessels believed to be chartered and licensed to fish in Fiji. It is possible that some Chinese fishing enterprises or individuals have a financial interest in these companies, but up to date information was not available to the authors during the study.

One enterprise previously in Fiji and more recently operating in Tonga is believed to be privately financed.

There is just one Chinese enterprise operating throughout the Micronesian area, Luen Thai Fishing Venture (LTFV). The company provides services in the ports of Majuro, Pohnpei and Palau under separate business arrangements in each port for up to 90 or so Chinese vessels, including 30 that it says is owned by Luen Thai under various subsidiary companies.

The company was formed in 1994 and is a subsidiary of Luen Thai International Group, Ltd., a large Hong Kong-based conglomerate that includes apparel manufacturing, textile and footwear production, insurance, financial services, marketing, air freight, and logistics as well as its fishing operations and marketing.

As a vertically integrated company, LTFV is involved in the supply of bait and fishing gear, fish processing, and marketing as well as fishing. A subsidiary of the parent company, Luen Thai (but not of LTFV) owns Asia Pacific Air, an air freight company with two Boeing 727 air freighters that is engaged in air freighting of fresh sashimi grade tuna to Japan and the USA. The air freight company also supports Luen Thai’s other businesses and has mail contracts to carry mail between Hawaii and the Micronesian region.

LTFV also reports having formed a subsidiary in Fuzhou, China in 1999 to handle recruitment of personnel, as well as the purchase of a tuna processing plant in Davao City, Philippines. The company’s organization chart depicting subsidiary companies is shown in Figure 5.

It can be seen in Figure 5 that the two active fishing companies in the Micronesian region, Marshall Islands Fishing Venture, Inc. (MIFV) and Micronesian Fishing Venture Ltd. (MFV) that operates in Pohnpei, exist under different subsidiaries of the parent company. Marshall Islands Fishing Venture is wholly-owned by LTFV and is registered as a foreign corporation there.
MFV, a wholly foreign-owned company registered in FSM, started out in 1994 as a joint venture composed of LTFV, Zhong Yuan (the CNFC subsidiary) and another provincially owned SOE. It is said that originally LTFV was a minority partner with CNFC as the biggest shareholder through its Zhong Yuan subsidiary. Now, however, it is believed that the company is controlled by LTFV, although CNFC may still be involved.

LTFV also is active in Palau, and operates in close association with a domestic company, Palau International Traders, Inc. (PITI) that has been established there since 1985.
The previous sections of this report have introduced some relevant background to China and its government fisheries administration, as well as important features of China’s commercial tuna fishing sector. The information provides the backdrop to the following general description of Chinese longliners based in the Pacific Islands and discussion of key issues related to their operation.

From the seven vessels that arrived in Palau in 1988 which are believed to have been the first in the FFA region, the number of Chinese longliners based in the PICs rose to 457 in 1994 (see Figure 2). Most, if not all of these vessels were based in Palau, FSM, and the Marshall Islands, and were affiliated with the Taiwanese company, Ting Hong. By 1997 there were also seven Chinese longliners based in Fiji (Gillett and McCoy 1997) with no ties to the Micronesian area operations.

At the outset, there was little understanding by Chinese captains of the extent or distribution of tuna resources in the areas where they operated. In the Micronesian areas in particular, existing port facilities and infrastructure were not able to support such a large a number of vessels. As a result of these and other problems, poor catches and economic performance resulted in steady reductions in the number of vessels until there were just 66 vessels based in the region in 1999 (Song et al. 2004). The number of vessels has since increased significantly during the first years of this decade, primarily due to an increase in the number of vessels based in Fiji.

In addition to the increase in the number of Chinese vessels since 1999, there has also been an increase in the variety of arrangements under which those vessels operate, including those relating to the flag state (i.e. country of registration). For the purposes of this section, unless otherwise specified, references to Chinese tuna longline vessels includes not only those vessels registered (flagged) in China, but also those which are believed to be controlled by Chinese interests but flagged in the PICs, Chinese flagged but chartered to domestic Pacific Island country (PIC) companies, or operated under flags of convenience.

Using that expanded definition, it is estimated that during 2004 there were a total of about 110 Chinese tuna longline vessels locally licensed and based in five Pacific Island countries: Fiji, Marshall Islands, FSM, Tonga, and Palau. Towards the end of 2004, it is believed that these vessels were distributed as shown in Figure 6. The numbers are approximate, as up to date license lists were not always available, and there was movement of vessels in and out of the region as well as between some bases in PICs during the year. Five of the vessels based in Tonga departed back to China in December, 2004 but have been included in Figure 6 since they were present in the country during almost the entire year.

Figure 6 Estimated Distribution of Chinese Longline VesselsLicensed in FFA Member Countries, 2004

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22 Chinese interest in basing vessels in Fiji is not new, having first become apparent in 1992. In that year, a delegation made up of representatives from the Chinese Ministry of Agriculture and one large fishing company from China first visited Fiji and held discussions with government and private businessmen regarding the basing of Chinese longline vessels in the country (T. Adams, pers. comm.).

23 It is worth noting that there were only eight Chinese vessels active due to the imposition of a moratorium on issuing licenses to locally-based foreign fishing vessels during the year. At the time of the moratorium there were reportedly a further 15 Chinese vessel applications pending.
Many distant water fishing nations participating in WCPO tuna fisheries have historical ties to tuna fishing. The presence of historical ties is useful to identify, as they can represent a degree of grass-roots political power that can have an influence on government policies. A good example is Japan, where the tuna fishing industry has for many years been based on cooperatives at the local level in prefectures that have extensive experience in tuna fisheries. The industry has, however, exerted political influence far greater and out of proportion to its size due to its direct ties to the prefectures.

Taiwan likewise has historically had domestic-based tuna fisheries in the WCPO from its southern regions around Kaohsiung which have wielded enough political power at the national level to keep the industry relatively free of government fishery management controls. It has only been in the last decade or so that the government fisheries management structure has been catching up and more forcefully exerting those controls.

The United States’ purse seine fleet in the WCPO is another example. The alliances between the large multi-national canning companies and a relatively small number of family-based owners that have been involved in the industry for several generations played a large role in shaping domestic government policies relating to fishing for tuna.

Even though China has a different political system than the examples mentioned, it is useful to recognize that it has no significant historical ties to tuna fisheries. At least partly as a result, participation in the industry is based on perceptions of opportunities in the fishery which tend to come from the top down, not from the bottom up as has been the case in the other countries mentioned.

That being the case, it is not unusual to see Chinese vessels based in the PICs that come from both northern and southern provinces in China, including those areas where tuna are unknown as a target species for fisheries. An analogy from another region of the world might be that of having Icelandic fishing trawlers re-fitted and showing up in the PICs. The provinces with the greatest numbers of vessels in the region are thought to be Guangdong and Fujian from the south, and Shandong and Liaoning from the north. There are also active vessels from state-owned enterprises based in the central coastal municipality of Shanghai and in the northern municipality of Tianjin. The latter SOEs are believed to currently limit their involvement to Fiji.

The one firm with the greatest overall presence throughout the region is the state-owned enterprise CNFC, with vessels active in Fiji, the Marshall Islands, Palau, and FSM during

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2004. Although a lack of public information on vessel ownership results in an inability to enumerate the exact number, it is estimated that about one-third or more of the vessels in the region are directly owned by CNFC or its subsidiary companies. Roughly a further one-third are owned by other SOEs, and about one-third are held in private ownership as Chinese flagged vessels, or registered under flags of convenience, or registered in the PICs.

The target species and markets for the catch of these vessels vary by location. In the Micronesian area the target catch is bigeye for air transport to fresh sashimi markets. In countries south of the Equator the catch is predominantly albacore for canning. Figure 7 shows the species composition of the total catch for 2003, including that of vessels not based in the PICs.

**Figure 7 Chinese Longliner Catch, 2003**

![Chinese Longliner Catch, 2003](image)

**Source:** SPC (2004)

### 5.1 General Fleet Descriptions

#### 5.1.1 Vessel Specifications and Configuration

Vessels used by China for tuna longlining in the PICs are of wood, steel, or fiberglass reinforced plastic (FRP) construction. The wooden vessels can have hulls made entirely of wood, or ferro-concrete with wooden bulwarks above the water line. In spite of the variety of materials used in hull construction, the vessels are generally of roughly similar design, with the exception of the FRP vessels. The ferro-concrete and wooden vessels shown in Figure 8 at the wharf in Colonia, Yap in the mid-1990s are typical of the design and size of vessels in use in the Micronesian area in 2004.
Chinese FRP vessels consist of those which are purchased second hand and built in Taiwan or Japan, and an increasing number of new FRP vessels built in China based on Taiwanese designs.

In mid-2004, about 60 percent of the Chinese fleet based in Majuro was observed to be steel hulled, while about 25 percent were of ferro-concrete/wood construction, and 15 percent were constructed using FRP. Of the eight boats operating in Tonga last year, five were steel and three were wooden hulled. A vast majority of the vessels based in Fiji are believed to be of steel construction, while those in Pohnpei are mainly of ferro-concrete/wood.

Without a long history in tuna longlining, China has adapted utilitarian designs used in other fisheries in coastal China such as gill netting. The vessel designs of the wood, steel, and ferro-concrete hull vessels are similar in that they appear to be adaptable to a variety of fisheries, with the wheelhouse usually placed aft. Vessel lengths of those licensed to fish in the PICs range from about 24 to 30 meters, with fairly narrow beams and fine entry at the bow. Gross tonnages (gt) of vessels vary depending on design, but for vessels of those lengths, the tonnages are around 100 to 140 gt. The designs of most Chinese vessels are simple, without the freezing capability or the overall carrying capacity of comparable Taiwanese and Japanese longliners. The Chinese vessels are large enough to operate in most weather conditions; however the wooden deck houses and superstructures on many of the vessels do not appear as if they would be able to stand up well in severe weather. These designs appear to enable the attainment of sufficient speed with main engines of relatively small horsepower.

An analysis of 19 vessels licensed in FSM at the end of December 2004 showed that the stated average engine power was 211 kW (282 horsepower) for vessels whose average length was 24 meters. Comparably sized Taiwanese vessels of the CT-4 class would typically utilize main engines from 300 to 375 kW (400 to 500 hp), and main engines in former Japanese pole-and-line vessels purchased second-hand by local FSM operators could have main engines up to 500 or more horsepower.

25 Some vessels are said to be former trawlers, however the smaller engine sizes makes this unlikely. Vessels with trawler sterns are mainly wooden hulled, and the design probably has more to do with simplified vessel construction and the type of wood used than their use as trawlers.
Many vessels are fitted with twin main engines of relatively small horsepower. This feature assists in boat handling, particularly in crowded harbors and during fishing operations. The engine redundancy can provide added safety and enables the vessels to reduce fuel consumption with the use of just one engine during operations when feasible.

Overall construction quality of Chinese fishing vessels based in the PICs is highly variable. According to one expert familiar with their construction they are “from mediocre to very poorly made”. Figure 9 shows a ferro-concrete/wooden vessel that lost its bow to a large wave in the Marshall Islands during 2004. Overall the vessels appear to be adequate, but by no means of top quality. Many of the ferro-concrete hull vessels were built in the early to mid 1990s, and share a major problem in lack of maintenance affecting appearance (at least) that is evident throughout all fleets. The lack of maintenance is so pronounced that several observers have commented that vessels look much older than their stated age, and one fisheries expert remarked, “vessels can look five years old when new, and twenty years old at age five”.

Figure 9  Ferro-Concrete/Wood Longliner Damaged by Waves, 2004

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26 There have been mixed results from people who have purchased new tuna longliners built in China. In one case, steel boats built for interests in FSM are described as working well, while reports from New Caledonia are that four vessels built in China for a local firm had to be completely re-outfitted upon arrival, with entire systems replaced. This increased the initial relatively low per vessel cost to that equal to new construction in places such as Australia.
Past observer reports indicate that when first arriving from China, electronic equipment on most vessels is basic: a global positioning system (GPS) for navigation, high frequency radio for contact with the base and other vessels, and a radio direction finder for locating fishing buoys on the line as well as for navigation. Vessels are mostly fitted with VMS systems upon arrival in the PIC ports.

When Chinese longliners first entered the FFA region, their fishing gear and method of fishing consisted of the traditional "basket" systems. Deck gear on vessels using basket gear is basic, with a hydraulic line hauler the only mechanical piece of equipment utilized. In basket systems, the main line is broken into sections and stored in open plastic drums, with smaller baskets holding the branch lines.

Observation of Chinese longliners in various ports and information from others in late 2004 indicates that a large proportion of vessels based in the PICs are now utilizing monofilament reel systems, including hydraulically operated line setters. All the vessels fishing in Tonga and most in Fiji in 2004 were fitted with longline reels and line setters. About 80 percent of the vessels based in Majuro are likewise utilizing reels and setters. The fleet based in Pohnpei still uses basket gear.

Regardless of the system, monofilament line is used for both the main line and branch lines. There are several major advantages to utilizing monofilament reel systems, including the ability to set more hooks, and to more accurately target specific depths through adjusting the speed of mainline deployment with the speed of the vessel. Detailed descriptions of both systems, the gear employed, and means of operation can be found in Beverly et al. (2003).

A vast majority of the vessels use ice for fish preservation, however some newer purpose-built vessels from China or second hand longliners purchased from Taiwan and Japan are equipped with refrigerated seawater (RSW) systems. Of the 30 vessels based in Majuro in mid 2004, only seven (about 23 percent) were equipped with RSW. According to one person in Fiji familiar with the fleet there, most of the vessels based in Fiji but which are not licensed to fish in Fiji are larger vessels of at least 100 gross tons that carry ice but also have refrigeration. They are thus capable of longer trips than the vessels fishing exclusively in Fiji that just carry ice without refrigeration.
Typical crew size on Chinese longliners based in the PICs is from eight to ten, including captain and engineer. The introduction of monofilament reels (the advantages of which include a reduction in the number of crewmen required) does not seem to have altered crew sizes on Chinese longline vessels based in the PICs. During the last decade, female crew were sometimes seen on vessels based in the Micronesian region. During this decade, however, it is believed that no female crew exist on the vessels in either the Micronesian region or countries in the South Pacific.

5.1.2 Operating Patterns

All vessels based in the Marshall Islands, FSM and Palau target bigeye and other species for the sashimi market\(^{27}\). Except for a very few vessels, most use ice only and according to observer reports, tend to limit trips to two weeks or less. Major factors determining the length of a trip for these ice boats include the rate of deterioration in the catch, bait supplies, and ice supply. Other factors, which are also important at times, are the need to return to port to meet air freight schedules, weather considerations, and the need for repairs or to seek medical attention for the crew.

Once vessels are based in one of the Micronesian countries of Palau, FSM, and the Marshall Islands, they appear to limit fishing activities to that country and perhaps adjacent high seas. Although practical problems precluded the obtaining of all license lists for comparison during this study, it is believed that it is not the practice for vessels to hold licenses concurrently in two or more countries\(^ {28}\).

There actually is little need for vessels to do so over the course of a year. Both FSM and the Marshall Islands permit licenses to be purchased on a quarterly basis at roughly the same price. The annual access fee for Palau costs a little less than the quarterly fees of the other two countries. Vessels also pay an export tax on all fish landed and exported from the country which brings their access system more in line with that of the other two jurisdictions.

The situation in Fiji is somewhat different, where an undetermined number of vessels are based in the country but are not licensed to fish there. It is believed that most vessels that have Fiji access permits tend to fish predominantly in the Fiji Exclusive Economic Zone (EEZ)). As noted above, however, some vessels based in Fiji are able to undertake trips of longer duration, a situation made more practical by the cannery end use of the catch. These vessels, all believed to be over 100 gt in size, are thought to fish in Vanuatu and perhaps high seas areas. Figure 10 shows the distribution of Fiji longline catches in 2003 and includes a significant catch to the west of Fiji in Vanuatu. Indications are that at least some of this Fiji catch is by Chinese owned or controlled vessels that would not show up in the catch depicted in Figure 7 above. Vanuatu reported that between 2001 and 2003 they licensed a total of 42 Chinese and 30 “Fiji domestic and joint ventures with Fiji” vessels, and that most were based in Fiji (Naviti 2004).

Figure 10 Fiji Longline Catch, 2003

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\(^{27}\) Three or four Chinese longliners based in Majuro targeted sharks prior to 2004, but were no longer active at the time of this study.

\(^{28}\) An exception might be when a vessel departs from one jurisdiction prior to its license expiration date for the purpose of basing in a different jurisdiction.
The details of operations of the undetermined number of Chinese longline vessels that may base in Fiji but which do not have access to the Fiji EEZ are not well understood. It is believed that large scale longliners fishing in high seas areas first arrived in the WCPO in significant numbers in 2003 (Song et al. 2004). There are probably on the order of 20 to 30 such vessels, but the exact number is not clear from information publicly available. Their activities are also not fully understood, e.g. if they offload or transship all catch in Fiji or transship a portion on the high seas.

Five of the Chinese vessels that operated from Tonga in 2003 and 2004 reportedly were based earlier in Fiji but are not thought to have retained their Fiji licenses while in Tonga. Although these and a few other vessels that were based in Tonga were reported to have fished in the Tonga EEZ during 2003 and 2004, Figure 7 does not show any catch attributed to the Tonga EEZ in 2003. The reasons for this are not clear.

Several Tongan government officials and others affiliated with the Ministry of Fisheries interviewed in Tonga believed that there was evidence that Chinese longlining in Tonga may have been oriented towards catching sharks rather than tuna. There were reports that skipjack was commonly used for bait rather than more traditional bait species such as mackerel or saury, and there was evidence of the vessels fishing shallow sets and using wire hook traces while targeting the seamounts.

Many of the vessels reportedly stopped fishing when the government began to closely monitor activities to discern if fishing targeting sharks was being practiced. On the other

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29 It should be pointed out that although common sense would seem to dictate that wire traces indicate a desire to retain sharks, the use of such gear is not always synonymous with shark targeting. Some captains and fishing masters in the western Pacific claim that the short stainless wire traces commonly employed on longlines reduce the loss of bigeye by eliminating line cuts from gill plates.

30 Sharks are indeed present around seamounts but so are tuna, particularly in higher latitudes. A recent tagging program conducted by the Pelagic Fisheries Research Program at the University of Hawai’i used two seamounts near Hawai’i as locales for tagging experiments as they provided the greatest concentrations of tuna in the area. Evidence from these locations indicated an ability of a relatively few number of commercial vessels targeting these seamounts to reduce the numbers of sharks present to a point where they did not hamper commercial tuna fishing.
hand, an official of the Chinese company involved indicated that they were harassed by some local officials and not allowed to conduct fishing operations in the manner in which was agreed, i.e. “the rules were changed”. Vessels belonging to this company left Tonga in late 2004.

Vessels deploying to the Micronesian area return to China for drydocking and repair at the conclusion of a two year period linked to their arrangements with local agents and base operators. Drydocking is undertaken in China, as are all major refits and repairs. It is believed that crews are likewise engaged by vessel operators on two year contracts. In Fiji, foreign vessels such as the Chinese are most commonly chartered by domestic firms to operate in the country, and it is not known if the two year period is common there as well.

Vessels operating in the Micronesian area, particularly Pohnpei, have been adversely affected by the downturn in catches during 2004 that has had a domino effect on operations and rippled through the sector. As vessels transfer to other ports where resources are thought to be better or cost structures less expensive under current fishing conditions, the vessels remaining are faced with amplified problems. Economies of scale in such things as bait purchase can be lost, and low catch volumes disrupt the schedules of air freight services. The loss of vessels also compounds raw material supply problems for domestic bycatch and reject tuna processors.

### 5.1.3 Aspects of Operating Cost Structures

Operating costs for fishing vessels can be categorized as variable or fixed. Variable costs include fuel and oil, bait, ice, crew wages, galley/provisions, and other items such as wharfage and unloading. Fixed costs usually include repairs and maintenance, fishing gear maintenance and replacement, insurance, and general overheads and administrative expenses. In fisheries for both the fresh sashimi market as well as the frozen albacore cannery market (except when delivering directly to a cannery), significant additional expenses can be incurred in transportation and marketing although these expenses are not the same for each fishery.

Vessels based in different locations incur different costs based on the type of commercial arrangements under which they operate, the level of access fees assessed, and varying costs of locally-available supplies, freight of imported supplies and equipment, air freight, and local charges and levies. Available information on these and other costs of operation for Chinese longline vessels based in the PICs is fragmentary and does not cover all locations or fleets. Information presented here is admittedly incomplete, sometimes inferred from information available from a variety of sources. The purpose of this section is thus to provide information that could be useful in further examinations of the topic of operating costs for Chinese longline vessels based in specific PICs, rather than to definitively describe the economics of vessel operations.

A general comment is that not only are many Chinese vessels relatively simply constructed and outfitted with minimal electronics and equipment, but also operating costs for Chinese vessels are kept to a minimum wherever possible. For example, there are clearly minimal expenditures for general maintenance (except perhaps machinery maintenance) and for provision of all but the most basic food supplies.

The major operating expense categories in longlining are usually crewing, fuel, and bait. For vessels exporting to sashimi markets by air, other major expenses are incurred in the costs associated with transshipment: the unloading, packing, storage, air freight, and sale of the catch, along with the agency fees associated with the latter.

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31 In Pohnpei, it was reported that the company operating the air freighter required a minimum of 5 t to direct a flight to Pohnpei. Commercial airline space was available only once per week, and limited to 2 t per flight.
Two vessel managers familiar with operations in the Micronesian were asked separately which place among the three major ports (Majuro, Palau, and Pohnpei) was the least expensive for Chinese longliners to operate. Their answers were: Palau was least expensive, and Pohnpei the most expensive port in which to operate in the Micronesian area. It is interesting to note that in the two least expensive ports, agency functions and provisions of supplies are handled by private enterprise, while in Pohnpei government agencies or quasi-government corporations are involved in the sale of packing materials, ice, and cold storage rental for bait and bycatch. In addition quasi-government corporations have exclusive rights to provide offloading and packing services, transport to the airport, loading at the airport, and the purchase of tuna rejects and billfish for all vessels based in Pohnpei. These activities do not include port and harbor fees collected separately by the Port Authority.

Crewing and Crew Remuneration

One factor that has enabled Chinese vessel operators to keep crewing costs under control is the disparity in job opportunities within China and the vast labor pool on which to draw potential crew. As economic conditions in China have changed in the last 15 years, geographic sources for crewing purposes have also changed.

The crew arriving on the first vessels to base in the PIC region during the early 1990s tended to come from the coastal areas of China where vessels originated, i.e., the provinces of Guangdong and Fujian in the southern China, and to a lesser extent Shandong in the north. Beginning in the latter years of the last decade, however, the booming economy in southern China made crew more difficult to employ as jobs in manufacturing and other sectors became available and more attractive. Many vessels from southern China are thus turning to other areas of China as the sources of crews where economic opportunities are fewer and jobs less available. This can be expected to have added some costs to operations in the form of recruitment and repatriation costs in China.

On an individual basis, information from the PICs indicates that the wage levels of Chinese crew appear to be in the range of US$200 to US$300 per month, depending on experience and skill level. This can vary between ports and even within ports between companies. It is believed that some operators have instituted systems common in other fleets where crews receive a majority of their compensation on the basis of catch. In these situations, there is usually some base amount calculated as a percentage of the return from fish sales, plus a bonus if catch amounts exceed a certain level. In most cases, an estimate of the total compensation to crews on Chinese longliners would not be expected to be above around 15 to 20 percent of total sales revenue.

There are many ways in which salaries are paid and bonuses calculated, but in general it can be stated that the vast percentage of wages for Chinese crew are paid in China rather than given to them in the country in which they are based. In FSM, for example, some companies provide a food allowance of $50 to $60 per month, which is meant to cover incidental expenses, while the majority of monthly wages are sent back to China. Other variations include providing a bonus from a portion of shark fin sales as a means of providing crew with expense money.

Shark fin revenue has always played an important part in longline crew salaries worldwide. For example, most if not all distant water longline fleets operating in the WCPO use it as the basis of crew bonuses. As shark fin prices rose during the 1990s, many operators were able to cut back on the level of guaranteed crew salaries. As prices rose during this decade, however, it has become the practice to give crew only a portion of returns from shark fins in the form of bonuses. This is probably the case now with Chinese vessels based in the PICs.
Based on practices in other fleets, a rough estimate is that crew might receive about 10 to 15 percent of their monthly wage as a bonus from shark fin sales.32

An indicator of the importance of shark fin revenue to crew remuneration aboard any particular vessel can be seen by the amount of effort put into catching sharks. A common practice (now prohibited in some jurisdictions) is to attach a “shark line” to each float so that it fishes close to the surface and does not interfere with fishing for the target species. In some cases, the last few sets during poor fishing trips will be exclusively for sharks.

Crew are usually onboard the vessel when it arrives in the intended PIC port for basing, and return to China with the vessel. The usual contractual period of employment is two years and in the Micronesian area this coincides with the vessel’s deployment overseas (plus transit time). In the Micronesian area, there is thus practically no entry or repatriation of crew to vessels already based in a country, except in extreme situations such as illness or serious injury. Less is known about crew movements into and out of Fiji and Tonga.

There does not appear to be any restriction imposed by China to limit crewing to Chinese citizens only. Several people in China remarked that the situation in general (meaning worldwide) was flexible, and while China desired to create jobs for its people, if local conditions required the hiring of some Chinese crew, it would not be prohibited by China. There are, however, practical problems in hiring Pacific Islanders as crew. In some PICs, Chinese operators had tried hiring some local crew but did not think it practical. They cited language and cultural problems aboard, as well as a general perception that Pacific Islanders would not consistently work as hard as Chinese onboard longline vessels. In spite of these real or perceived problems, there are Fijian crew working onboard Chinese longliners based in Fiji where the cost of a Fijian deck crew is estimated to be F$18 per day or about US$300 per month.

In the Micronesian areas, captains are chosen from those who have experience longlining and who have “risen up in the ranks”. Since vessels in the Micronesian areas do not tend to shift to operations in countries to the south, there are now a relatively large number of captains who have gained experience and proficiency in the fishery. Since China does not possess a surplus pool of experienced tuna longline captains with experience in Micronesia, it is in the best interests of companies to foster good practices among captains and to encourage their development.

It is believed that some Korean and Taiwanese captains are employed on Chinese vessels operating in Fiji. One observer remarked that the most productive boats in Fiji were those that employed such expatriates as captains. The exact number or proportion of non-Chinese to Chinese captains is not known. Korean and Taiwanese captains could be expected to earn more than Chinese captains.

The income of captains is not known, but there is some disparity between what some in China perceive as the incomes of captains in the fishery versus what is claimed in the PICs by their companies. In China, several people familiar with the industry indicated that captains could make in the range of US$8,000 to $9,500. Some companies in Micronesia, however, indicated that based on catch, captains could earn from $US10,000 up to $US20,000 per year for a very good captain.

According to Fiji government observer reports, the typical Chinese vessel in Fiji is said to have a Chinese/Taiwanese/Korean captain, Chinese engineer, and Chinese cook. The deck crew is thus a mix of Chinese and Fijian, so that of the total number of people on board a Fiji-based vessel, slightly less than about half are Chinese.

32 McCoy and Ishihara (1999) estimated that crew on Taiwanese distant water longliners received 11 to 17 percent of salary from shark fin, those on Korean longliners from 10 to 13 percent.
Bait

The cost of bait can represent 30 percent or more of variable costs for longliners, with the market price of bait primarily determined by supply and demand on the world market. Various species of mackerel, saury, and scad, are used in the WCPO, but Chinese vessels operating in Micronesia have in the past favored using squid as their primary bait.

Ilex squid from the Falkland Islands area was the main bait used by Chinese longliners in the Micronesian area, but production of Ilex has been very poor in the Southwest Atlantic since 1999 when reported catches peaked at 340,000 t. In 2004, the catch had dropped to just 72,000 t (FAO 2005). Squid has thus been either unavailable or prohibitively high in price for the last few years.

As a result, vessels have had to shift to using other, less expensive bait for longline operations. The choices seem to depend on the relative financial position of the vessels concerned. Chinese in Pohnpei tend to use the cheapest bait they can get, which usually means one of three types of mackerel that is purchased from Taiwan. In December, 2004 such bait was quoted at US$15 per 10 kg case in Pohnpei. It was estimated that the average bait expense per vessel was about $4,000 per month.

Sardines were sometimes imported from Taiwan at very low prices by Chinese vessels operating in Tonga. Supplies were apparently insufficient and inconsistent, however, as one agent reported that the imported bait would be used up quickly, and Chinese vessels would then have to pay the going rate to whoever had bait for sale in Tonga.

Economies of scale in the purchase of bait can also be important, as ports with larger numbers of vessels may benefit from their greater leverage in the market. This only relates to the profits of agents or other middlemen, however, as most vessel operators have neither financial resources nor cold storage space available to enable them to import bait themselves. As a result, they must rely on purchases from local agents that add to their costs.

Fuel

The rising cost of fuel in the Pacific Islands is a concern to all, including operators of vessels in the fishing industry who are getting squeezed between higher costs of operation and stagnant fish prices. On a cost per unit basis for fuel, Chinese longline vessels appear no better or worse off than vessels from other fleets based in the PICs. In early January the fuel prices in Pohnpei and Majuro were about US$1.75 per US gallon (US$.47 per liter).

For vessel operators exporting their catch to Japan, the high cost of fuel has been at least partially offset by the fall in value of the US dollar against the yen.

As previously noted, many Chinese longline vessels are simply constructed and hull forms appear to provide adequate speed with minimal horsepower applied. Vessels operating in the Micronesian area have no refrigeration, and with only one auxiliary engine they are likely using the least fuel for vessels of comparable size for longlining in the PICs.

Fixed Costs: insurance

Insurance cost is an important consideration in many longline fleets. Lenders and investors typically require adequate coverage to protect their interests. There are several types of insurance, some of which may be required by lenders, flag state or local regulation. The three most common are hull and machinery insurance that covers partial or total loss; protection and indemnity (P and I) insurance that covers liability for loss of life, personal injury and property damage; and marine pollution insurance.
There are clauses in current PIC access agreements with Chinese operators addressing insurance requirements. The provisions can range from short statements on the vessel being required to have acceptable evidence of general liability and P and I insurance, to detailed requirements evidencing coverage of all three types of insurance and specifying the minimum coverage.

Some PICs have become stricter with insurance requirements written into access agreements after experiencing accidents or situations where vessels have caused damage and have not been properly insured. These cases typically involve ship groundings that damage the environment, or damage to other vessels or port facilities such as wharves and aids to navigation. Even when strict insurance requirements are written into access agreements, however, compliance with such requirements does not appear to be given very high priority in several jurisdictions where Chinese vessels are based.

In spite of requirements written into access agreements, the degree to which Chinese vessels based in the PICs carry part or all of these insurance covers is not fully understood. This situation is complicated by the fact that access agreements in several countries are signed with the vessel agents or base operators who are not necessarily the owners of all vessels covered under the agreements. As a practical point, it may be difficult for such an agent or operator to require or force vessels operating under the umbrella of their access agreement to procure the required insurance. Further complicating the situation, vessels may move between jurisdictions and be faced with varying degrees of insurance requirements.

The insurance rates in China are not fully known. An assumption is that for vessels belonging to most SOEs, there are minimal insurance costs because of the nature of those enterprises and their abilities to “self-insure” or obtain favorable rates from state-owned insurance companies.

Privately owned vessels may be faced with a different situation. Indications of insurance rates in China applicable to longliners operating in the Pacific Island region are few. One private owner indicated a rate under 2% on an insured vessel value of RMB 2 million.

Given the type(s) of vessel construction and lack of equipment aboard Chinese longliners, the value of a “constructive loss” of a Chinese longliner would tend to be much less than a comparable Taiwanese or Japanese vessel. This would tend to discourage large insurance coverage against total loss and would likely result in lower overall insurance costs for privately-owned Chinese vessels.

Considering the points above, it is likely that overall insurance costs for Chinese vessels are less than comparable vessels in competing Taiwanese and Japanese fleets in the region. Vessels would tend to carry the least amount of liability insurance required, transferring some or all of that liability to vessel agents and base operators under some access agreements. Insurance against total loss would tend to be greater among privately-owned vessels than those owned by SOEs.

5.1.4 Trends in Fishing Technology

The most noticeable technological trend in the Chinese longline fleet based in the PICs is the increased use of hydraulic longline reels and line setters and a corresponding reduction

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33Generally, generally in other insurance markets rates for total loss insurance premiums for hull and machinery have been historically in the 3 to 5 percent range. It is not uncommon for fishing vessels to combine their resources and operate a type of self-insurance where the pool self-insures the first level of claim and seeks insurance on the open market for the remainder. This method can reduce annual premiums in some cases, and may be the only option for relatively high risk fleets such as the high seas albacore trollers.
in the use of the more traditional basket gear as mentioned in Section 5.1.2. The use of longline reels and line setters changes Chinese longline fishing in two ways: vessels equipped with the reels can set an increased number of hooks, and they can set deeper to target bigeye during daytime sets\textsuperscript{34}. Use of the reels in this manner enables fishing throughout the month and is in contrast to vessels using shallow-set basket gear which tend not to fish during the new moon phase.

Another benefit, perhaps not taken into consideration by the Chinese when purchasing a longline reel system, is that setting deeper using longline reels can reduce the opportunity to inadvertently capture sea turtles, as they usually are caught or entangled by hooks in the upper 100 meters of the water column.

Longline reels and attendant equipment and gear are purchased primarily from one fisheries supply house in Honolulu distributing equipment manufactured in the USA; or from SeaMech, a Fiji-based company that manufactures reels there.

There are some longline reels being manufactured in northern China. According to one vessel agent in the one or two instances when Chinese vessels in the Pacific Islands have tried these reels, poor quality of construction was evident, and results were unsatisfactory. Operators have thus opted to use US or Fiji equipment, even though costs for an installed complete system can approach US$40,000 or more depending on type of reel and installation configuration. The US supplier has indicated that over 100 reel systems have been sold or on order for Chinese vessel operators in the Pacific and Indian Oceans.

A second trend is the move away from using wooden and ferro-concrete hulled vessels towards more steel vessels as well as the introduction of FRP as a hull material. The hulls of a majority of the vessels first arriving in the Micronesian area in the 1990s were constructed of ferro-concrete. Today quite a few of such vessels remain in the fishery. Ferro concrete is a relatively uncomplicated and inexpensive technology for building a fishing vessel hull that utilizes two commodities available in abundance in China: steel and cement. Although there are still many ferro-concrete and wooden vessels remaining in China, government policy reportedly now does not allow the building of new vessels of those hull materials and favors steel and FRP in their place.

Indications are that although FRP may be the “material of the future” for some Chinese longliners, vessels are not being manufactured yet in large numbers. The first few vessels to be built for use in the PICs were based on Taiwanese designs and were said to cost in the range of the equivalent of around US$500,000. As of late 2004, there were two built in China in service in the Micronesian region and about six FRP longliners were being built in northern China for the Guangdong Guangyuan Fishery Group Company. Song et al. (2004) mentioned that beginning in 2002 China began to design and construct fiberglass “small scale longliners” with refrigerated seawater systems equipped with monofilament longline reels intended for fishing in the Fiji EEZ.

Of note in the building of FRP vessels is that they tend to follow existing Taiwanese designs (for now), so are built with larger main engines and represent a step up in mechanical complexity and will cost more to operate. As a result, these vessels represent a departure from usual Chinese longline vessel operating economics. One reason for not building large numbers of these vessels may be the need to settle on an appropriate design or designs for use in the PICs or elsewhere that makes economic as well as operational sense.

\textsuperscript{34} The traditional method using basket gear is employed with sets close to the surface in the evening and hauling during daylight hours using squid for bait. The best fishing is usually during a few days before, during and a few days after a full moon, taking advantage of the fact that large bigeye come close to the surface (50 to 100 meters) to feed at night in equatorial waters (Beverly et al. 2003). Some boats have continued to use basket gear and these techniques using mackerel or other bait in place of squid, but catch results have generally been poor.
Costs of tooling for fiberglass construction, e.g. the cost of mold production, are high and costs are usually recouped through production of multiple units. Given the large hand of government in various fisheries SOEs and the restrictions on new vessel construction in general, it is likely (but unsubstantiated) that some form of government assistance has been made available for initial construction of FRP vessels.

5.2 GENERAL BUSINESS STRUCTURE DESCRIPTION

The practical business activities of Chinese vessels in the PICs are circumscribed by two facts. First, there is no one Chinese organization, government or otherwise, that purports to represent all Chinese flag vessels in the PICs on a commercial basis. Second, at present Chinese longline tuna fishing activities are not governed by direct formal government-to-government agreements sometimes described as “head agreements” or “umbrella agreements” under which commercial arrangements are concluded35.

Fishing access agreements, where they are known to exist, are commercial arrangements between locally-based agents and the relevant PIC government authorities.

There are three basic components of the Chinese locally-based longline industry in the PICs:

1. The vessels and fleets that come from China including, in some cases, vessels that Chinese owners have obtained outside of China
2. The locally-based agents, which can be transshipment companies, fish buyers, or suppliers. These agents typically contract with the vessels in China to come to the PICs, and then provide supplies and services, including transshipment and sale of the catch when necessary, and importantly in most cases, access to fishing licenses.
3. The sales agents or companies that broker the sales in foreign markets such as Japan or elsewhere.

Each of the three components can be constituted in a different manner, depending upon the participants, sources of investment, and in some cases host PIC requirements. In some PICs where Chinese vessels are based, all three components are closely linked. This is particularly true in the Micronesian areas, but believed to be less so in Fiji and Tonga.

5.2.1 Vessel Ownership and Control

Vessel ownership is commonly thought of as being vested in the company or individual whose name appears on the vessel’s Certificate of Registration, which indeed does describe the legal owner. In some cases, however, the legal owner listed on vessel documentation papers may not identify the party or parties who stand to benefit financially from the operations of the vessel. In situations where PICs require access fees as a revenue-generating measure, and where those access fees are either negotiated or otherwise set

35 A formal fisheries agreement does exist between China and Papua New Guinea, but is not considered here because Papua New Guinea does not allow domestic-based foreign longlining. There are three separate Memoranda of Understanding, or MOUs relating to cooperation in fisheries between China and Vanuatu, Fiji and FSM. These memoranda are not considered formal treaties and are believed to have been executed between relevant PIC fisheries administrations and China’s Ministry of Agriculture. These documents do not govern foreign fishing, but rather indicate the directions that the parties intend on taking in promoting fishery relations and may be considered precursors to more formal arrangements.
with some consideration given to the owner or operator’s ability to pay, it is useful to identify those persons or entities having a beneficial interest in the vessel\textsuperscript{36}.

In some cases, the beneficial vessel ownership of Chinese longliners based in the Pacific Islands is fairly straightforward, such as when ownership is vested in SOEs like CNFC or its subsidiaries. In other situations, however, identification of beneficial owners may not always be clear from documentation made available to PIC government officials.

This is not to imply that there is always intended deceit on the part of all vessel owners when applying for licenses in the PICs. It is common in the shipping and fishing industries to insulate vessel ownership from operations, and there may be very good additional reasons why ownership through a variety of arrangements, including shell corporations, makes good business sense in China\textsuperscript{37}.

When the vessels in question are not those believed to be owned by SOEs, the situation cannot always be resolved by simply asking operators or agents to identify the beneficial owners. Claims of ownership are not always easy to confirm through available documentation, and there seems to be a predilection for some operators to claim vessels as their own when that may or may not be the case. In one instance during the course of this study, an SOE based in one PIC claimed to own a fleet of vessels based in a different PIC, while the fleet’s general manager insisted they were privately owned.

Further impediments to the determination of beneficial ownership are sometimes the regulations in the PICs themselves. In several countries, locally-based foreign vessels are required to pay periodic access fees, but those same vessels are exempt from fees if they can be shown to be owned or chartered by a locally-registered company, even if that company has no local ownership.

It should be acknowledged that the existing Chinese political system and evolving economic one means that control of vessels activities may not always coincide with ownership, beneficial or otherwise. Section 3 previously introduced the Chinese legal regime for fisheries and described how government policies can affect tuna fisheries. But beyond such a general description it is difficult to pin down exactly the degree of control exerted over vessel operations in the PICs by those in China, either government officials or employees of SOEs\textsuperscript{38}.

Outwardly, vessel management appears generally free to conduct operations in the manner best suited to the situation in the port(s) in which the vessels are based. There is, however, still a shortage of managerial expertise fully conversant with the needs of the newly evolving economic order. Old practices can be difficult to change, and as a result manifestations of central control can still exist. For example, the subject of VMS usage by Chinese vessels appears to be sensitive enough that records relating to VMS systems in place on board some Chinese vessels are maintained in China and not necessarily by company personnel in ports where the vessels are based.

5.2.2 The Role of Local Agents

As used in this discussion, the term agent is used to mean the transshipment companies, fish buyers or suppliers that have some sort of contractual or other arrangement with

\textsuperscript{36} As used here, the term beneficial interest refers to financially benefiting directly from the revenue generated by the vessel.

\textsuperscript{37} One way to assist in determining beneficial interests is through the examination of vessel insurance documents that identify the insured party. Such documentation was not available to the authors during the course of this study.

\textsuperscript{38} It could be argued that government officials and SOE employees are one and the same; however under the new emerging economic structure in China it is more likely that it is the government and SOE policies that are similar or the same and not necessarily the personnel.
Chinese longliners to supply items such as bait, fuel, food, and fishing gear, as well as transshipment of fish to foreign markets and the handling of payments received from sales. Agents can also provide what are normally the more traditional tasks of a ship’s agent in arranging port clearances and dealing with the host government on a variety of subjects. Most such arrangements are concluded in China and form a basis for the Chinese vessels’ deployment and subsequent activities in the PICs.

The agents for the Chinese vessels based in the PIC region may be indigenous companies, foreign-owned domestic companies, or a combination of foreign and indigenous companies. There can be more than one type of agent in a PIC where Chinese vessels are based, such as in FSM where the foreign-owned Micronesian Fishing Venture and the Pohnpei State-owned Pohnpei Fisheries Corporation (PFC) each have represented fleets of Chinese longliners based there. Table 1 lists the major agents in the Micronesian region as of December, 2004. The nationality of all owners in some companies is not completely clear.

Table 1 Local Agents in the Micronesian Region

<table>
<thead>
<tr>
<th>Port</th>
<th>Agent</th>
<th>Business Ownership</th>
<th>Owners’ Nationality</th>
</tr>
</thead>
<tbody>
<tr>
<td>Majuro</td>
<td>MIFV</td>
<td>Wholly owned foreign owned</td>
<td>Hong Kong</td>
</tr>
<tr>
<td>Pohnpei</td>
<td>MFV</td>
<td>Wholly owned foreign owned</td>
<td>Hong Kong</td>
</tr>
<tr>
<td>Pohnpei</td>
<td>PFC</td>
<td>Pohnpei State Government</td>
<td>FSM</td>
</tr>
<tr>
<td>Palau</td>
<td>PITI</td>
<td>Foreign and domestically-owned</td>
<td>Japan (?) and Palau</td>
</tr>
<tr>
<td>Palau</td>
<td>PMIC</td>
<td>Foreign and domestically-owned</td>
<td>Taiwan and Palau</td>
</tr>
</tbody>
</table>

As described in Section 4.2, it is the Hong Kong-based company, LTFV that is most active in the Micronesian area. Its Marshall Islands subsidiary, MIFV, began operations in Majuro in 2001. The company took over and refurbished a defunct cold storage, wharf and offloading area known as the “fish base” from the government of the Marshall Islands for a nominal sum on a long term lease basis, and has now expanded with a small loining plant that produces fresh sashimi loins39.

Pohnpei-based MFV acts as agent for about 8 to 10 Chinese vessels that were contracted to it at the end of 2004. The company is also believed to be controlled by LTFV. Its activities in Pohnpei pre-date MIFV by 7 years, having begun in 1994. The major difference between the two firms, MIFV and MFV (aside from their corporate structure) is that the latter has no physical base or facilities under its control in Pohnpei. As a result, it must use government wharves, and certain services that are required to be provided by government or quasi-government entities.

The other agent in Pohnpei is Pohnpei State’s domestic fish processing company, Pohnpei Fisheries Corporation. It has contracted with Chinese vessels on a fleet basis primarily to obtain raw material supplies for its processing plant. It also provides agency services and sells ice and other supplies to the vessels. PFC has been plagued with cash flow and other problems, and in late 2004 their formerly contracted fleet from Fujian (affiliated with LTFV) left Pohnpei to be based elsewhere.

In Palau there are two agents who represent Chinese vessels. PITI began in 1985 with primarily Japanese investment and also obtained a lease on a cold storage, wharf and offloading area from the government of Palau. There have likely been changes in foreign ownership of shares in the company in the last few years, but details are lacking (PCS 2000). Palau Marine Industries Corporation (PMIC) started in 1988 and is essentially a

39 The loining operations of MIFV should not be confused with the larger loining plant on Majuro which processed frozen tuna of purse seine origin to produce loins for canning. That facility ceased operations in late 2004 and is not connected with MIFV.
Taiwanese-owned company, although there may be Palauan shareholders (PCS 2000). Of the two agents, PITI appears to represent a greater proportion of the Chinese vessels that base in Palau.

Through its subsidiary companies and other arrangements, LTFV has been the major catalyst for bringing Chinese longliners into the Micronesian region since the demise of an earlier Taiwanese enterprise, Ting Hong, in the early 1990s. The financial resources of the parent company have enabled them to recruit vessels from various enterprises in China, believed to be both private and state-owned, to base in PICs where LTFV subsidiaries or affiliates operate. The practice seems to be for LTFV to create a company in China, which then contracts with vessel operators for the vessels to operate at the various bases under the control of other LTFV subsidiary companies. These LTFV subsidiaries in the Micronesian area then contract with the Chinese LTFV companies for the services of the vessels for a set period, usually two years.

In order to entice Chinese vessels to base in the PICs and affiliate with their company, LTFV provides advances to the vessel operators for refitting, repair, and transit expenses to RMI. One of the purposes of LTFV’s China-based companies may be to act as the conduit for these advances. Benefits accrue to both sides in the transaction, as many of the vessels could find it difficult to finance such refitting and transit on their own accounts. In turn, LTFV gets a contracted fleet to which they sell supplies and market the catch. There are other advantages to both sides: the Chinese enterprises are able to move their vessels out of an overcrowded and overfished fishery at home at relatively small initial expense; and opportunities arise for moving funds in different currencies outside of controls in place in China.

Thus, Chinese vessels can arrive in ports in the Micronesian area already owing substantial sums to their agent. This is not a new system, as the Taiwanese company Ting Hong is also believed to have practiced this method of securing vessels to fish in Micronesian areas during the early 1990s.

Once vessels arrive in a particular port, they purchase most of their supplies, including bait, fuel, and other supplies from or through the agent. This can be a lucrative business, as the Chinese vessels must rely on agents for almost every need. The greatest potential for agents to make profits on vessel activities is when they control all aspects of supply and marketing. This is the case in Majuro and Palau, but as noted earlier the situation is different in Pohnpei where several government or quasi-government entities control key aspects of servicing in that port.

In the Micronesian area at least, the advantages that large companies such as Ting Hong (in the past) and LTFV (present) have over indigenous PIC companies in contracting Chinese fleets to operate in a particular PIC port are readily apparent. Without large sums of capital to underwrite outfitting, vessel transit, and perhaps some operational costs, PIC companies are not able to effectively entice fleets into the region and must rely on others that have the resources to do so.

Most Chinese longline vessels active in the Micronesian area utilize ice for fish preservation and are dependent upon reliable supplies. The supply of ice can also be a lucrative business for agents, particularly when their equipment costs have already been amortized. Ice prices tend to follow the cost of the energy that is utilized to produce the commodity, so they have been rising over the last several years from about US$60-US$65 per t to US$90 per t or more depending on the port.

In some situations such as Palau, agents represent both Taiwanese and Chinese vessels. It is desirable from the agents’ perspective to have a mix of the two fleets operating simultaneously. Taiwanese vessels tend to deliver larger catches because their use of RSW can enable longer trips. In Palau, some Taiwanese vessels also have the ability to utilize live bait obtained in the Philippines, which can also increase catch rates. Since Taiwanese
vessels using RSW tend to offload fewer times in port than Chinese vessels, the latter are valuable in contributing to a steadier stream of fish supply. This is beneficial to agents in maintaining markets and supporting regular air freight services. Chinese vessels also represent some opportunities for greater profit by agents through their need to purchase ice for each trip.

One of the most important roles of the agent(s) is in the procurement of fishing licenses. Where fishery access agreements are required, current practice by most PIC governments is to conclude a fishery access agreement with the local agent and require it to assume liability for the activities of vessels contracted to them. In practice, although licenses or permits are issued in the name of individual vessels, it is the agent who is responsible for paying the access fee and ensuring vessel compliance with the agreement.

Another aspect of agent activity in some PICs is their involvement in businesses peripherally related to longlining. In the case of MIFV in the Marshall Islands, they act as ship’s agents for some transhipping purse seiners, and have begun a small loining operation that produces fresh tuna loins for the US and European markets.

The relationships between vessels based in Fiji and Tonga and their representatives or agents are more varied and not as well known as those in the Micronesian area. It appears that there are about ten agents representing the locally-based Chinese longliners in Fiji in 2004, with the firm Hangton Pacific Company Ltd. being the largest in terms of vessels owned or represented. Not all agents in Fiji perform all functions as is the case with LTFV in Micronesia. For example, where there may be around ten companies representing locally-based longliners, only three or four are reportedly involved in packing for export.

Many longline vessels that are not licensed to fish in Fiji waters offload their catch at Suva. Some individuals feel that this is beneficial to Fiji as it generates economic activity, makes additional by-catch available, and assists the process of making Suva a hub for tuna fishing in the Western Pacific. Some of the major participants in the tuna industry, however, feel that such vessels are detrimental as they take up limited dock space, utilize much of the scarce air cargo capacity, employ few Fijians, and may be fishing illegally in Fiji waters.

Chartering of overseas vessels (mainly Chinese) has apparently been instigated to assist entry into longline fishing of individuals who are short of capital. According to Fisheries Department officials, the scheme was also intended to give the local charterers business experience in the tuna industry. It is noted that neither the terms “charter” nor “joint venture” appear in the current tuna management plan. Individuals/companies who are presently chartering vessels strongly defend the scheme, saying it is providing them with real opportunities. Many individuals/companies in the Fiji tuna industry that are not involved in the scheme strongly oppose it, saying that most of the charterers have no real involvement in the business, are not learning the tuna industry, the vessels imported for charter are driving legitimate local vessels out of business, and the money that the charterers are paid is really a charge on the fishing company for operating in Fiji – something that should not accrue to individuals.

The Chinese vessels that arrived in Tonga from Fiji had two different local agents and representatives during their tenure there. The first agent indicated that being legally responsible for the activities of the Chinese vessels with no ability to control those activities was not compatible with his business practices. That agent sold ice and some bait to the Chinese vessels, in addition to being responsible for packing and exporting the fish. The agent also supplied some crew at the commencement of activities, but that did not continue.\(^{40}\) Although the agent was responsible for packing the fish for export, it was the Chinese and not the agent who determined the end markets for the fish. This situation was

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\(^{40}\) The idea was to have 50 percent Tongan deck crew onboard the vessels after the first year, but this requirement was later relaxed.
reported to have caused some problems, due in part to the poor quality of some shipments and to the lack of market knowledge on the part of the Chinese vessel company.

The second agent indicated that the local company was responsible for processing paperwork, obtaining visas, handling communications with government and “assuring the smooth running of the company”. After the departure of most of the vessels in late 2004, the remaining few are now said to be represented by a local company that is a venture between a local Chinese businessman and the local branch of the Salvation Army.

Agents would not be able to effectively conduct business and work with local authorities in the countries in which the vessels are based without a solid management structure and personnel. Most of the base managers in the Micronesian area have a good command of the English language, and have had experience in the region during earlier basing of Chinese vessels in the Micronesian area under Ting Hong in the early 1990s.

In order for their businesses to run smoothly, it would seem desirable for non-indigenous agents (and for that matter all sectors of Chinese longline activity) to foster good relations within the countries in which they operate. Interviews with and information from longline fishery participants other than the Chinese, including vessel operators, agents and some government officials during the course of the study indicated that attitudes held towards the Chinese fishing activities by certain sectors in the host countries vary considerably between the Micronesian area and the South Pacific (Fiji and Tonga).

Whereas there has been active opposition from other vessel operators and agents to Chinese vessels operating in Fiji, those in the Micronesian area have generally accepted their activities as a necessary and even welcomed part of the industry\footnote{It should be noted that there are no other active longline vessels based in Majuro other than those affiliated with MIFV. In Pohnpei, there are two active fleets other than the Chinese.}. In the Marshall Islands and FSM the agents have fostered generally good relations with both the government and private sectors. In Palau, however, other ocean-related businesses such as dive shops, environmental groups, and some politicians have voiced opposition to the basing of any longline vessels in the country, including Chinese. These objections appear to be based mainly on aesthetic reasons linked to the country's efforts at promoting tourism and sport diving, and to earlier publicity given active opposition to the practice of shark finning by the government of Palau.

With the exception of Palau, there are several reasons for the differences between the Micronesian region and the South Pacific, most of which relate to the financial resources and business approach of the agent in the Micronesian area, LTFV. The company has the advantage of hindsight in analyzing some of the problems caused by the activities of the Taiwanese company Ting Hong in the early and mid-1990s that led to its demise. For example, it has not pushed for large numbers of vessels to be based in ports where infrastructure is limited. Importantly, it has come into the region at a time when expectations for success in locally-based fisheries have been lowered considerably by the failure of several domestic private and government controlled fishery ventures, as well as that of Ting Hong in the past.

At least one reason for the positive attitudes in these countries is the reliance on air freight services that are provided as a direct result of the involvement of the agents' parent company in fishing activities. Air freight services provided by the company appear adequate to cater to all current needs. Without the air freight services provided for fish export, current air mail and air freight services to the Marshall Islands and FSM would be seriously curtailed. By comparison, there is greater competition for available air freight capacity in Fiji and the involvement of more vessels in the fishery can have an adverse impact on the export activities of established operations.
Another reason that LTFV and its affiliated companies enjoy relatively good relations with other sectors in FSM and the Marshall Islands relates to their use of government infrastructure such as wharves and freezers. These were built on several islands during the frenzy of government investment that occurred in the 1990s with US funds provided after independence. Chinese vessels are now using the infrastructure and contributing to local economies where prior government-sponsored projects have, in the main, failed to do so. Where such infrastructure still exists and is unutilized, local governments have asked the Chinese to consider basing vessels at those locations.

The financial resources of the agents’ parent company in FSM and the Marshall Islands have contributed to good relations is apparent in other ways as well. Two quasi-government enterprises in Pohnpei indicated that the Chinese agent sometimes provided financial assistance during periods of low cash flow. By contrast, in Tonga, one agent indicated that the Chinese fleet with whom they were dealing were often late with payments and had “no concept of a binding contract”.

In one of the more unusual events to involve the longline industry with a community in the PICs, LTFV was a major sponsor of the 2004 annual sportfishing tournament in Majuro. The fact that the tournament was a success with numerous marlin and other fish caught by teams from the Marshalls, FSM, Kiribati, Hawaii, Guam and the Northern Mariana Islands at a time when there was an active fleet of longliners based in Majuro did nothing to harm the longline industry’s reputation in the Marshall Islands.

Agents can also play a role in the hiring of indigenous fishermen for work aboard Chinese vessels. In Fiji and Tonga the desire for Chinese vessels to employ local crew appears to be one of the justifications for Chinese longliners to base in those two countries. There has been some success in placing Fiji crew onboard Chinese longliners. In Tonga the concept apparently was agreed upon, but for unknown reasons was not implemented.

5.2.3 Marketing Relationships

The two basic markets for the catch of Chinese longliners in the PICs are the cannery market for albacore and the sashimi market for bigeye, yellowfin, and some billfish. Vessels based in the Micronesian area target the sashimi market exclusively, while vessels based in Fiji and Tonga primarily fish for the albacore cannery market, with some bigeye, yellowfin and occasionally billfish sent to sashimi markets. The sashimi markets utilized for marketing the catch of Chinese vessels are primarily:

- Auction markets in Japan
- Direct sales in Japan that bypass the auction system
- Sashimi markets in other countries, primarily the USA and Europe for production from the Micronesian area and Fiji, with small amounts from Fiji being marketed in Australia.

A very small amount overall, perhaps a few tonnes, has been shipped back to China for test marketing. It is believed that all of the fish exported to China is produced by SOE-owned vessels based in Fiji.

Incidental catch of non-tuna species such as some marlin and wahoo in Micronesia are either sold on the local market or frozen for export, mainly to Taiwan. The same may be true for vessels based in Fiji, except that swordfish is more common and may also be exported fresh.

In defining the marketing relationships, it is useful to review the usual marketing system as it applies to most fresh, chilled sashimi that is sent to Japan from the PICs:
• Agents in the exporting country engage sales agents or wholesalers in Japan, or as in the case of LTFV, already have their own company undertaking these tasks.

• The fish are first graded just after offloading to determine if they are suitable for export, and if so to which market they will be sent. This grading information is used along with market intelligence to determine specific destinations. Usually, bigeye are destined for Tokyo with yellowfin going to Nagoya and Osaka.

• Upon arrival in Japan, the fish is forwarded in specific lots by the company agents to wholesalers or auctions, as previously determined.

• When fish is sent to an auction, gross sales amounts are reported back to the agent in the PIC quickly in the form of a marketing report. This information is then provided to the vessel operator or his representative.

• Later, a report reconciling gross sales and all charges against sales is sent back to the agent and the net proceeds from the sale provided to the appropriate vessel accounts.

In Fiji, it is believed that the Chinese vessel operators sell their fish at a set price to one of three or four agents who have packing facilities. Thus the last two steps in the marketing system go only as far as those agents and not to the vessel operators42.

In the Micronesian area, exports are handled by the local agents, most of which are affiliates of LTFV. Chinese vessel operators market their catch through these agents as part of their contractual arrangements. Agents act as brokers and maintain that the fish remain the property of the vessel operators until shipped and sold. LTFV retains its own sales offices in Japan and has marketing arrangements with other companies elsewhere.

In Japan, an undetermined volume of the production from the Micronesian area is sold directly to buyers in the non-auction sector who service outlets such as supermarkets and the "kaiten sushiya", conveyor belt-style sushi restaurants, and other volume outlets. Figure 11 depicts the LTFV supply chain for marketing in Japan.

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42 With an estimated 70 percent of the Fiji longline catch being albacore sold to the local cannery at prices that fluctuate far less than those in sashimi markets, the relatively small number of agents engaged as packers for export compared to the number of agents is perhaps to be expected.
Sashimi markets other than Japan have been expanding in recent years. These markets generally will accept grades slightly below those in Japan, as well as fish that are smaller than the usual 20 to 25 kg size for individual fish required for Japanese markets. Shipments can consist of fish that have been headed, tailed and gutted, or more commonly loined to save on air freight costs.

Information obtained during the study indicates that in some cases operators may be given the option of market destination, and therefore price. This situation is only possible where reliable and frequent air freight is available to multiple destinations, as it is in Majuro and Fiji.

For example, if the agent has a supply arrangement with a particular buyer in, say, California for fish of a certain grade at a certain guaranteed price, the vessel operator may decide to take that price rather than risk the auction in Japan and pay the costs associated with sending fish to Japan. Likewise, direct buyers as indicated in Figure 11 exist in Japan and the agents, acting as brokers, can likely guarantee a price from those sources and also avoid the auction risks.
Several factors must be taken into account by vessel operators when deciding to access the various markets. Distances from markets determine the air freight costs, and air schedules can have an important impact on freshness and therefore price received. Agents have a direct interest in gaining the best price for a product, as their commissions are based on sales value.

Fresh tuna sent to US and European markets are mostly sent as fresh loins to limit air freight costs. This is currently being undertaken only in the Marshall Islands at present, as facilities are available and reasonable air freight connections exist. It is estimated that approximately 60 percent of production from the Marshall Islands is shipped east to Hawaii and the US mainland, while 40 percent goes west to Japan.

Other important considerations in deciding which market to access include currency exchange rates. Higher shipping costs to a particular destination may be partially or fully offset by favorable exchange rates. For example, vessels based in Majuro with expenses in US dollars might find it more lucrative to send fish to Japan when exchange rates are in the 102-105 (yen to dollar) range, than when exchange rates are at 120 or 130 yen per dollar.

Marketing alternatives to the Japanese auction system for sashimi-grade fish are thus important to vessel owners and agents alike. The use of such alternatives can, however, result in problems for PIC government officials and fishery managers when attempting to estimate the landed value of the production of a given fleet or vessel. Among other things, this may have an adverse impact on the ability to gauge the appropriate level of access fees to charge foreign vessels.

### 5.2.4 Indications of Subsidies to Chinese Vessels

An important consideration in the management of fishery resources is the level of government subsidies and supports that may be assisting the industry or underlying its financial structure.

The general subject of fishery subsidies has been the focus of much discussion and activities in fisheries management worldwide, including actions aimed at limiting or reducing fishing capacity. The World Bank (2004) has shown that subsidies to the fisheries sector have been an important driving force in creating current overcapacity and subsequently overfishing. The United Nations Environment Programme has identified subsidies to capital costs or operating costs as the most harmful types of subsidies, contributing directly to excess fishing capacity or effort (UNEP 2004).

Subsidies can also have detrimental effects on international trade. The broader issues contained in the subject of subsidies to fisheries have been taken up by the WTO and have generated a large body of literature and extensive debate on the subject that is still ongoing on various levels. Specifically, the subject of fishery subsidies is an integral part of the ongoing Doha Round of WTO negotiations.

The WTO Agreement on Subsidies and Countervailing Measures contains a definition of subsidy as “a financial contribution by government or an agency designated by government that confers a benefit”. In this context, a financial contribution can be:

- direct or potential direct transfers of funds or liabilities (i.e., loan guarantees);
- provision of goods or services, other than general infrastructure;
- purchase of goods;
- foregone government revenue (i.e., tax credits);
- payments to a funding mechanism that carries out any of these functions; and
- any form of income or price support (APEC 2000).
Benefit refers to an advantage resulting from the “financial contribution”. For example, government purchase of goods or services at a commercial rate is a “financial contribution” but does not confer a “benefit” because the purchase is made at a commercial rate— in this case, there is no subsidy. However, government purchase of goods or services at better than commercial rates is a “financial contribution” that confers a “benefit” resulting in a subsidy, because the recipient receives more than it would have received through a commercial transaction (APEC 2000).

The subject of subsidies to Chinese vessels is a major topic amongst some in the industry in the PICs and there have been major concerns expressed from some domestic vessel operators or their associations. In one case, there have been concerns voiced that China is “rapidly building and operating highly subsidized tuna fleets that are flooding the region with below cost operations, undermining regional prices for non-subsidized fleets”.

As the list above implies, there can be a multitude of subsidies for fisheries in a given country. For the purposes of this study, the search for the existence and extent of subsidies was restricted to those related to vessel construction, subsidies to operating costs, and subsidies for access fees. It is felt that the first two are those that could give the most significant advantage to Chinese over domestic PIC operators, while the third should be of concern to fishery managers and others in government.

Very little direct evidence was found for specific subsidies in the three areas of vessel construction, operating costs, and access fees. What little information was available on the overall subject was often couched in highly euphemistic terms. For example, a publication of the Shanghai Fisheries General Corporation and Shanghai Deep Sea fisheries Company, Ltd. states

Recently, thanks to the governmental and municipal policies on supporting deep sea fishing, Shanghai Deep Sea Fisheries Co. Ltd. is developing some tuna fishing projects, including both super-freezing tuna longliner and seawater-cooling tuna vessel as well as tuna purse seiner for fishing in different areas and various species.

Likewise, a publication of the Guangdong Guangyuan Fishery Group Company, Ltd. states that the company

...enjoys all the policy and treatments the national government gives to the pelagic fishery companies

When company officials from both firms were queried as to the meaning of receiving the support of “policies” and “treatments”, neither was specific but inferred the references were to financial assistance related to the acquisition of new vessels.

A discussion paper provided to PIC fishery officials by a provincial tuna fishing enterprise during talks on fishery cooperation recently noted that the central government is encouraging the opening of a market for tuna in China and “…provides favorable policies and encouraging measures to the production and processing of tuna.”

Decentralization and the rise of the non-state owned sector are important themes to keep in mind in the discussion of subsidies. A former manager of an SOE fishing fleet during the 1990s in Micronesia explained that at that time there were “special rights granted to companies, mostly government companies”. He said that in general, “the companies did not have to worry about repaying loans because the banks were all owned by the government and companies were also all owned by the government. As a result, the banks supported the companies, even if they didn’t make money”.

It is interesting to note that a review undertaken for APEC in 2000 did not find much detail on subsidy programs related to increasing fishery production in several provinces where vessels active in the PICs originate. Fujian Province was noted to have a “marine fishery development fund to support the marine fishery industry” which was explained as providing that “the needed foreign exchanges and supporting funds for marine fisheries development
projects will be arranged as priority”. No amounts of money or details, however, were specified (APEC 2000). From the sparse information available, it could not be determined if Fujian Province’s program of certain tax benefits to foreign investors in fisheries noted above in section 1.1.3 applied to foreign-based tuna fisheries.

Vessel Construction

It has been pointed out by APEC (2000) that shipbuilding is among the most heavily subsidized sectors in the world. Major fishing powers such as Japan, Norway, and Spain have had shipbuilding subsidies in the past that have led in part to their becoming major fishing nations. The pendulum has now swung the other way, and many of the industrialized nations that subsidized vessel construction have now instituted fleet reduction and buyback programs. China does not, however, appear to be fully in that camp since the fleet reduction program described earlier in section 1.2 applies only to domestic fisheries. There is some (unconfirmed) evidence that the exemption for vessels operating overseas may be acting as incentive for owners to move their vessels into overseas fisheries.

In practice, the vessel subsidies linked to construction can come in several forms: tax benefits for shipyards, loan guarantees or grants for construction, design, or machinery purchase. Evidence collected during the study indicates some subsidy for the introduction of new designs and new types of vessels, particularly fiberglass vessels used for longlining, but the extent of such subsidies is unknown\(^{43}\). There was no indication that new fishing gear or techniques attract any subsidy. Outwardly at least, it appears that vessel operators are responsible for bearing the cost of adopting new techniques and gear such as is the case with hydraulic longline reels and line setters.

Operating Costs

No direct evidence one way or the other was found regarding the existence of subsidies for operating costs of Chinese longliners based in the PICs. There are, however, some indications of an absence of such subsidies, or at least subsidies significant enough to enable vessels to overcome financial adversity.

- The fluctuation in the number of Chinese longline vessels operating in the region, particularly the decline after 1995 when it was reported that only about 50 percent of Chinese longliners operating in the PICs were profitable (JETRO 1995) would appear to argue against subsidies (or insufficient subsidies) for operating costs during that period at least.

- The departure in 2004 of fleets from Pohnpei in FSM due to poor catches for an extended period would seem to indicate some degree of reliance upon fishery revenue to fund fishing operations.

- The departure of the fleet from Tonga in 2004 where the remarks of another operator there indicated they were not making any money.

In comparison, an example of subsidies to fishing in the region is the operation of longliners in FSM owned and operated by the government’s National Fisheries Corporation during the early 1990s. At the time, those vessels took advantage of government subsidies by being provided fuel at the government (i.e. no tax) price.

Access Fees

\(^{43}\) An employee of one China-based company mentioned that to encourage use of FRP, the Chinese government had provided grants through the Ministry of Agriculture.
Access fees that are paid by the government are clearly a subsidy, as they reduce costs for the vessel operator. An example of access fee subsidies is the “goods and services” payments that are made with some Japanese fishery access agreements in the region. These payments are partially funded indirectly by the Japanese government and have as their main purpose the reduction of the industry's license cost.

It is interesting to note that during the mid-1990s when many Chinese vessels were involved in longlining in the Micronesian area, it was reported that fleets "except for paying the license fees, handled the finance by itself" (JETRO 1995). The context of the statement does not clarify whether in fact there was a subsidy from government to pay license fees or not. Very little information has come to light since then on whether access or license fees are somehow subsidized by the Chinese government.

There may be significant exceptions to the foregoing, particularly with regard to SOEs. A person familiar with the industry indicated that the Chinese Ministry of Agriculture provides grants each year to large fishing companies (i.e. SOEs) that are to be used for “the development of new fishing areas”. If applicable to the FFA region, this would be considered a subsidy and could have an impact on their ability remain in a particular location under adverse economic conditions.

It has also been acknowledged by a Chinese fleet manager that while it can be difficult for some Chinese companies whose boats are based in the PICs to survive economically and be able to profit and repay loans, the situation is different for CNFC (and by implication other large SOEs) because it is owned by the government.

5.3 FACTORS IN CHINA CONTRIBUTING TO THE ATTRACTIVENESS OF THE FFA REGION TO LONGLINE FISHING

Previous subsections in this chapter have described the Chinese longline fleets based in the PICs and reviewed important aspects of the business structure that supports their presence there. The following discussion notes some of the important factors in China that have contributed to attracting or encouraging Chinese vessel operators (and in some cases, agents) to base vessels in FFA member countries.

It should first be noted that there do not seem to be major factors in China that might discourage vessel operators from basing their vessels in the FFA region. On the governmental level, once companies have satisfied the requirements for conducting fishery business overseas and have obtained the necessary documents for vessels intending to operate outside of China, there do not seem to be any impediments for moving vessels to the FFA region.

Diplomatic recognition of Taiwan by some PICs has meant that Chinese flag vessels currently operate in countries where there is no Chinese diplomatic representation. To date, however, this has not been an impediment to vessel operators sending their fleets to these locations.

The serious problems associated with fishery resource depletion in China and the government’s responses in reducing capacity and closing certain domestic waters to fishing have been explained earlier in section 1.2. Reductions in the number of vessels allowed to

44 The payments by the US government under the Multi-Lateral Tuna Treaty could also be considered a subsidy of access fees, since access would not be granted on the basis of the industry payment alone. The US has, however, taken great pains to characterize the payments as foreign aid and this has generally been accepted in and outside the region.

45 Palau, Marshall Islands, Tuvalu, Kiribati and Solomon Islands currently have diplomatic relations with Taiwan. No Chinese vessels are believed to be based in Tuvalu, Kiribati, or Solomon Islands.
operate, restrictions on the building of new vessels, and specific closed areas during certain times of the year all contribute to the significant reduction of fishing opportunities for domestic vessel operators in China.

In addition to the impacts from the management measures described, China has been faced with shrinking opportunities for its domestic fleet due to the conclusion or renewal of fishery delimitation and management agreements with its neighbors in both the north and south. In the north, Japan and the Republic of Korea share several fish stocks exploited by Chinese offshore fleets. The agreement with Korea will reduce the number of Chinese vessels allowed to fish in Korean waters, and in the south an agreement on fisheries cooperation with Vietnam in the Gulf of Tonkin which went into effect during 2004 will also likely reduce Chinese fishing activities in that area.

Although this report focuses mainly on the commercial aspects of Chinese tuna longline fishing based in the PICs, there are also important political considerations that must be taken into account. Global shifts in political power that have taken place since the end of the Cold War have resulted in China’s emergence as a world superpower with evolving strategic interests in Oceania.

China’s development of its sphere of influence is evident in many areas: diplomatic recognition exchanged with many PICs, foreign aid flows that provide funds for construction of highly visible structures such as national sports facilities, conclusions of agreements or MOUs on fishery and other cooperation, and most recently the commitment to finance construction of the headquarters of the new Western and Central Pacific Fisheries Commission in Pohnpei.

In several FFA countries, the basing of tuna vessels can also be interpreted as an important aspect of the relations with PICs evolving from China’s aspirations in the region. No sources were found that describe if or how China’s tuna fishing activities are directly linked to foreign policy, however it is believed that the Chinese government’s approach is to focus on government-to-government fisheries agreements as one of the objectives towards furthering overall ties with the PICs.

In order to maintain this approach, China must demonstrate a desire to utilize the region’s tuna resources under PIC control. This can be accomplished by several means, including having representative offices such as the one opened recently by CNFC in Fiji, or by ensuring that at least some Chinese vessels remain in the fishery, even if only as “place holders” for the future.

China assisted in establishment of a Pacific Forum Trade Office in Beijing in 2002 to promote economic and trade cooperation and investment between the PICs and China. The office focuses on many aspects of trade and trade relations between China and the PICs. In fisheries, assistance from this office goes both ways, with information and help extended to both potential Chinese or PIC partners or participants.

The value of the longline fishery to China in furthering foreign policy goals is mainly in bilateral situations. One of the vexing problems for China’s government in pursuing this strategy, however, is the continued recognition of Taiwan by four FFA member countries. As noted above, recognition of Taiwan has not prohibited vessels from being based in two of these countries, Marshall Islands and Palau.

On a regional basis, the most practical vehicle for furthering China’s policy objectives through fishery-related ties may be the purse seine industry. Success in purse seining requires access to multiple zones, and China has already announced its willingness to pursue a multi-lateral arrangement similar to that in place with the USA.

46 This would appear most feasible for SOEs directly under central government control.
The basing of Chinese longline fishing vessels in the PICs has created opportunities in commerce and local business, as well as increased revenue for governments of the PICs. It is recognized that the basing of Chinese vessels in some PIC ports has not been without controversy, and that there are costs to the PICs associated with basing of vessels and subsequent fishing activities.

In most cases, the PICs have been able to extract direct revenue by assessing fishery access fees and through some fuel tax and other government charges. Local businesses have benefited to varying degrees by supplying fuel, services and provisions, among others. Indirect benefits have also been realized through wages paid to Pacific Islanders, and through local spending by foreign vessel crews and workers attached to the enterprises.

In order to provide a context for seeking to capitalize further on available opportunities, this section first highlights factors that contribute or detract from making the FFA region attractive to Chinese vessel operators and/or agents for the basing of vessels in the PICs.

This is followed by a case study of one of the PICs that indicates the levels of expenditures on both government and private sector goods and services by the Chinese fleet. The case study does not identify the country concerned, but expenditure figures are believed to be accurate. The case study should not be considered conclusive or completely applicable to all PIC locations. It does, however, provide a point of reference by which to gauge locally-based Chinese longline fishing activities in the region.

A subsequent discussion looks at alternative sources of direct revenue. A final section looks at other factors that should be taken into consideration when approaching the subject of increasing benefits.

6.1 Factors Contributing to the Attractiveness of the Region

The following aspects of business and government relations in the PICs related to Chinese longline fishing are believed to contribute to the attractiveness of the FFA region for Chinese vessel owners, operators and/or agents.

**Licenses for Fishery Access:** Fishing licenses are available on a short-term basis of less than one year in FSM and the Marshall Islands. Government fishery managers in FSM indicated that Chinese vessels generally opt to purchase licenses on a short-term basis, even though costs are higher when figured on an annual basis and it appears most vessels have remained based in the country for at least a one-year period.

**Government-to-Government Relationships with China:** Two levels of relationship relevant to fisheries exist in those PICs that have diplomatic relations with China. On the first level, diplomatic recognition and the exchange of ambassadors provides some level of comfort to Chinese vessel operators that assistance may be available from their own government if required. An elevated level of relationship in terms of potential benefits to both sides can exist when agreements specific to fisheries are signed. To date these consist of memoranda of understanding on cooperation in fisheries. Fiji and FSM are the two Pacific Island governments where Chinese vessels are based that have concluded separate MOUs on fishery cooperation with China. There is no empirical evidence to indicate the MOUs result in different or favored treatment of Chinese vessels based in these countries. The MOUs can, however, provide a basis for foreign aid directed at fishery-related projects such as infrastructure development and joint ventures involving SOEs from China. MOUs can also indicate the manner in which fishing licenses might be made available and/or specify the
number or types of such licenses, thus binding the PIC to some future level of performance in these areas.

**Suitable Fishery Infrastructure:** The existence of suitable fishery infrastructure, including wharves, adequate ice production, repair facilities, and proximity and access to international airports are all important for vessels desiring to base in the PICs. In the Marshall Islands and Palau, the ability to lease government-owned infrastructure on a long-term basis or conclude arrangements with those enterprises holding current leases has proved beneficial to agents representing Chinese vessels in those countries. In Fiji, the availability of slipways, machine shops, and general repair and supply facilities can support larger and more sophisticated vessels than those that are based in the Micronesian area.

**Foreign Investment Climate:** A generally open policy towards foreign investment in some PICs has enabled Chinese operators and agents to set up local companies or conduct business through existing domestic enterprises. It is believed there are no major restrictions on the repatriation of profits in most countries where Chinese vessels are based. Lax government attitudes towards certain aspects of business and trade can be attractive to any foreign operator, and the Chinese would be no exception. For example, in one PIC all fish export shipments require a fish export license. It is reported, however, that there is no legal, quality control, or statistical reason for doing so. The shipments are not inspected, nor are the weights used for annual compilations. In another PIC, it was reported that there was no adverse consequence to the lack of implementation of requirements related to the hiring of local crew.

**Conduits to Markets:** Chinese vessel operators do not currently have their own marketing channels to sashimi markets, and have relied on agents, either domestic or foreign domestic-based, to provide access to markets. Air freight services from several carriers result in options for air freight in Palau and Fiji. The existence of a tuna cannery/loining facility in Fiji is attractive in that such a local market for albacore (the major portion of the catch in that region) minimizes freight costs.

**Currency Use and Banking Systems:** As discussed earlier in section 1, certain aspects of Chinese business activity benefit from situations where banking systems are flexible and operate without currency restrictions. The use of the US currency in the Micronesian area can provide some advantages to operators, particularly in times when that currency is weak in relation to those used in overseas markets.

**Perceptions of Business Competence:** A delicate subject that is not often discussed is the perception of Chinese businessmen of the capabilities of business communities and governments engaged in business in the PICs. Chinese businesses, particularly SOEs, have had their own share of poor business performance due to poor management and are well-attuned to incompetence on the part of government officials or others in business dealings. Such incompetence or lack of experience on the part of the PIC party can be recognized as a business opportunity. The Chinese perceptions of the abilities of Pacific Islanders in business are therefore important in their approach to the region.

From the very few interviews where Chinese have been willing to discuss the subject, the views expressed by those interviewed indicated they did not hold a very high opinion of the competence of their “partners” or government officials with whom they interacted in business matters. In one example, a government official signed a management agreement and turned over important assets to a Chinese enterprise to manage. The enterprise controlled all aspects of the arrangement, including maintaining the books. Inevitably the government incurred debts to the manager that required relinquishing the asset. In a different country, the PIC managers were described as “very inexperienced” and their approach to chartering

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47 Note that the perceptions may not apply to Pacific Islanders as a group.
such that it was as if the Chinese vessels chartered the domestic company, rather than the other way around.

**Western and Central Pacific Fisheries Commission:** China has endeavored to become a participant in regional fisheries bodies worldwide. Their success in achieving membership (and currently Vice-chair) in the WCPFC provides their vessels with guarantees of some level of access to resources governed by the Commission in the future. The fact that the Commission headquarters are to be built in one of the FFA member countries with financial assistance from China further solidifies their position in this new fisheries management regime.\(^{48}\)

### 6.2 Factors Detracting from the Attractiveness of the Region

Observations of Chinese fishing activities based in the PICs and discussions with some operators and agents have highlighted some elements of the business and regulatory environment that detract from the region’s attractiveness from the perspective of Chinese vessel owners, operators and/or agents.

**Offloading, Packing, and Shipping Services:** Lack of control by Chinese operators or agents over services relating to offloading and export of the catch can result in higher costs to Chinese vessels. As described in section 5.3.1, this problem is especially acute in Pohnpei where several government or quasi-government entities have a monopoly on offloading, cold storage, ice supply, packing for export, and transportation to the airport for the catch of longline vessels. Also in the Micronesian area, Chinese are discouraged from using one location as a potential base because of the local prohibition against working on Sundays.

**Government Regulations and Requirements:** One PIC, Tonga, has instituted a moratorium on any further locally-based foreign fishing vessel licenses. A major concern in FSM is the requirement for vessels to receive port clearances for each fishing trip while based in the country. This results in higher operating costs due to added port fees, overtime payments for government officials, and delays in departure due to the absence of the appropriate officials. The restrictions on catching sharks or banning of the practice of shark finning in several PICs can be seen as a negative factor by some Chinese operators, as the restrictions can have an adverse impact on profitability. Increased scrutiny of vessels for compliance with survey and/or safety requirements can result in added costs that Chinese vessels would otherwise not incur. For example, there is some indication from Fiji that there has been greater use of slipways in Suva by Chinese vessels because of enforcement of survey requirements for vessels operating in the country. It was felt by the Chinese operator in one country that it was unfair for the PIC to change government policies after the access arrangements had been in place, and this resulted in financial loss to the company.

**Opposition to Longline Activities from non-Government Sources:** Opposition to longlining from local environmental and tourist groups has been most prevalent in Palau, but the subject has been receiving increased publicity in several other PICs from environmental groups outside the region concerned about bycatch issues and the practice of shark finning. In one PIC, opposition to granting of fishing licenses to a large number of Chinese vessels was strongest from some domestic-based fishermen.

**Crew Travel:** Crews aboard Chinese vessels typically arrive from China with the vessel upon its deployment in the PICs. The high costs involved in air travel to and from the region

\(^{48}\)Their strategy has been to appear to support the rights of developing countries. This was the case in the negotiations leading up to the enactment of the Convention, and also at WTO where they have introduced measures to give special consideration to the rights of developing countries.
are a deterrent to exchanging crews by that method. In addition, there are no direct air links between the PICs and China. For some locations this presents a serious logistical hurdle in getting even some company officials to and from some PICs. In the Micronesian region travel by the most direct route to FSM and the Marshall Islands transits through the US, and this can cause problems for Chinese companies because of the difficulty in obtaining a US visa.

**VMS Requirements:** Given the lack of extensive electronics in the wheelhouses of many Chinese longliners, VMS can be seen as an expensive piece of equipment for operators to procure. Some Chinese operators believe that the VMS requirements are too strict, that they should not be blamed for technological problems, and that government and FFA personnel do not have a realistic understanding of how they are harmed financially by such problems. In one case in Palau an entire fleet was forced to stay in port because of a problem they claimed was not caused by their vessels, but by the FFA system. An operator in a different country said that many times the vessels have electrical problems and this may cause some VMS transmission problems. He also felt that “honest human error” in turning off the VMS system should not be treated harshly.

### 6.3 Local Expenditure Case Study

Expenditures covering Chinese longline vessels in a PIC are presented here to provide an indication of the relative size of major expense categories. The listing of expenditures have been categorized as (1) payments to the government, including national, and municipal or other governmental structures where applicable, and (2) payments to the private sector, including workers' salaries for PIC nationals.

It is estimated that local expenditures account for about $4,381,000 injected into the local economy. From the following two subsections, it can be seen that the government obtains significant amounts of revenue: $706,000 or about 16% of the nearly $4.4 million total expended. Costs incurred by government in providing some services would offset that revenue. Fuel purchases are the single largest expenditure item at nearly $2.6 million, and represent about 59% of the total expenditures.

#### 6.3.1 Direct Government Revenue in the Case Study

Table 2 lists the amounts remitted to the government during 2004 in the form of fees and other government charges. It can be seen that about 82 percent of the total direct government revenue comes from access fees and port charges.

The usual means by which the government would attempt to increase direct revenue would be by increases to these fees and taxes, and/or by increasing the number of fishing licenses issued.

<table>
<thead>
<tr>
<th>Item</th>
<th>Amount</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>62</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### 6.3.2 Payments to the Private Sector in the Case Study

Private sector payments are highly skewed towards fuel purchases, with 70 percent of expenditures in this category. Although the amount is large in comparison with other categories, retained benefits in the PICs from the sale of imported fuel where refineries do not exist have been shown to be small (see for example Hamnett and Pintz 1996).

Local salaries are those paid to nationals of the host country. Much of this employment is part-time, involved in packing fish for export and related activities.

Other expenditures that are made in the private sector relate to crew needs. Crew food is estimated at $60 per crewman per month, and the provision of “living items” to crew at $30 per person per month. Captain’s “entertainment” is estimated at $100 per month per person, and crew “entertainment” at $70 per crewman per month.

Local salaries represent just 4.8 percent of payments to the private sector. Office staff is primarily Chinese, with only two non-Chinese employed.

All vessels currently return to China after two years’ deployment overseas. There is little use of local repair facilities. There are strong reasons for the operators to retain the two year period, due in part to transportation patterns and crew contracts.

There appear to be few opportunities to increase benefits to the private sector, other than an increase in the number of vessels based in the country that might provide proportional increases in all or most expense categories.

### Table 3 Payments to the Private Sector

<table>
<thead>
<tr>
<th>Item</th>
<th>Amount (unit = USD$)</th>
<th>Percentage of Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fuel</td>
<td>2,579,135</td>
<td>70.2</td>
</tr>
<tr>
<td>Gasoline</td>
<td>8,159</td>
<td>.2</td>
</tr>
</tbody>
</table>
### 6.4 Alternative Sources of Direct Revenue

The foregoing case study has noted the usual means by which the government might attempt to increase its direct revenue would be by increasing license fees and taxes, and/or by increasing the number of licenses. A common procedure for computation of access fees might be to estimate the overall value of the catch and assess a per vessel fee based on a percentage of catch value, usually but not always, 5 percent. This figure is often discounted in consideration of the economic benefits gained by the PIC in the basing of vessels in its port(s).

The structure of fishery access agreements and licensing arrangements for domestically-based foreign vessels typically places responsibility for the payment of access fees and adherence to license conditions on the local agent or representative. This has been the practice in the Micronesian region for at least 10 or more years; and is consistent with aspects of rights-based management schemes where it has been pointed out that it is easier to manage local companies than individual foreign vessels. This is particularly so when there is no one association or organization to collectively represent all vessels desiring fishery access licenses.

The roles of local agents in support of Chinese companies and their vessels are generally known to and understood by fishery managers in the relevant PICs. As described earlier in section 5.2, they provide services and supplies, access to markets, and can act as the conduit for fishing licenses. Less may be known, however, of the actual business relationships between the agents and vessels or their beneficial owners, or between the agents and markets overseas. This is due in part to the nature of the industry and, in some cases the structure of fishery access agreements or licensing arrangements.

Just as knowing who may have a beneficial interest in a vessel is useful for fishery managers, a better understanding of the relationships between agents and vessels, and agents and marketing systems is of value for the same reasons. One of the most important reasons for understanding these relationships is in determining not only what profits are made in the fishery, but who profits.

Over the past 15 years or so the profit centers in the industry have shifted. The alterations have become more pronounced as those who previously profited (mainly the vessels and markets in Japan) have given way to a new order in the industry.

Whereas the fresh sashimi market for yellowfin and bigeye in Japan used to be supplied by a large number of Japanese vessels delivering their catch directly back to Japan, that market...
is now supplied mostly by air from various ports in the WCPO. Profits in the private sector that were formerly shared between various sales agents and middlemen in Japan and vessel owners now include agents in the PICs. The increased number of layers of middlemen has had a profound impact on vessels operating in the fishery. Those with high operating costs such as the Japanese have not been able to cover those costs and pay the additional charges of agents, transshipping, and other expenses associated with basing overseas. As a result, they have been almost completely squeezed out and replaced by vessels from countries such as China with demonstrated lower operating costs.

The local agents represent one of the new layers of middlemen in this restructured fishery. How those agents are related to the vessels and to the marketing of the catch has a lot to do with how costs and profits in the industry are distributed. The distribution of these costs and profits is critical for those PICs who consider access fee generation from locally-based foreign fleets to be important.

The most simplistic way to view the situation is that the more middlemen take out of total fishery revenue, the less rent there is from which the PICs can extract their access fees solely from the vessel operators. A situation can arise where vessels appear to be unprofitable (indeed, they may be), and cannot afford a certain level of access fees, yet profits continue to be made in the fishery.

Determining where the profits are extracted and the magnitude of those profits is not an easy task, as governments are hindered by the lack of current financial and other data in the individual PICs relating to the operation of the industry.

There are several important points to keep in mind:

- In increasing its direct revenue from the operation of Chinese vessels, a PIC is essentially transferring rent from the private to the public sector. The usual manner is to assess an access or license fee on the vessel operator. In the past, particularly when vessels were not based in the PICs, the vessel operator was the only available source to access for this rent.

- There is no one method for increasing direct revenue that will fit all cases in the PICs. It is important to realize that government direct revenue (or increases in direct revenue) does not have to come solely from access fees (or increases in access fees) paid by fishing vessel operators. There are now others in the PICs that profit from the fishery.

Whether or not additional direct revenue can be obtained depends primarily on the net value of the fishery in a particular PIC.

- The methodology for determining the net value is generally the same as that for rent: the costs of catching (i.e. vessel costs), handling, marketing, management, and public services relating to the fishing industry are subtracted from gross wholesale catch value to obtain the “net value”.

- The government gets its share of the net value through access fees and other forms of taxation. The remainder is private sector profits shared between those in three major categories: vessel owners, local agents, and marketing agents in Japan or elsewhere.

Each country’s situation must be analyzed with respect to the relationship(s) between the three major categories in the last bullet point above who share in private sector profits. Since it is usually very difficult to impose taxes or charges on the foreign-based component (i.e.

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49 Rent is defined here as the difference between total fishery revenue and total fishery costs. Access fees are taken from rent and not considered a fishery cost.
marketing agents), local agents and vessel owners are the elements from which the government must extract the public sector’s share.

A further consideration is that where there is a definite separation between the three components, regimes that are structured to extract benefits by other than assessing access fees to fishing vessels must be carefully formulated so as not to enable the charges to be passed on to the vessels.

It should be noted that the foregoing discussion can apply to non-Chinese foreign vessels based in the PICs as well.

There are a number of means by which governments can attempt to capture a greater amount of the fishery’s net value. In one case, a PIC sought in court to prove that exported fish were actually the property of the locally-based agent and not the vessel owner, hence subject to local taxes when sold on overseas markets (the PIC was unsuccessful).

6.5 Other Considerations

Although there is much discussion on increasing indirect benefits from locally-based foreign fishing, few PICs have studied in depth the costs of foregone direct revenue when used as an enticement to encourage locally basing of foreign vessels. Not all information on access fees is public information in all PICs. Many PICs have somewhat different approaches to licensing and the charging of access fees.

Indications are that Fiji has become a profitable place in which to base Chinese vessels. At the same time, low wage costs in Fiji may result in greater opportunities for extracting benefits through the placement of local crew onboard Chinese vessels based there. Some longline equipment is manufactured in Fiji, and there are opportunities for gaining benefits from fleets based there. The greater distance from Fiji than the Micronesian areas to China and the existence of slipways and other support facilities may mean greater opportunities for the private sector there. For example, in 2004 it is estimated that about 40 Chinese vessels used both private slipways and the government slipway in Suva.

Not all information on direct benefits from licensing in the PICs is readily available. There are indications that loopholes exist in several countries where locally-based foreign vessels pay access fees, while foreign vessels owned by domestic-registered companies which may not have to have domestic investment, pay no access fees.
7 POSSIBLE FUTURE DEVELOPMENTS

The circumstances under which Chinese longliners are currently based in the PICs are not expected to remain static, even in the short term of the next two to four years. It is difficult, however, to attempt to predict how the situation will change and what the impacts of future developments within and outside the FFA region might be on the PICs. Nevertheless, with the recent enactment of the new Western Pacific Fisheries Management Convention and resultant changes to aspects of the regional management regime on the horizon, it is useful to highlight some potential future developments in China and elsewhere that may have important consequences for Chinese longline fishing based in the PICs.

7.1 Changing Economic Circumstances in China and Elsewhere

Some of the more important issues to watch in China are:

- Revaluation of the Chinese yuan versus the US dollar, and changes to the situation with respect to full convertibility of the yuan. Currently, China's competitiveness in fisheries is at least partly due to lower costs based on the current low value of the yuan relative to the US dollar. Revaluation would bring the currency more in line with the wishes of many of China's trading partners. It would also reduce some advantages China enjoys in fisheries by making certain Chinese supplies, equipment and labor more expensive in dollar terms and lessen profits in yuan. The easing of currency restrictions could alter the structure of some business arrangements currently designed to alleviate problems caused by such restrictions.

- Increasing shifts towards emphasis on profitability in SOEs. The decline in the number of Chinese vessels in some PICs is often referred to by current Chinese participants in the fishery as being the result of "bad management". Given the importance of the tuna fishing industry, China may place greater emphasis on profitability. This could have an adverse impact on the FFA region in some cases.\(^{50}\)

- In the Micronesian area, the recent removal of textile quota protection for the garment manufacturing industry has caused a crisis for that industry in the Northern Mariana Islands and may have an adverse affect on air freight services to the longline tuna industry. The major provider of air freight to the tuna longline industry is closely linked to garment manufacturing in Saipan, and raw material as well as finished garment products provide cargo volumes contributing to the viability of air freight services. The volume of garment production is expected to drastically decrease as manufacturers in Saipan move production to centers in lower-cost areas of China, Cambodia, and elsewhere in Southeast Asia.

7.2 Future Developments in the Chinese Tuna Industry

Markets for sashimi tuna in China can be expected to further evolve. Figure 12 shows the display of a sashimi-grade tuna that was part of marketing efforts at a

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\(^{50}\)Some SOEs have found it more profitable to control their own support service rather than rely on established agents, as is the case in many PICs. At least one SOE has reported that the reduction in its presence in the WCPO is a result of shifting some operations to countries in the Indian Ocean where they are better able to undertake servicing their own vessels and thereby control supply costs.
recent fisheries trade expo in China. Although the current focus seems to be at least partially on satisfying a “Gucci syndrome” of desiring high priced, brand name goods as a personal statement of financial success, expansion of markets among the middle class may increase the economic viability of products other than just those at the top end of the sashimi scale.

Figure 12 Tuna Displayed to Assist Marketing of Sashimi in China

Increase in the processing of ULT tuna in China, with a parallel increase in the ULT longline fleet. Such vessels will need bases in the Pacific from which to operate, even if port visits per vessel are not expected to be numerous. At present, Fiji would appear to be the country that would benefit the most from increases to the ULT longline fleet.

Increased attention to and investment in purse seining. It is generally expected that China’s tuna purse seine fleet will expand. Larger SOEs currently involved in longlining may find it more lucrative to concentrate on purse seining, leaving some aspects of longlining to smaller SOEs or private enterprise.

Increased use of PIC registration or FOC registration for Chinese-controlled vessels based in the PICs. There has been no resistance from or concerns expressed by PICs where Chinese-controlled PIC registered and FOC registered vessels are currently based. Increases in vessel construction costs in China and the availability of relatively inexpensive non-Chinese vessels from countries such as Japan who are leaving the fishery may mean an increase in non-Chinese registered vessels operated by Chinese interests.

7.3 Future Expansion of Chinese Longlining in the FFA Region
Cook Islands. It is reported that a planned arrangement with a Cook Island agent is expected to result in at least 10 Chinese vessels operating out of Rarotonga during 2005 to take advantage of infrastructure and marketing channels already established. Destruction of fisheries infrastructure by cyclones in early 2005 may adversely affect these plans.

Tonga: One government official indicated that although the majority of Chinese vessels had left the country by the end of 2004, more Chinese vessels may return if and when Tonga approves a directed shark fishery.

Tuvalu: Tuvalu has held discussions with a Singapore-based company on the basing of Chinese longliners in Funafuti. An MOU was signed in November, 2002 following discussions with the company that might involve basing up to 30 vessels in Tuvalu. According to some government officials in Tuvalu, the overseas firm is still in the process of procuring finance and the proposal remains under review in Tuvalu.

FSM: Chinese vessels may return to Pohnpei in greater numbers than at present if catches in the area rebound to levels significant enough to overcome the two major current disincentives, or if the disincentives are removed. The current major disincentives are (1) the lack of control over government-owned transshipment facilities, and (2) the costs associated with required port clearances prior to and upon return from each fishing trip.

Fiji: Factors contributing to the attraction of Fiji as a location for basing have already been discussed in section 6.1. Fiji is likely to continue to see an increase in the presence of Chinese longliners, particularly if facilities servicing the longline fleet (such as wharves) are significantly expanded.

Vanuatu: In 2002 there was a news report in Vanuatu that the Chinese government through CNFC would construct in 2003 two longline transshipment bases in Vanuatu: one in Vila and another in Santo (Willie 2002). This has never eventuated, although at the time reports were that a preliminary agreement had been reached with CNFC. The establishment of a fishery base or bases in Vanuatu would make some sense from a logistical point of view, considering there is significant fishing in the Vanuatu EEZ and given that some facilities already exist in Santo. Proximity to Fiji may lessen Vanuatu’s attractiveness as the former continues to develop, however, as might recent diplomatic problems with China.

CONCLUSIONS

The operations, markets, and business arrangements of Chinese vessels based in FFA member countries are not uniform throughout the region. State owned enterprises continue to play a major role in supplying vessels to most ports where vessels are based. Their reliance on agents and/or charterers has insulated them from direct contact with government fishery officials to a point where beneficial ownership of vessels is not always known to those officials.

In contrast to other distant water fishing nations such as Japan or the U.S., there is no heritage of tuna fishing in China. The absence of historical ties to the industry has meant that participation in the fishery has been encouraged from the top down rather than the other way around.

The presence of tuna longliners from China in the Pacific Islands will continue to play an important role in Pacific Island fisheries in at least the short to near-medium term (the next
two to five years). This is evidenced by the slow but steadily increasing number of vessels in the region, their willingness and apparent financial ability to adopt technological advances (such as hydraulic longline spools and line setters), and the obvious political value of their presence to China as a basis for furthering diplomatic ties with FFA member countries.

Many business management aspects of Chinese vessels operating in the Pacific Islands mirror the situation in contemporary China. Private enterprise is gaining a foothold in the industry, but overall it is still dominated by large state owned enterprises with extensive financial resources and access to finance from state-owned banks.

Chinese vessel operators are able to survive and even prosper in adverse economic conditions that have forced other operators, both foreign and domestic in the Pacific Islands, to drastically cut back or exit the fishery. In the Micronesian countries where Chinese vessels are based, at least part of this ability to survive has been brought about by vertically integrated business structures.

There does not seem to be an opportunity for large increases in benefits to the private sector in the Pacific Island countries, given the relatively low operating cost structures of Chinese vessels at present.

If FFA member countries desire to obtain greater direct benefits, there is a need to view the entire structure of the industry more closely than is currently the case. The situation has changed significantly from that of two decades ago when vessels were assessed license fees based on simple assumptions of a percentage of catch value. Profits are now extracted in the fishery at more than the level of vessel operation, and serious consideration needs to be given to seeking direct benefits from the levels of middlemen and others profiting from the fishery as well.
REFERENCES


OPRT (2003a) China, Japan strengthen ties of cooperation for responsible tuna fishing. OPRT International Newsletter, Number 1, July, 2003

OPRT (2003b) Fisheries organizations in China and Japan sign tuna cooperation agreement. OPRT website, www2.convention.co.jp/OPRT/oprt_local_e/e_news_030409.html


APPENDIX 1

Definition and Classification of Enterprises by Registered Status

Source: ADB Institute, Kanamori and Zhao (2004)

The registration status of enterprises is classified into three categories: domestic-funded enterprises, enterprises with investment from Hong Kong, China, Macau and Taipei, China, and enterprises with foreign investment, following the registration status of enterprises by industrial and commercial administration agencies. Domestic–funded enterprises include state-owned enterprises, collective enterprises, cooperative enterprises, joint ownership enterprises, limited liability corporations, share-holding corporations, private enterprises and other enterprises. Included in the enterprises with investment from Hong Kong, China, Macau and Taipei, China and enterprises with foreign investment are joint-venture enterprises, cooperative enterprises, sole investment enterprises and share-holding corporations. For government agencies, institutions and social organizations that are not requested to register in industrial and commercial administration agencies are classified mainly by sources of funds and management form.

1. State-owned enterprises refer to non-corporation economic units where all assets are owned by the state and which have registered in accordance with the Regulation of the People's Republic of China on the Management of Registration of Corporate Enterprises. Excluded from the category are sole state-funded corporations that are limited liability corporations.

2. Collective-owned enterprises refer to economic units where the assets are owned collectively and which have registered in accordance with the Regulation of the People's Republic of China on the Management of Registration of Corporate Enterprises.

3. Cooperative enterprises refer to collective economic units where the capital comes mainly from employees in the form of shares, with a certain proportion of capital from the outside, where production is organized on the basis of independent operations, independent accounting for profits and losses, joint work, democratic management, and a distribution system that integrates remuneration according to work and dividends according to capital share.

4. Joint-ownership enterprises refer to economic units established by two or more corporate enterprises or corporate institutions of the same or different ownership, through joint investment on the basis of equality, voluntary participation and mutual benefits. They include state joint ownership enterprises, collective joint ownership enterprises, joint state-collective enterprises, and other joint ownership enterprises.

5. Limited liability corporations refer to economic units established with investment from 2-50 investors and registered in accordance with the Regulation of People's Republic of China on the Management of Registration of the Corporation, depending on its share of investment, and the corporation bearing liability to its debt to the maximum of its total assets. Limited liability corporations include exclusive state-funded limited liability corporations and other limited liability corporations.

6. Share-holding corporations refer to economic units registered in accordance with the Regulation of People's Republic of China on the Management of Registration of Corporations, with total registered capital divided into equal shares and raised by issuing stocks. Each investor bears limited liability to the corporation depending on the shares held, and the corporation bears liability to its debt to the maximum of its total assets.
7. Private enterprises refer to profit-making economic units invested and established by natural persons, or controlled by natural persons using employed labor. Included in this category are private limited liability corporations, private share-holding corporations and private partnership enterprises and private-funded enterprises registered in accordance with the Corporation Law, Partnership Enterprises Law and other regulations on private enterprises.

8. Other domestic-funded enterprises refer to domestic-funded enterprises other than those mentioned above.

9. Cooperative Enterprises with Funds from Hong Kong, China Macau and Taipei, China are established by investors from Hong Kong, China, Macau and Taipei, China with enterprises in the mainland of China in accordance with the Law of the Peoples Republic of China on Sino-foreign Cooperative Enterprises and other relevant laws, where the investment or provision of facilities, and the share of profits and risks is stipulated in the cooperative contract.

10. Enterprises with Sole (exclusive) Investment from Hong Kong, China, Macau and Taipei, China refer to enterprises established in the mainland of China with exclusive investment from investors from Hong Kong, China, Macau and Taipei, China in accordance with the Law of the People's Republic of China on Foreign-Funded Enterprises and other relevant laws.

11. Share-holding Corporations Ltd. with Investment from Hong Kong, China, Macau and Taipei, China refer to share-holding corporations established with the approval from the Ministry of Foreign Trade and Economic Relations in line with relevant state regulations, where the share of investment from Hong Kong, China, Macau or Taipei, China business people exceeds 25% of the total registered capital of the corporation. If the share of investment from Hong Kong, China, Macau or Taipei, China is less than 25% of the total registered capital, the enterprise is classified as a domestic-funded share-holding corporation.

12. Joint-venture Enterprises with Foreign Investment refer to enterprises jointly established by foreign enterprises or foreigners with enterprises in the mainland of China in accordance with the Law of the People's Republic of China on Sino-foreign Joint Venture Enterprises and other relevant laws, where the share of investment, profits and risks is stipulated in the contract.

13. Cooperative Enterprises with Foreign Investment refer to enterprises jointly established by foreign enterprises or foreigners with enterprises in the mainland of China in accordance with the Law of the People's Republic of China on Sino-foreign Cooperative Enterprises and other relevant laws, where the investment or provision of facilities, and the share of profits and risks is stipulated in the cooperative contract.

14. Enterprises with Sole (exclusive) Foreign Investment refer to enterprises established in the mainland of China with exclusive investment from foreign investors in accordance with the Law of the People's Republic of China on Foreign-Funded Enterprises and other relevant laws.

15. Share-holding Corporations with Foreign Investment refer to share-holding corporations established with the approval of the Ministry of Foreign Trade and Economic Relations in line with relevant state regulations, where the share of investment of foreign investors exceeds 25% of the total registered capital of the corporation. If the share of foreign investment is less than 25% of the total registered capital, the enterprise is classified as domestic-funded share-holding corporation.
Regulation on Ocean Fishery Management, 2003

Order from Ministry of Agriculture

Minister: Du Chin-Lin
18/04/2003

Chapter 1 - General rules

Art. 1. purpose: protect and reasonably use ocean fishery resources.

Art 2. definition of ocean fishery:

Fishing in High Seas and sea governed by other countries, not including Yellow Sea, Eastern and South Sea

Art 3. Authority: (1) Ministry of Agriculture
(2) provincial fishery administration

Art 4. practice: Ministry supervises and manages boats and fishermen.

Chapter 2 - Application

Art 5. qualified enterprises

Art 6. enterprises should apply to provincial administration

Art 7. documents for application

Art 8. Agent or lease should be confirmed by signing an agreement to present business type, management on boats and fishermen, fishery disputes and incident handling

Art 9. Ministry’s permission within 15 days. It extended, it informs the enterprise the reason.

Art 10. the enterprises apply for certificate of ocean fishery boat and fishermen after getting permission.

Art 11. Fishing on other country’s sea should be register on overseas Embassy.

Art 12. report on provincial administration.

(1) entry and exit

(2) capacity, kinds of fish, value on every Jan 10 and July 10

(3) shipping back

(4) when ministry or international organisation requires
Art 13. Change on fishing region type, ways of getting permit or amount of boats should be done with permit according to Art. 6.

Art 14. Suspension or termination of fishing should submitted and reported with 30 days

Chapter 3. Enterprises qualification and business

Art 15. certificate of qualification

Art 16. certificate renewal yearly

Chapter 4. Ocean boats and fishermen

Art 17. qualified boats

Art 18. manufacturing, reshape, buying and importing boats should be done with following the management regulations

Art 19. fishing with related certificates and show the flag

Art 20. fill in fishing diary

Art 21. fishermen qualification certificate and professional training certificate

Art 22. agreement with fishermen

Art 23. fishermen ID

Art 24. lessons on disciplines and law for fishermen

Chapter 5. Supervision

Art 25. Boss should be responsible for fishing management behaviours of boats and fishermen and undertake legal responsibility

Art 26. supervise boats and capacity for setting VMS and qualified fishermen

Art 27. self control in activities

Art 28. incidents should be properly reported to the Ministry, provincial administration and related Embassy.

Art 29. Suspension or cancellation on illegal behaviours as follows:

(1) fishing without permit

(2) conceal the truth when apply for permit or reporting

(3) different fishing type, area and time from what permit allows or illegally fish scarce wildlife

(4) invalid certificates

(5) disobey the regulations employing fishermen
(6) interfere or refuse supervision

(7) not providing reports or information

(8) refuse or interfere with observers

(9) not filling fishing diary

(10) disobedience overseas resulting in serious effect

(11) others according to the law

Art 30. resume after one year suspension

Art 31. right of applying for reviewing verdict

Art 32. verdict on every levels administration staff

Chapter 6. miscellaneous

Art 33. definition on ocean fishing boats and fishermen

Art 34. entry into force from June 1, 2003.