
1. Introduction and review objectives

Capture fisheries in marine and inland areas involve risks. Examples of major risks in capture fisheries include asset risks, such as the loss or damage to fishing vessels, equipment and gears as a result of natural disasters (such as storms, tsunamis, lightning, etc.). Risks are not only asset related: production, management, market and health risks also affect capture fisheries activities. Specific risks that are affecting capture fisheries include, among others:

- pollution of (inland) water bodies by other industries/sectors;
- illegal, unreported and unregulated (IUU) fishing practices;
- theft;
- introduction of non-indigenous species that harm the existing fish stocks and biodiversity;
- genetic pollution and disease transmittance (through escape of fish from cages/farms);
- conflicts with other resource users resulting from lack of planning.

The technological advancements seen over the last decades in the vessel design of major fishing nations' fleets, as well as the rapidly changing on-board fish storage and processing generally demand large investments from the vessel owners and imply that the financial and investment risks have increased rapidly over the same period. Modern fishing techniques (e.g. pulse trawling) and equipment (e.g. fish finders, global positioning system (GPS), individually quick frozen (IQF) freezers) tend to decrease the risk of poor catch as well as provide better quality products to the market and safer working environment for fisherfolk, but these developments in capture fisheries mean also higher investments and thus increased financial risks.

Risk management approaches have been developed for the capture fisheries sector in recent years. Risk management in capture fisheries can be referred to in the following general terms:

- development and implementation of aquatic resource management plans;
- introduction of codes of conduct;
- fisheries stocks certification;
- implementation of plans of action against illegal, unreported and unregulated fishing (IUU);
- plans of action to manage the capacity of the fleet, etc.

More specific risk management approaches include, among others:

- the follow-up of safety-at-sea regulations;
- the application of guidelines on product handling;

- storage;
- transport and product quality maintenance.

Risk management approaches also include those related to processing of the products of the sector, such as Hazard Analysis and Critical Control Point (HACCP), International Organization for Standardization (ISO) and other certification schemes.

Insurance is considered an important tool in the risk management of capture fisheries activities. Vessel insurance of marine capture fisheries vessels is available in many countries. This is not the case for the vessels and equipment used in inland capture fisheries activities. It can be argued that vessels in inland fisheries are generally smaller and require less investment, but that is not always the case on the large lakes in Africa and the major river systems in South America and Asia. Moreover, the majority of the small-scale vessels fishing in marine waters are not insured. The world map currently shows many virgin areas that are not covered by insurance services to the sector.

The recent surveys, desk study and analysis carried out for the *Review of the current state of world aquaculture insurance* (van Anrooy *et al.*, 2006), and the presentations at the tenth Aquaculture Insurance and Risk Management Conference, held in Vigo, Spain, in April 2006, showed that aquaculture insurance as well as capture fisheries insurance services generally do not reach those involved in small-scale activities in the sector worldwide. Particularly in Africa, South America and Asia, the percentage of fisheries enterprises (large- and small-scale) covered by insurance is very low. Subsequently, *Guidelines for action to meet insurance and other risk management needs in developing aquaculture in Asia* (Secretan *et al.*, 2007) was prepared in 2007. These guidelines provide practical ways of reconciling the aims of both the insurance sector and those of governments, donors and NGOs and addressing the insurance needs of the small-scale aquaculture enterprises in Asia.

A decade ago, the Food and Agriculture Organization of the United Nations (FAO), the Asia-Pacific Rural and Agricultural Credit Association (APRACA) and the National Federation of Fisheries Co-operative Associations (ZENGYOREN) conference: Regional Conference on Insurance and Credit for Sustainable Fisheries Development in Asia¹ (Tokyo, November 1996) showed that particularly the small-scale marine capture and inland capture fisheries rarely received attention in the past from the insurance sector, although a clear need for the service was expressed by fisherfolk in the region. The Regional Conference in 1996 showed that existing insurance schemes have had only limited success, despite the effort and financial resources put into them. The performance of insurance programmes has been poor in regard to financial viability as a result of high loss ratios, high administrative costs and inadequate coverage of insurance needs.

¹ The proceedings of this conference were published as FAO Fisheries Circular No. 948, entitled: *Fisheries insurance programmes in Asia – experiences, practices and principles*. This document is available at: <ftp.fao.org/docrep/fao/005/x4363e/X4363E00.pdf>. Background papers of the conference are available at: www.fao.org/docrep/009/ah464e/ah464e00.htm

This need for insurance services was recently reconfirmed at the Regional Workshop on Guidance for Credit and Microfinance Programmes in Support of the Sustainable Use of Inland Fisheries Resources and Poverty Alleviation.² One of the conclusions of the regional workshop held in Beijing from 14 to 17 February 2006 was that “many microfinance and insurance schemes directed towards inland fisheries can still be regarded as being in a pilot phase, and wider dissemination of success stories and formulas has not taken place yet”.

Recent disasters that hit the fisheries sector (e.g. tsunamis in 2004 and 2006, annual hurricanes in the Caribbean, typhoons in Viet Nam and China in 2006), increased the calls from governments for further development of risk management measures to mitigate the immediate impact of these disasters and ensure the rapid rehabilitation of coastal communities, as well as the rapid restoration of productive capacity for food security, income and employment.

Apart from the natural disasters that increase the vulnerability of fishing communities, there are also management and operational risks, food safety and public health risks, occupational risk/hazards and environmental risks that affect fisherfolk. Collisions at sea, piracy, improper navigation, arrests by foreign countries for violations of laws, loss of value of fish owing to breakdown of onboard cold storage/freezers, loss of gears and accidents with equipment and so forth, are common in the fisheries sector.

Many people dependent on the fisheries sector for their livelihoods are among the poorest in the world. It is general knowledge that most of the world’s poor can be considered as risk averse: they do not want to risk losing their limited assets because this would sometimes mean starvation. When a fishing boat is damaged or lost at sea, the consequences and burden are borne by the fishing households, and often by the fishing community at large. Risk prevention and reduction tools, such as early warning systems, development and implementation of codes of practice and conduct, safety-at-sea measures and fisheries insurance services can contribute to improving the livelihood of impoverished fisherfolk. Insurance (particularly micro-insurance) can reduce the risks involved in fisheries, enabling poor fisherfolk to innovate and access micro-credit services and investment funds. Through these linkages they might be able to break out of the vicious cycle, often called the “poverty trap”.

The benefits of fisheries insurance to fisherfolk can be substantial. Fisheries insurance could provide the following benefits:³

- protection against a variety of natural hazards beyond their control, which affect their health and personal security, assets and harvests (Hotta, 1999);
- protection of fisherfolk from accidents;

² The proceedings of this regional workshop can be found in Tietze, U., Siar, S.V., Marmulla, G. & van Anrooy, R. 2007. *Credit and microfinance needs in inland capture fisheries development and conservation in Asia*. FAO Fisheries Technical Paper No. 460. FAO. 138 pp. This document is also available at: www.fao.org/docrep/010/a1182e/a1182e00.htm

³ Adjusted after FAO Fisheries Circular No. 948 and FAO Fisheries Technical Paper No. 493.

- basic compensation for the loss of or damage to fishing vessels, gears and catch (or harvest), thus contributing to the stabilization of incomes within the fisheries sector;
- more secure incomes, greater stability and social and economic welfare in the fishing community;
- improved access to seed capital, as well as capital for expansion and formal credit, by reducing the risk of non-payment of loans for the financial institutions providing these loans;
- reduced risk for fisherfolk in investing their own resources to adopt new technologies and acquire improved equipment;
- improved market supply quality, consistency and reliability;
- increased mutual assistance and cooperation among fisherfolk and their organizations;
- access to additional sources of information on risk management;
- reduction of the unpredictable burden on government in providing emergency assistance in the wake of natural disasters;
- some “peace of mind” for the fisherfolk;
- a more stable contribution of the fisheries sector to the national economy.

Accident and life insurance schemes for fisherfolk have been successfully implemented with the help of fishers’ cooperatives (where they exist); indeed, these programmes have contributed to strengthening these cooperatives. Vessel (hull) and gear insurance schemes have also been successful in some countries. Since the Regional Conference on Insurance and Credit for Sustainable Fisheries Development in Asia in 1996, a number of developments have taken place. Such developments include:

- the termination of fisheries insurance provision by some major insurers and the entry of new insurers in the business;
- the increase in the number of microfinance institutions (some of which provide micro-insurance services to the sector);
- the recognition at the international level of the need for increasing the access to and availability of insurance services to the poor;
- new insurance products designed and tested;
- a number of mutual insurance schemes that have matured and new schemes established;
- certain insurance schemes addressing the needs of the sector that have become profitable;
- policy wordings and insurance products contents that better address the demands of the fisherfolk.

However, these developments are not extensive. In many countries and regions poor and small-scale fishers still do not have access to insurance services, and the insurance service provision has not developed to expectations. The reasons for this limited growth include, among others:

- the general lack of knowledge of the operation of fisheries-related insurance among insurers in developing countries;

- limited awareness among fisherfolk in developing countries about the benefits and functioning of insurance;
- the inability of insurers to reach small-scale and poor fisherfolk, owing to the lack of rural agents and the high administrative costs involved in providing the service extensively;
- the lack of well-established village institutions, such as cooperatives, to act as insurance agents,
- the lack of legal frameworks for fisheries insurance and the lack of related government policies;
- difficulties in promoting insurance policies, designing sustainable insurance programmes and coordinating the work of the agencies concerned;
- the lack of staff within insurance institutions who have knowledge of the sector;
- the negative experiences by insurers and reinsurers who have endured substantial losses in the provision of insurance services to the sector.

The FAO Fisheries and Aquaculture Department, being made aware of the limited access of small-scale and poor fisherfolk to insurance services – and recognizing the opportunities fisheries insurance services can offer to the sustainable development of capture fisheries in developing countries – decided to carry out a world review of the state of capture fisheries insurance.

OBJECTIVES OF THE REVIEW

Throughout this world review and the conclusions that will be drawn from it, the FAO Fisheries and Aquaculture Department intends to contribute to the promotion of capture fisheries insurance and the development of “best practice” insurance schemes and models that address the needs of the sector. The main purpose of this document is to provide an overview of the current status of capture fisheries insurance in the world, similar to the *Review of the current state of world aquaculture insurance* that was prepared in 2006.

The long-term purpose of this review is to provide guidance for the formulation of appropriate legal, policy and institutional frameworks for fisheries insurance in the developing countries. Indirectly, the review will contribute to the environmentally sustainable, economically viable and socially acceptable development of fisheries worldwide. Such development is among the main objectives of the FAO Fisheries and Aquaculture Department. Other aims of this document are to inform decision-makers at national government levels, as well as in international agencies about the role of capture fisheries insurance in the sustainable development of the sector, and provide fisheries sector stakeholders some insight into what all-too-frequently is considered a complicated activity.

ABOUT THIS DOCUMENT

A synthesis of the various regional and national studies on capture fisheries insurance is presented here. Five of the top-ten fish producer countries in the world (China, Japan, India, the Russian Federation and the United States of

America) are covered through national review studies, while three other top-ten producer countries are covered within regional reviews (Peru and Chile in the South American review and Norway in the European review).

Chapter 2 provides a summary of the regional syntheses, presented as an overview of the current state of capture fisheries insurance in the world. Chapter 3 presents the situation in China with regard to capture fisheries insurance. Chapters 4 to 11 discuss the current state of capture fisheries insurance in some other main producer countries in Asia (Japan and India), followed by regional overviews of Europe, South America, Africa, Oceania, the United States of America and the Russian Federation. Each chapter starts with an introduction, followed by a brief overview of the fishery sector production in the region or country, providing volumes and values of the main species. The insurance market is discussed in each chapter, followed by sections on demand and supply issues, policies in force, perils covered, vessels insured, gears and equipment insured, the underwriting situation, claims handling, risk management and underwriting experiences. Each chapter ends with conclusions drawn and recommendations presented. Chapter 12 presents the main conclusions and recommendations of this review.

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2. Summary overview of the current state of world capture fisheries insurance

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2.1 INTRODUCTION

In this summary overview the national and regional overviews presented in Chapters 3 to 11 of this document are summarized. The responses to a survey questionnaire sent in 2007 to primary insurers active in the business of capture fisheries insurance are also incorporated in this chapter (see Annex 1).

2.2 SHORT SUMMARY OF CAPTURE FISHERIES PRODUCTION IN THE WORLD

The estimated total capture fisheries production for 2006 was 91.8 million tonnes, of which 10 million tonnes (11 percent) came from inland fisheries and 81.8 million tonnes (89 percent) from marine fisheries. The top ten producer countries for marine and inland capture fisheries in 2006 were: China, Peru, the United States of America, Indonesia, Japan, Chile, India, the Russian Federation, Thailand and the Philippines.⁴ In 2004, there were an estimated 41 million people in marine fishing and fish farming, of which 73 percent were marine fishery workers. Table 2.1 presents the volume of capture fisheries production in 2005 and 2006. Table 2.2 presents the number of marine fishery workers during the period from 1990 to 2006 in the countries included in this review.

2.3 THE INSURANCE MARKET

As in the analysis of the aquaculture insurance market (Van Anrooy *et al.*, 2006), the condition of the capture fisheries insurance market can be examined using the commonly applied Structure, Conduct, Performance (SCP) framework. The market structure (i.e. the number, size and diversity of participants at different levels) influences market conduct (i.e. the reliability or timeliness of activities, as well as the control or standardization of quality and regulatory mechanisms). Structure and conduct together determine the performance of the marketing

⁴ The figures are derived from the Fishery Statistical Databases of the FAO Fisheries and Aquaculture Department, and can be accessed at: www.fao.org/fishery/statistics/programme/3,1,1

TABLE 2.1
Volume of capture fisheries production in 2005 and 2006 in selected countries

Country	Volume of capture fisheries production (tonnes)	
	2005	2006
Australia	237 042	192 574
Chile	4 328 646	4 168 461
China	17 053 191	17 092 146
France	574 552	573 375
India	3 691 362	3 855 467
Japan	4 089 821	4 186 980
Mauritania	304 877	193 230
Morocco	1 024 484	864 922
Namibia	553 995	509 395
New Zealand	545 118	470 708
Norway	2 392 988	2 255 513
Peru	9 388 662	7 017 491
Russian Federation	3 197 565	3 284 126
South Africa	817 160	617 388
Spain	846 099	949 515
United Kingdom	669 907	623 823
United States of America	4 892 967	4 859 872

Note: Total catch in inland and marine waters from all fishing areas.

Source: FAO. 2007. *Yearbook of Fishery Statistics – Capture Production 2005*. Rome. Vol. 100/1. 539 pp. Data for 2006 provided by the FAO Fisheries and Aquaculture Information and Statistics Service (FIES). Data available at: www.fao.org/fi/statist/FISOFT/FISHPLUS.asp

system as a whole (i.e. the efficiency of the market in technical and allocation terms, the degree of market integration, market price and margins, as well as the accuracy and adequacy of the flow of information).

In terms of market structure, the first topic that should be mentioned is that the number of worldwide insurance suppliers to capture fisheries is rather limited. While in Europe, North America, Oceania and Latin America, large composite private-sector insurance companies often dominate the capture fisheries insurance market, in Asia public-sector insurance companies are playing a major role. Mutual insurance companies and fishing cooperatives are also active in capture fisheries insurance in many countries; however, their share in the total market is not very high, except for Japan. The Japanese fishing vessel insurance market is a particular case as it is a mutual insurance system supported by financial assistance from the government. Overall, one can say that competition among fishing vessel insurers in most national markets is limited, particularly when compared with insurance services in other classes (i.e. health insurance, life insurance, housing insurance and car insurance). However, in none of the markets surveyed in the study can one speak of a monopoly for any one insurer. In some countries or regions in countries, because there are few suppliers available, fishing vessel owners seeking insurance have few options. The study showed that there is a fair supply of fishing vessel insurance services in the Russian Federation, India, China, Peru, Chile and Oceania. Although not an oligopoly on the supply side, large fisheries generally have access to the international insurance market, where competition is much

higher. Moreover, in some countries the demand for fishing vessel insurance is dominated by only a few large fishing companies, which adds to the market concentration figures as reported for the supply side. As in many other classes of insurance, the supply side of the international market for fishing vessel insurance is not in a state of perfect competition, because the services offered by the vessel insurers and the services demanded by the fishing vessel owners differ greatly, and therefore cannot be considered as homogeneous.

Lloyd's of London, being a market in itself, together with a few other large reinsurance companies, such as Swiss Re and Munich Re, are playing a major role in fisheries insurance because many modern vessels are valued above the underwriting capacity of most direct insurers; thus reinsurance is essential for providing such vessels the desired coverage. In the reinsurance market some further market concentration occurred recently when GE Insurance Solutions was taken over by Swiss Re.

Market conduct is strongly affected by policy, legal and regulatory frameworks. On the supply side, the fisheries insurance industry can be considered a highly regulated business. Governments generally have laws in place to regulate and control the insurance business (including fishing vessel insurance). International composite insurers have to comply with regulations and reporting demands for both the domestic and foreign markets for which they provide service. The many regulations require companies to employ specialists in the many fields they serve, making it sometimes difficult for insurers without up-to-date knowledge of the fishing sector and its distinctiveness to enter the fisheries insurance market. In addition, there are still a number of countries that have established and apply certain entry-barriers to international insurers in favour of their national (often public in these cases) insurers. Similarly, in some countries national public insurers are not allowed to operate in foreign markets, or to seek reinsurance from abroad.

Market performance is determined by profits and marketing margins. Profitability in the fishing vessel insurance market shows large variations over the years, as it is highly affected by natural disasters in key fishing areas. Performance can differ in the same year within countries, between countries, between classes of fishing vessel insurance, types of fishing activities and fishing areas⁵. The underwriting experiences (Section 2.9) give some insight into the market performance of fishing vessel insurers, although it should be noted that information of this kind was generally kept confidential; thus the analysis was based on only a few companies' responses in each region/country.

2.4 DEMAND AND SUPPLY ISSUES

The FAO State of World Fisheries and Aquaculture (SOFIA) 2006 (FAO Fisheries and Aquaculture Department, 2007) estimates that the world fishing fleet consists

⁵ More information on the disasters that are affecting the fisheries sector and possible mitigating options can be found in: Westlund, L., Poulain, F., Bage, H. & van Anrooy, R. 2007. *Disaster response and risk management in the fisheries sector*. FAO Fisheries Technical Paper No. 479. FAO. Rome. (available at www.fao.org/docrep/010/a1217e/a1217e00.HTM)

of about 4 million vessels of which 1.3 million fishing vessels are decked vessels of various types. Virtually all of these decked vessels are motorized. The same publication also reveals that 86 percent of the decked vessels can be found in Asia, followed by nearly 8 percent in Europe and nearly 4 percent in the Americas. In view of the global overcapacity of fishing fleets, a number of countries have established – with varying success – schemes to reduce the number of fishing vessels in their fleets. Many of the main fishing nations (e.g. Japan, Norway, the Russian Federation and the European Union (EU-15) show a reduction in fleet size in recent years, but often this is less significant if one looks at the total fishing power (kW) and it is partly compensated with an increase in average vessel size. On the other hand, countries like the United States of America, Indonesia, the Philippines, Argentina and Chile saw an increase in fleet size in recent years. SOFIA 2006 concludes that the number of fishing vessels worldwide has remained fairly constant in recent years. This allows us to assume that the number of decked vessels will not increase significantly in the near future, and consequently that the global demand for capture fisheries (marine hull) insurance is unlikely to change significantly in the near future.

The number of fisherfolk in the world is estimated at around 30 million, of which the large majority belong to the so-called “small-scale” sector. The fishing industry in Japan, Europe, Russia, North America and Oceania is generally well served by the insurance market. National and international insurers can insure both large- and small-scale operations. Insurance brokers, agents of international insurers and mutual insurance companies make insurance services available to the sector, with very few operations that remain uninsurable. Nevertheless, some regions and capture fisheries sub-sectors are better served than others. At present, many fishers in Africa, South America and large parts of Asia have no access to fishing vessel insurance services. In most of the countries in these regions, international composite insurers may serve large fishing companies, but as the majority of the fishers are small-scale operators, they are generally of limited interest to the insurance sector. Insuring small-scale fishing operations is often left to public insurers (who are sometimes forced by laws and regulations to supply insurance services to the poorer sections of society) or it is the domain of mutual insurance companies.

The large composite international insurers’ interest in the small-scale producers is generally low because of:

- the high costs involved in serving often remote fishing villages;
- the difficulty of dealing with a fishing population which frequently also has no access to other financial services (e.g. bank accounts, credit, or microfinance);
- the small premium fees that would be collected from individual fisherfolk;
- the related high administration and monitoring costs;
- the generally low level of education and widespread illiteracy.

Altogether, these characteristics of the small-scale fish-producing sector do not make it an attractive sub-sector to the insurers. Moreover, the demand expressed

by the individual small-scale operators for insurance services is often limited. The small-scale operators are either not aware of the existence of insurance services, do not see the need for insurance (or only for life and health insurance) or have such low incomes that purchasing insurance is not a priority. In some countries, small-scale fishing is kind of a last resort option, being an important occupation for landless farmers, rural and urban unemployed and the poor, as well as for other people having limited means and capacities for finding jobs and earning income elsewhere. The small-scale sector is therefore very important to the livelihoods of many people.

In countries (and regions in these countries) where small-scale fisherfolk have a high level of organization (e.g. in associations, cooperatives or self-help groups), the demand for fishing-related insurance services is generally higher. In India and China, as well as in Chile, there is evidence of considerable demand for insurance among the organized small-scale producers. However, many of them are not served by the insurance market for a variety of reasons, including, among others, lack of enabling policy and regulatory frameworks for insurance, limited awareness of their demand, highly fluctuating incomes, language barriers, and limited recognition by governments of the needs of the sector.

It can be argued that demand meets supply, worldwide, when one looks only at modern large-scale and well-maintained fishing vessels. Insurance is available for such vessels, and competition among insurers means generally that potential access constraints can be overcome. However, in areas like the European region the number of vessels is decreasing, causing a reduction in demand for vessel insurance and related services. In addition, because at present the construction of new fishing vessels in these regions is at low levels, resulting in ageing fleets that are less attractive to insurers, both the demand for and supply of insurance services to the sector may decrease in these regions. Moreover, poor underwriting experiences in the fisheries insurance sector have caused some insurers to withdraw from this class of insurance. This has negative effects on the supply of insurance services to the sector as a whole.

Considering that the number of fishing vessels worldwide is around 4 million, of which only some 12 percent are currently covered by insurance, it is clear that there is room for an increase in fishing vessel insurance, particularly in those regions that are not yet widely covered (e.g. large parts of Asia, Africa and South America, as well as inland capture fisheries in most regions). Moreover, the number of fisherfolk (particularly in Asia) is high, which implies a potential demand for life, health and Protection & Indemnity (P&I) insurance services that is much larger than is actually supplied.

2.5 POLICIES IN FORCE

Although it is impossible to provide an accurate number of fisheries insurance policies, owing to the wide variety in products and services (combined with the fact that such information on policies is often only collected – if at all – at the aggregate level) and as some insurers regard this information as highly confidential,

the authors of this review still consider it possible to provide a rough estimate of the size of the industry.

Based on the data presented by the various overviews, it is estimated that around 500 000 fishing vessels are covered by marine hull insurance at present. More than 40 percent of these can be found in Japan, where basic insurance of fishing vessels is obligatory. In Japan, some 208 000 fishing vessels are insured (basic insurance), which is estimated at between 90–95 percent of the total number of active vessels. The second largest market for marine insurance in terms of the number of vessels is China, where over 100 000 fishing vessels are insured, equal to some 7 percent of the total number of motorized fishing vessels in the country. In the United States of America, it is estimated that approximately 79 000 fishing vessels carry marine hull insurance; this number is about 50 000 in Europe. In India, it is estimated also that marine hull insurance covers between 10 and 20 000 fishing vessels.

In Africa, at least 4 500 vessels are covered by insurance, which is a very small percentage of the total number of fishing vessels. In the Russian Federation at least some 2 260 fishing vessels at present carry insurance, which is only a small portion of the total number of fishing vessels (fishing in marine and inland waters). The number of fishing vessels carrying insurance in Oceania is estimated at between 2 000 and 2 800, while in South America at least some 1 000 fishing vessels are carrying insurance, which implies that on this continent the small-scale sector is largely operating without insurance coverage.

Besides policies for marine hull insurance, the market for health, life and accident insurance of fisherfolk and their families is substantial, taking into consideration the total number of fisherfolk worldwide.

2.6 PERILS COVERED

Because many international insurers have linkages with the London markets where the Institute Fishing Vessels Clauses are promulgated, these clauses are used extensively throughout the industry. While there are some differences among regions, essentially the clauses of the “all risk” type are modified as required by the specific situations in each region. This means that the “all risk” type of policies is most common, but frequently fishing vessels insurers also use the “named perils” policies, e.g. in the United States of America. Their use depends on the coverage desired by the individual fishing vessel owner, and the costs of the policy coverage offered by insurers. Type of vessel, vessel age, fishing areas, gears and equipment used are the main determinants of the business for insurance coverage.

In general, the perils covered include: damage to and the loss of fishing vessels caused by natural calamities, such as: storms, lightning, tsunamis, earthquakes and floods. Also, the costs incurred by the insured to salvage fishing vessels, (provided that such cost does not exceed the total insured sum of the fishing vessel) are generally covered. Additional coverage can generally be obtained for the losses of or damages to fishing vessels caused by war risks, wars, hostile actions, attack, capture, seizure, or detention. “All risk” policies generally also include the coverage of losses and partial losses caused by accidents, such as fishing vessels

being grounded, stranded, sunk or having collided with other objects and/or having encountered fire or explosion.

Apart from common hull insurance, P&I insurance is also common. This class of insurance has become increasingly important for the capture fisheries sector, which is reflected in the number of P&I insurance policies issued. For instance, in Japan, around 90 percent of the fishing vessels carry P&I insurance to cover liabilities for damages caused to other vessels through collisions and damages caused by a third party during navigation of the vessel. Other P&I insurance policies, such as those including life and injury of crewmembers and passengers are less in demand in Japan. In Europe, P&I insurance coverage is often offered by mutual insurance companies, as well as by P&I Clubs.

2.7 VESSELS INSURED

While in Europe, Oceania, and Japan all types and sizes of fishing vessels can be insured, this is not the case in all regions and countries. In Europe, both marine (coastal and offshore) as well as inland fishing vessels can be insured. Types of vessels that are commonly insured include: seiners, purse seiners, trawlers, longliners, tuna vessels, as well as trap-fishing boats. Insurance is available and sometimes obligatory for the larger vessels. Hulls insured can be of steel, glass reinforced plastic (GRP), polyester, wood and concrete; but not all materials are accepted by all insurers. The state of maintenance of the hull is often a key determinant in whether coverage can be offered. Of course, for the larger industrial vessels, reinsurance has often to be sought from the industry, but insurance is generally possible.

In South America, China, India, Africa and to a lesser extent also in the Russian Federation, it is generally more difficult to obtain insurance for small-scale vessels than for the larger ones. Sometimes, small-scale vessels are not accepted, or the policy conditions are such that the insurance coverage is not attractive for small-scale fisherfolk, (e.g. age restrictions might be tighter, sometimes wooden hulls are excluded, hulls must be new and/or of high quality).

Because some fishing practices incur higher risks and are more hazardous than others, there is a large difference in premiums for the same coverage in monetary terms. For instance, underwriting of crayfishing vessels in Oceania and crabbers in some other regions is generally done with caution.

In most regions, recreational fishing boats, vessels used for diving, accessory fishing vessels, tugboats, yachts and barges can be insured as well.

2.8 EQUIPMENT AND GEARS INSURED

International insurers of fishing vessels generally also offer coverage of machinery (engines), fishing gears (purse seines, trawl and gill nets, long lines), processing equipment (including industrial freezers), electronic systems (such as navigation aids, net monitoring and control systems, fish finders, radar, global positioning system (GPS), radio beacons, auto pilots, smoke alarms) and lifeboats. The machinery, equipment and gears used on modern fishing vessels can have a

combined value of hundreds of thousands of United States dollars. Vessel insurers active in Japan, Europe, the United States of America, South America, Oceania, the Russian Federation and Africa commonly insure the above items.

However, gear accessories such as floaters, sinkers and ropes sometimes cannot be included under the coverage (e.g. in Japan and India) and compensations are sometimes paid only for gears in case these are lost together with the vessel (e.g. in Japan, China and India). In India, the equipment and gears of larger vessels can generally be insured; however, engines are not insurable after some years (often three years).

2.9 UNDERWRITING

In most countries and regions the fishing vessel insurers can underwrite individual vessels up to (or on any single risk) US\$1 to 1.5 million or more. For higher valued vessels reinsurance capacity is generally sought on the international market.

In some cases insurers set a certain maximum underwriting capacity for fishing vessel (marine hull) insurance by operating only in their home market. However, fishing vessel insurers are increasingly active in other countries outside their home market. This is a consequence of ongoing market liberalization processes in some of the main fishing nations, and of the fact that larger specialist insurers always seek new and profitable business opportunities. Insurers make frequent use of insurance brokerage firms and agencies, and the larger specialist insurers have established specialized subsidiaries in other countries to meet the specific demands of the fishing fleets in these countries.

In terms of underwriting practices, it can be argued that insurers require extensive information on every production operation offered for insurance, and all applicants will be required to complete specialist application forms as part of the insurance underwriting process. Together with the underwriting and risk management surveys, these forms will assess the risks and hazards that are relevant to fishing operations and insurers will base their underwriting approach on this assessment. The obligatory nature of fishing vessel (marine hull) insurance in Japan means that the Fishing Vessel Insurance Association cannot easily refuse to underwrite a fishing vessel. Of course, premium payments must be made in order that the insurance coverage takes effect.

2.10 RISK MANAGEMENT

Risk management practices differ slightly between the regions. All fishing vessel insurers have risk assessment procedures in place. Both private and public sector insurers carry out risk management surveys. The individual criteria used by insurers and the assessment methods differ, depending on past experiences with fishing vessel insurance, their history of insurance with the specific applicant and their willingness to take on certain risks.

Independent marine surveyors are increasingly used to determine the conditions of the vessel(s) offered for insurance. As knowledge of risk management is developing rapidly and high qualifications are needed, these specialist surveyors

ensure continuous updating. They are familiar with many types of vessels, as well as their construction, the variety of gear and equipment used, their value and lifespan, and the particular hazards related to fishing in a variety of environments.

Under mutual insurance arrangements and insurance that is provided via groups (associations, cooperatives, etc.) insurers and insured can be one and the same and, apart from the usual risk management practices, social relationships play a very important role in the management of the risks that are involved in capture fisheries.

Vessel maintenance programmes, risk awareness programmes and plans, programmes to increase safety-at-sea and related measures, training programmes on risk assessment and management, and better management practices (BMPs) are increasingly used in the fisheries sector, and among fishing vessels insurers. This reduces the risks associated with the fishing industry and the difficult environment in which fishing vessels and their crews sometimes have to operate.

In addition to direct insurers, specialist brokers and specialist surveyors, the reinsurance industry also plays an important role in risk management. The reinsurers have their own standards, conditions and risk management related criteria, which must be adhered to if insurers seek reinsurance for a fishing vessel.

2.11 HANDLING OF CLAIMS

In fishing vessel insurance policies it is stipulated how, when and to whom the insured should send information concerning potential claims, accidents and losses. In general, the insured should notify the insurer immediately of an accident or potential future claim, irrespective of whether or not the damage or loss is covered under the policy. This is also important in view of possible mitigating efforts that could be undertaken (such as the salvage of a sinking vessel) to reduce the damage or loss and/or avoid further losses.

It is important that the insured provides the insurer with a description of the cause and consequences of the damage or loss, an indication of the damage or loss in value terms (preferably combined with evidence and other relevant information, e.g. photographs of the damage or loss).

The insurer will – in most cases – assign an independent loss surveyor and sometimes also a specialized loss adjuster who will manage the claim. In certain cases, more than one loss adjuster will be at work, as larger fishing vessels companies often also arrange for a loss adjustment report. However, in most cases one adjuster works in close collaboration with the insured and insurer on the claim.

Within mutual insurance arrangements, the damage and loss surveys are generally the domain of the mutual insurance company itself. In most cases the mutual insurance companies have their own division or service dealing with the claims from their members. Within the Japanese system, the Central Society of Fishing Vessel Insurance Associations has its own inspectors who can provide damage assessments, and will ensure proper handling of the claims.

It is in the interest of both the insurers and the insured to have claims settled promptly, especially in view of the fact that loss in fishing time and costs of legal processes are increasingly part of the coverage provided. In the case of mutual insurance companies, it is clear that they were established with the intention of serving the fishing members in the best possible way; thus here also a rapid loss adjustment and claim settlement process are considered important.

2.12 UNDERWRITING EXPERIENCES

The underwriting experiences in the fishing vessel insurance business over the last decade show a wide diversity. Results seem to have improved in the Russian Federation. At present they are generally good in Oceania and Africa, while in recent years, they have been generally balanced in China and Japan. It should be noted here that the underwriting experiences in China would be much worse if the government had not subsidized the sector. In India, the underwriting experiences were poor in 2004–2005 as a consequence of the December 2004 earthquake, which was followed by a tsunami. In the same year ten typhoons struck Japan, causing high losses to the Japanese basic fishing insurance scheme. In the United States of America underwriting experiences can be considered marginally positive in recent years.

The various regional reviews showed that trends in the fishing sector have a great influence on the results of the insurance sector. In Japan, the varied underwriting results were mainly influenced by the occurrence of large typhoons. Years with frequent typhoons generally cause higher numbers of claims and payments. In China, the subsidy provided by the government and the size of the vessels insured are key determinants of the profitability of underwriting practices. Larger subsidies and larger vessels mean profits for Chinese fishing vessels insurers, but because a large part of the fleet consists of small-scale, poorly maintained vessels, the overall business has seldom generated profits in recent years.

The fishing vessel underwriting experiences in the Russian Federation were negatively affected by the ageing of the fleet, reduced fisheries production and reduced incomes from fishing. This resulted in reduced investments in fleet maintenance and repair and worsening overall conditions of the fishing fleet. In addition, human negligence is a major cause of damage and losses in fishing vessel insurance in the Russian Federation.

In Europe the greater vigilance among insurers active in fishing vessel insurance has improved results in recent years. This was helped by the reduced fishing time (days at sea), the reduction in the number of fishing vessels – often meaning that older vessels are taken out of the fleets with the support of European and national subsidy schemes – an increase in safety measures as being demanded by some countries in the European Union, and higher levels of deductibles that are accepted by the insured to reduce their premium payments.

While fishing vessel insurance showed diverse results, P&I and group life and accident schemes showed underwriting results that generally were positive – sometimes even rated as excellent – in the regions and countries included in the survey.

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ANNEX 1**REVIEW OF THE CURRENT STATE OF WORLD CAPTURE
FISHERIES INSURANCE***Questionnaire for Primary Insurers*

Conducted on behalf of the Food and Agriculture Organization of the
United Nations (FAO), Rome

The information you provide in answer to the questions in this survey, will be treated in the strictest confidence, and will not be made available in any format that can identify your information with your company. Your answers will be combined into a single section of an overall review, a copy of which will be made available for free, to those who provide the information requested.

Please provide as much information you can, in answer to the following questions:

Your Company's name:

The information in this box will only be used in case of the need to follow up for possible clarification, and will not be published, or released beyond the team of FAO consultants and staff.

About the vessels you will insure:

List the type and size of vessels you currently insure:

List any other vessels you believe you will be insuring in the reasonably near future:

List any type/ size of vessels you are not prepared to insure: (Please explain briefly).

How many vessels do you insure?

About the equipment (including navigation, fish finders, outboard motors, quick freezers, etc) and gears (nets/ systems) you will insure:

List the equipment and gears you currently insure:

List any other equipment and gears you believe you will be insuring in the reasonably near future:

List any fisheries equipment and gears you are not prepared to insure: (Please explain briefly).

About the activity you will insure:

Please tick the fisheries activities you currently insure:

Offshore fisheries Near-shore/in-shore fisheries Inland fisheries
 Trawling Purse-seining Gillnet fishing Trammel net fishing Longlining
 Push net fishing Lift net fishing Fishing with traps Fishing with set-nets
 (fykes) Recreational fishing Game fishing Diving for lobster/fish Diving
 for ornamental fish
 Tuna pole fishing Others , please list.....

List any fishing activities you believe you will be insuring in the reasonably near future:

List any fishing activities you are not prepared to insure: (Please explain briefly).

About your underwriting capacity:

What is your Company's net capacity, in US\$, on any single risk (i.e. at any single location or in respect of an aggregation of locations): \$

What is your Company's gross capacity (with reinsurance), in US\$, on any single risk (i.e. at any single location or in respect of an aggregation of locations): \$

Are you restricted to underwriting capture fisheries risks in your own country only:
 YES NO

If "YES", please explain briefly:

If "NO", list the other countries in which you provide these services:

Is your capacity available to "follow" the terms of other specialist underwriters or will you only support your own terms and conditions: Will follow other underwriters
 Only our own:

Handling claims:

Do you handle your own losses or do you use independent loss adjusters:

Use own adjusters only

Use independent adjusters

Risk management surveys:

Do you do your own risk management surveys, or use independent experts:

Use own Surveyors only:

Independent Surveyors

Basic terms & conditions:

Will you underwrite “All Risks” terms and conditions, or are you only prepared to underwrite “Named perils” terms: “All risks “ Only “Named perils”

Have you developed your own Application Forms: YES NO

(If you answer “YES” to this question, please may we have a copy of your Application Forms?)

Have you developed your own policy terms and conditions: YES NO

(If you answer “YES” to this question, please may we have a copy of your policy wording?)

How many capture fisheries insurance policies do you have in effect at the moment?
 ____ policies.

Your Company’s experience:

How long has your company been underwriting capture fisheries insurance for: ____ years.

How would you describe your Company’s fisheries underwriting results since it started underwriting fisheries business, or over the last 10 years.

	Very bad	Bad	Neutral	Good	Very good
2006:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2005:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2004:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2003:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2002:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2001:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2000:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1999:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1998:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1997:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1996:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Other classes of fisheries insurance:

In addition to fishing vessel/equipment insurance, can you provide the following classes of insurance cover to fisheries companies?

Buildings and onshore equipment:	YES <input type="checkbox"/>	NO <input type="checkbox"/>
Public Liability:	YES <input type="checkbox"/>	NO <input type="checkbox"/>
Employers Liability:	YES <input type="checkbox"/>	NO <input type="checkbox"/>
Products Liability:	YES <input type="checkbox"/>	NO <input type="checkbox"/>
Transport Liability:	YES <input type="checkbox"/>	NO <input type="checkbox"/>
Marine Liabilities:	YES <input type="checkbox"/>	NO <input type="checkbox"/>
Aquaculture stocks:	YES <input type="checkbox"/>	NO <input type="checkbox"/>

Fisheries insurance development constraining factors:

What do you consider the main constraints to further development of the capture fisheries insurance business?

NOTE: The constraints could be, but not restricted to, lack of appropriate policy measures and weak regulatory and supervisory framework and implementation capacity.

How do you think these constraints could be overcome?

Fisheries insurance promotion:

Do you see a role for international agencies, like FAO, to assist in overcoming the above mentioned constraints and support the development of fisheries insurance?

YES NO

(If you answer "YES" please, please let us know what you think FAO should do in this respect)

Do you see a role for other stakeholders in promoting fisheries insurance, particularly among small-scale fisheries?

Fishers' organizations and cooperatives YES NO

Micro-finance institutions YES NO

NGO's YES NO

(If you answer "YES" please, please let us know what you think that they should do in this respect)

3. The current state of capture fisheries insurance in China

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3.1 INTRODUCTION

China is the largest producer of fisheries products in the world. In the recent past, both the volume and value of China's fisheries production have increased. Admittedly, aquaculture is contributing much to it; however, the capture fisheries industry is undeniably an integral part of the national economy. The sector has long been and still is supplying the public with the raw materials and other necessities for their livelihoods.

However, maritime capture fisheries have always been regarded as a high-risk industry. These risks originate mainly from the following:

- 1) Natural calamities: Capture fisheries are vulnerable to natural disasters, such as severe weather, lightning, flood, earthquake and tsunamis. Capture fisheries, when affected by these disasters, often are confronted with the loss of the lives of crews as well as large financial losses. According to the China Fisheries Yearbook 2006 (Fishery Bureau, 2006), 1 856 vessels were wrecked throughout the country in 2005, of which 1 662 vessels belonged to the four coastal provinces: Fujian, Guangdong, Jiangsu and Zhejiang. Moreover, 104 people were reported dead and 156 people missing. Taking these data into account, it is estimated that there was one ship sunk for every 15 000 tonnes of seawater. The average mortality rate among fisherfolk active in marine capture fisheries in China is high, about 25 to 30 times higher than that of the United States of America, and 20 times higher than among fisherfolk in Italy.
- 2) Accidents: Fishing vessels (especially offshore ocean-going vessels) are frequently grounded, stranded, sunk, destroyed by fire, damaged by explosion or involved in collisions at sea. It is estimated that every year the loss of ocean-going vessels caused by these accidents amounts to around ¥700 million. In recent years, since near-shore fishery resources are

becoming increasingly scarce, fishers tend to go farther offshore. This trend contributes to higher risks, especially for wooden and poorly equipped vessels having engines of less than 44kW. According to national statistics, there were 1 972 vessel traffic accidents, 693 sunken ships and 1 181 people reported dead or lost in the period from 1997 to 2001 in the eastern sea fishing zone. The loss of vessels and lives, and its impact on the fishing communities, was estimated at over ¥225 million. The statistical data indicate that vessel accidents and the loss of lives among fisherfolk have been increasing in recent years and that there is no sign that this trend will change in the near future.

In addition to natural disasters and accidents, capture fisheries are vulnerable to damage from other sources, such as the deterioration of the fishery products onboard and onshore, market risks, production technology risks, operational risks, etc. Therefore, ship owners and fisherfolk are in great need of a feasible and efficient capture fisheries insurance system that addresses the specific demands of the sector.

3.2. THE INSURANCE MARKET

3.2.1 Insurance companies

A number of insurance companies have become active or have been established in China of late. In 2005, 23 new companies obtained a licence to provide insurance services to the Chinese market, including two domestic health insurance companies, two domestic pension companies, four domestic comprehensive life insurance companies, five foreign comprehensive life insurance companies, nine domestic companies and one foreign property and casualty insurance company. As of March 2007, China possesses 39 property and casualty insurance companies, 53 life insurance companies, five reinsurance companies, six insurance holding groups, nine insurance asset management companies, 1 684 insurance agencies, 319 insurance broker companies and 258 insurance surveyors and loss adjusters companies.⁶

3.2.2 Domestic insurance companies

The development of domestic-funded insurance companies is characterized by the following:

- The number of insurance companies is increasing rapidly. Before 1996 there were only six insurance companies, namely, the People's Insurance Company of China (PICC), Ping An Insurance Company of China (Ping An China), China Pacific Insurance Company, Xinjiang Production and Construction Corps Insurance Company, Da Zhong Insurance Company of China and Tian An Insurance Company of China. Towards the end of 2005, there were already 42 domestic insurers.
- Many specialized domestic insurance companies have started up businesses. These can be divided as follows: (a) pension insurance: in December 2004, the

⁶ See China Insurance Regulatory Commission: www.circ.gov.cn/

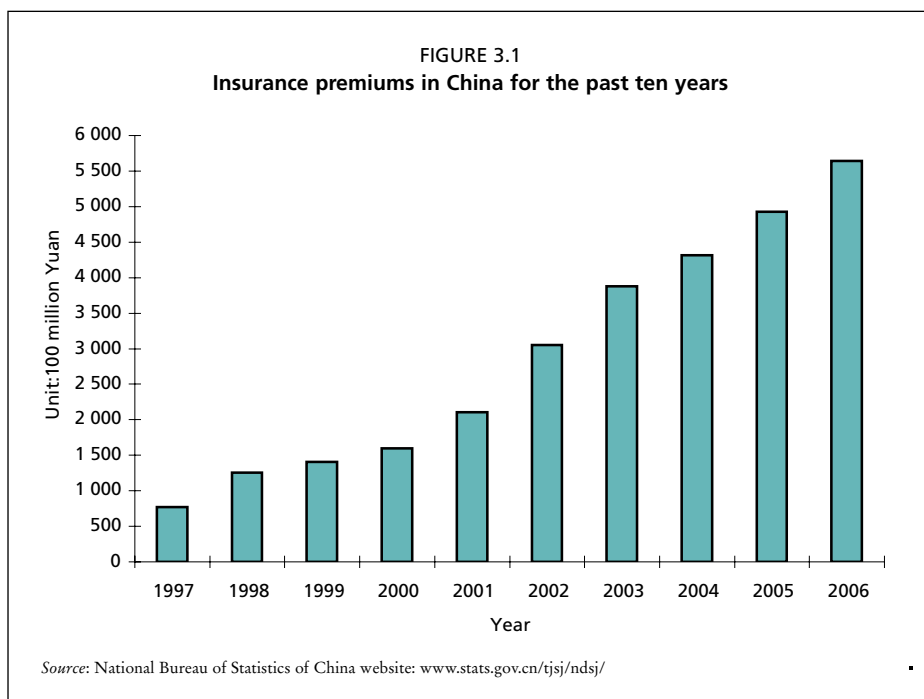
first two pension insurance companies were founded; (b) health insurance: in the first half of 2005, PICC Health Insurance Company Limited led the way in specializing in health insurance; (c) car insurance: in December 2004, Tian Pin Automobile Insurance Company Ltd initiated automobile insurance; and (d) agricultural insurance: since 2004, three regional policy-related agricultural insurance companies have been established, namely, Shanghai Anxin Agricultural Insurance Company Ltd, Anhua Agricultural Insurance Company Ltd and Sunshine Agricultural Mutual Insurance Company Ltd.

- Innovation in insurance models is taking place. In January 2005, Sunshine Agricultural Mutual Insurance Company Ltd, China's first mutual insurance company, was set up. This company was based not only on ten-year pilot practices in the Heilongjiang cultivation area, but also on international experiences and success stories. The corporation is standardizing the operation of mutual funds and provides crop insurance, cultivation and farm insurance, property and casualty insurance, liability insurance, etc.
- Mixed management is increasing in the insurance industry. Many insurance companies have established holdings or groups and more transparent and comprehensive management procedures and processes.
- Transformation of state-owned insurance enterprises continues. PICC, China Life and Ping An China have part of their shares listed abroad, allowing the shareholders to contribute to the reforms of these financial giants.
- More foreign owned and private companies are investing in domestic insurance companies, which sometimes lead to more complicated equity structures.

3.2.3 Foreign capital insurance enterprises

China is trying to fulfil its promises with regards to the agreements signed when it became a member of the World Trade Organization (WTO). The country opened up its domestic insurance market for foreign insurers step by step. Presently, China's insurance market is open to foreigners in all areas and for almost all business, except some legal insurance business. Therefore, the business scale of insurance companies having foreign investment is expanding quickly and extensively. The following aspects characterize this development:

- The number of foreign insurance companies is increasing rapidly. By the end of 2005, the number had risen to 40; there were only 21 before China joined the WTO. Among the top global 500 enterprises listed by Fortune Magazine, 46 are foreign insurance companies, of which 27 have founded branches in China.
- The insurance premium payments are soaring, and with it the market shares of insurance companies. In 2005, the insurance premium of domestic companies reached ¥458.62 billion, an increase of over 8 percent compared with the previous year. In the same year, foreign insurance companies reported a premium of ¥34.12 billion, which was an increase of 248 percent compared with the previous year. Obviously, the growth rate by foreign insurers is much higher than that of domestic companies.



- Regional barriers are being dismantled gradually. Foreign enterprises are also beginning to establish their business in mid-western China, and the central cities of Chengdu and Chongqing are becoming financial centres. The authorities allowed Groupama from France and Liberty Mutual from the United States of America to form branches in Chengdu and Chongqing respectively, in June and November 2003.

3.2.4 Growing demand for insurance and increasing insurance premiums

Along with improvement in market access for insurance, public awareness has been enhanced; thus the market for insurance companies is increasing. This is presented in Figure 3.1.

3.2.5 Reduced monopoly power

The fact that more insurance companies are emerging promotes competition in the market; therefore market concentration is becoming more diffuse. The combined market share of the top three property insurers and life insurers in terms of insurance premiums collected has fallen from around 95 percent in 2001 to just over 70 percent in 2006.

3.3 DEMAND AND SUPPLY ISSUES

3.3.1 Demand

The number of hooker-type fishing vessels in China is the largest in the world, as is the number of fishers. According to the latest data, there are around 3 090 000

people employed in capture fishing and about 510 000 motorized fishing vessels, including 278 000 marine capture vessels. Ninety percent of these fishing vessels possess less than 200 horsepower (HP), 60 percent have even less than 20 HP, and about 20 percent are over ten years old. The smaller fishing vessels are generally of limited economic value and are used only for near-shore fishing. Many are used for small-scale trawling.

In Zhejiang Province, insurance consciousness is relatively high. Fishing vessels have about seven to nine crewmembers and usually are covered by ship owners against employers' liability risk. When the employer insures employees, name registration is unnecessary. The direct beneficiary in the insurance policy is the ship owner, but the crewmembers and their families are the final beneficiaries. The insurance-covered hooker-type vessels are mainly production as well as auxiliary vessels.

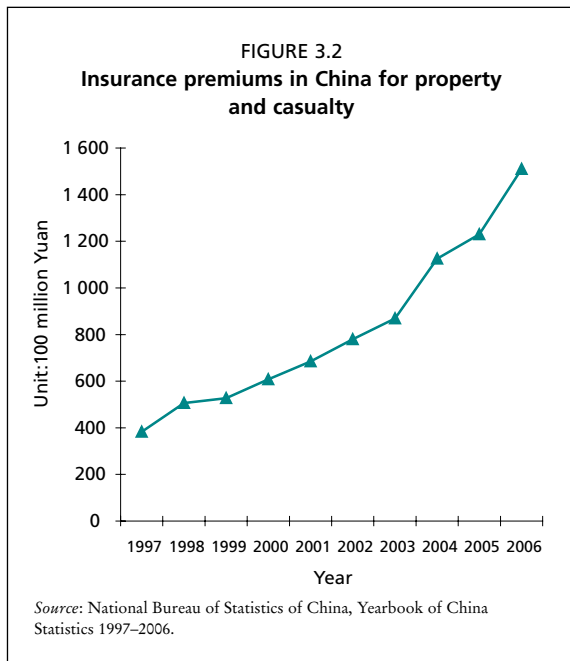
In Shanghai, fishers have become increasingly interested in insurance. In 2004, the local government announced it would provide every crewmember with insurance coverage of ¥10 000 as employer's liability insurance. In 2006, this provision was increased to ¥200 000. In the meantime, the local government subsidizes 30 percent of the premium of fishing vessel (hull) insurance, while the insured must pay the other 70 percent of the premium. As a result, 80 percent of all fishing vessels are currently covered.

In general, fishing vessel insurance is not compulsory, but some cities or regions have issued regulations in this respect. For example, Zhoushan City, in Zhejiang Province requires that fishing vessels of over 120 HP be insured. Otherwise they are not allowed to leave port.

3.3.2 Supply

In China, fisheries are historically considered part of the agriculture sector; therefore fisheries insurance is also regarded as an integral part of agricultural insurance. However, agricultural insurance in China has a short history and progress is rather slow.

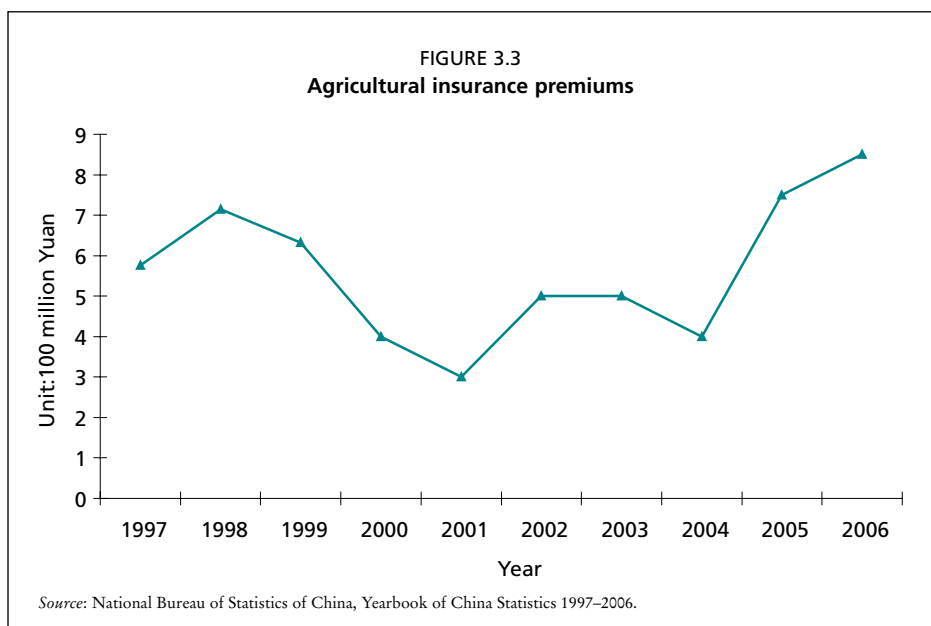
Agricultural insurance started officially in China in the 1950s. At that time, PICC had provided continuous agricultural insurance services for around eight years. During the period from 1950 to 1952, the total insurance premium was 480 billion old Yuan, while it paid an indemnity of 180 billion old Yuan. During the period of the Great Leap Forward and the Cultural Revolution, insurance was annulled. In 1982, agricultural insurance services were resumed, but because of the high loss ratios during pilot projects, very few companies stayed in business. Statistics from the China National Statistical Bureau indicate that insurance premiums from agricultural insurance were ¥43.3 million in 1985, ¥192 million in 1990 and ¥829 million in 1993. In the period from 1991 to 1995, China was exploring new ways to manage agricultural insurance, but none proved to be feasible. Even after 1996, when China's insurance companies began to transform their operational system, the agricultural insurance business decreased annually in view of its limited profitability.

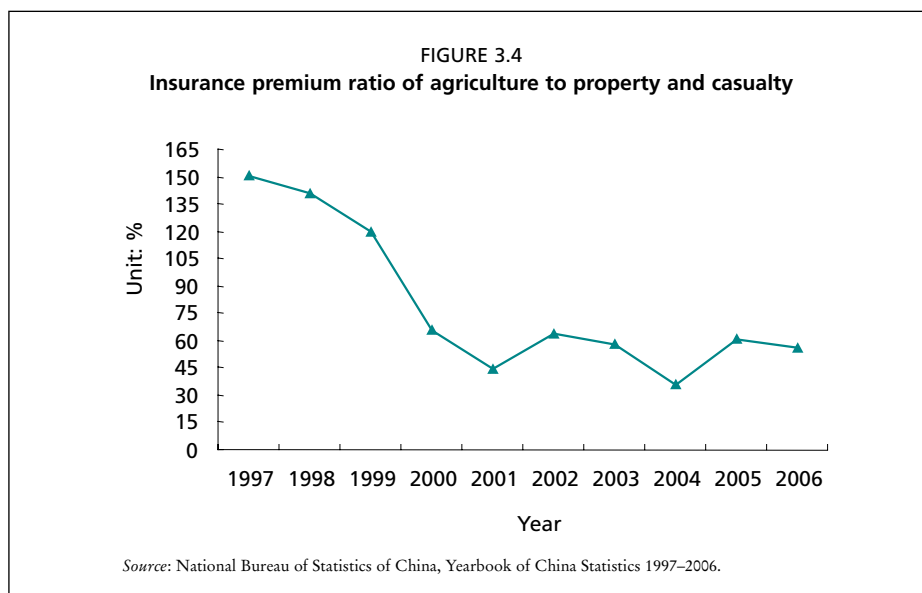


Compared to the premiums received from property and casualty insurance in 1997, the agricultural insurance premium was less than 2 percent, and even decreased to 0.6 percent in 2006. These trends are laid out in Figures 3.2, 3.3 and 3.4.

In 1982, PICC tried unsuccessfully to initiate aquaculture insurance. In December 1983, the former Ministry of Agriculture, Animal Husbandry and Fisheries and PICC teamed up and jointly issued a “Notice on developing domestic fishing vessel insurance” and promulgated the Provisional Measures on Insurance for Domestic Hooker-type Vessels to promote fisheries insurance. But until the end of 1986, the number of insured marine vessels had only

reached 260 000, a little over 10 percent of the total number of marine vessels. In May 1987, these partners held their first insurance meeting to further accelerate the development of fishing vessel insurance. Since the 1980s, fisheries insurance has progressed slowly; this can be largely attributed to high loss ratios.





At present, the following three types of companies are active in the fisheries insurance market:

- 1) **Commercial insurance companies:** PICC and Xinjiang Corps Insurance Company (renamed as China United Property Insurance Company Ltd) implemented policy-related agricultural insurance until recently. These two companies became joint stock companies, and gradually withdrew from the market of agricultural insurance. The ratio of agricultural insurance premiums received, compared with their total premiums received, is small and decreasing. Other commercial insurance companies operating fisheries insurance, especially the hooker-type vessel insurance business, include the following:
 - China Dadi Property Insurance Company Ltd;
 - Dazhong Insurance Company Ltd of China;
 - Bohai Property Insurance Company Ltd;
 - Ming An Property Company (China), Ltd.

Furthermore, foreign investment in agricultural insurance has caused some public concern. In October 2004, Groupama, a large French international insurer of agricultural activities and other sectors, set up a branch in Chengdu, China.

- 2) **Policy-related regional agricultural insurance companies:** China is trying to establish a new policy-based agricultural insurance mechanism to promote the development of rural areas by providing financial instruments and to speed up the modernization of agriculture. The same mechanism should contribute to the integration of urban and rural areas, by providing economic compensation for agriculture and farmers that are affected by disasters. The government provides the basis of the mechanism, while the orientation is towards the market. A pilot project is being carried out.

An initial experiment to increase efficiency and equity was the establishment of the Shanghai Anxin Agricultural Insurance Company Ltd in September 2004. The risks covered included aquaculture crop-related risks and liability risks. Furthermore, Shanghai Anxin reinsures the China Fishery Shipowners Mutual Insurance Association⁷ (CFSMIA). In December of the same year, another similar company, Anhua Agricultural Insurance Company Ltd, was created in Changchun, Jilin Province, where it carries out its main business. In November 2005, Sunshine Agricultural Mutual Insurance Company Ltd was established in Heilongjiang Province.

- 3) **Cooperative society (CFSMIA):** Having learned from the experiences of Korea and Japan, the Ministry of Agriculture of China expedited the establishment of CFSMIA on 6 July 1994 to branch out into non-profit mutual insurance activities. After a decade of development, CFSMIA can be considered the main supplier of the capture fisheries insurance market in China, especially for small-scale fisheries. It has about 50 000 members.

The headquarters of CFSMIA is located in Beijing with auxiliary branches in provincial capitals and sales offices in other large cities and towns. The administration of fishery and fishing harbour supervision and registration of fishing vessels in all provinces and regions of China are activities carried out by the agents of CFSMIA. Fishers can be members of the Association provided they submit:

- a certificate of fishing vessel inspection;
- a certificate of fishing vessel seaworthiness;
- a certificate of professional training;
- a copy of their ID card.

This regulation includes ship owners, operators and crewmembers, as well as personnel on chartered vessels.

At the outset, CFSMIA, because of the lack of guarantee funds, could insure fishers only against the loss of life of crewmembers and the total loss of fishing vessels. With the expansion of business and the increase of reserves, the insurance capacity has become stronger, the premium rate has been reduced, the minimum required horsepower limit is lower than before and the maximum compensation limit has increased. In addition, new insurance services have been introduced.

The individual branches of the CFSMIA at the provincial level are relatively independent of their headquarters in Beijing. The performance of capture fisheries insurance varies greatly among the branches owing to different local conditions. The typical representatives of overall performance are in Shanghai and Zhejiang.

It should be pointed out that for hull and oil pollution damage, the main insurance companies, PICC and China United Property Company Ltd, usually obtain reinsurance from other international underwriters,

⁷ Information available at: www.cfpi.org.cn

for example Japan P&I Club and Skuld & Gard. In contrast, domestic policy-related regional agricultural insurers are in urgent need of reinsurance services. While the many branches of CFSMIA share their risks with domestic joint-stock insurance companies, some of them prefer reinsurance.

State-owned fisheries companies are inclined to obtain insurance coverage from PICC or China United Property Company Ltd; occasionally they will turn to brokers in Hong Kong (e.g. AON) and then insure with foreign insurers.

3.4. POLICIES IN FORCE

The number of policies in effect in China is unknown. However, it is likely that the aggregate premium payment figures can provide some insight. Data obtained from CFSMIA show that from its establishment in 1994 till 2005, there had been a total of 2.1 million fishers and 100 000 fishing vessels insured. CFSMIA had paid over that period a total of ¥3.1 billion as compensation for 4 363 fishers who died or disappeared, 15 216 fishers who were injured, 858 fishing vessels that were considered a total loss and 18 248 who had suffered partial loss. It had accumulated reserves of ¥75 000. In 2005, 300 000 fishers (sometimes including their households) and 20 000 fishing vessels were covered. This means that nearly 10 percent of the fishers and 7 percent of the marine motorized fishing vessels were insured by CFSMIA. In 2005, the premium reached ¥160 million. In 2006, about 360 000 fishers and 25 000 fishing vessels were insured by CFSMIA.

The fishing vessel insurance premium gained by PICC, Shanghai, is usually about ¥2.5 million. Anxin Shanghai reported that there were only 110 fishing vessels insured in the largest fishing port – Xijia Port of Shanghai – in 2005. This means that only some 13 percent of the fishing vessels operating from this port in Shanghai had insurance coverage in 2005. However, in 2006, the percentage of vessels insured increased tremendously, and reached 87 percent. The premium also climbed to a new peak at nearly ¥1.7 million, 150 percent higher than the same period one year earlier. The premiums collected in the same port were expected to reach ¥2 million in 2007.

In Zhejiang Province, the capture fisheries related insurance premium collected was 70 million in 2006, and it was likely to reach over ¥100 million in 2007. There are about 24 000 fishing vessels above 120 HP, and about 9 000 are currently insured. Of the estimated 170 000 fishers in the province, only 100 000 are covered by insurance. However, In Zhoushan province, marine insurance coverage is estimated at 100 percent.

3.5 PERILS COVERED

The perils covered by commercial insurers, policy-related insurers and the CFSMIA do not vary a great deal. The main differences lie in market access. Commercial insurers, such as PICC only cover large fishing vessels with high HP, while CFSMIA also covers small-scale fishing boats.

3.5.1 Perils covered by CFSMIA

Fishing vessels

- Total loss: Total loss of the complete fishing vessel insured, caused by natural calamities such as: severe weather, lightning, tsunamis, earthquakes and floods, as well as the cost incurred by the insured on salvaging the fishing vessel, provided that such cost shall not exceed the total sum insured of the fishing vessel, are covered.
- Total loss plus third party collision liability coverage: Hull, equipment and salvage are covered, as well as third party liability caused by collision.
- “All risks”: this coverage includes the above, and in addition the coverage of partial loss caused by accidents such as fishing vessels grounded, stranded, sunk or having collided with other objects and/or having undergone fire or explosion. The cost incurred by the insured of salvaging the goods or averting or minimizing a loss recoverable under the policy, provided that such cost shall not exceed the sum insured of the vessel, is covered as well.
- Additional risks that can be insured include: activities in the areas of Nansha Islands and Beibu Gulf, machinery breakdown, guarantee risks and oil pollution damage.

Fishers-employer’s liability risk

The insurance covers the employer’s liability either for bodily injury or casualty during business activity carried on by the insured.

3.5.2 Hospitalization

The insurance covers risks caused by contingencies and compensates partial fee-for-service charged by hospitals.

3.5.3 Perils covered by CFSMIA (Zhejiang Branch)

Employer’s liability risk

The premium rate of the employer’s liability risk is 0.6 percent. Each fisher is restricted to the purchase of 20 shares and each share equals a coverage of ¥10 000. Those who buy more than five shares enjoy a 20 percent provincial fiscal subsidy. The additional contingency rate of the premium is 1 percent, and is subject to a maximum of ¥20 000 per fisher.

Fishing vessels

In view of the variation in vessel conditions and the different materials of which the vessels are made, the Zhejiang Branch of CFSMIA applies specific premium rates as listed in Table 3.1. The insured vessels enjoy a provincial fiscal subsidy at the rate of 20 percent on the basis of total loss premium.

The insured value is entrusted to be further confirmed according to the specific circumstances by individual affiliates of the Zhejiang chapter. For ocean-going fishing vessels over 25 years of age, the chapter limits the amount insured. The maximum amount for vessels longer than 45 metres is ¥600 000, while the

TABLE 3.1
Premium rate of CFSMIA – Zhejiang Branch

Liability rate		Total loss liability	"All risks" liability	Maximum proportion of the insured value
Type of fishing vessels	Age of vessels			
North Pacific squid jigging vessel + offshore fishing vessels+ accessory fishing vessels	Less than 5 years	1.01%	1.52%	80%
	5–10 years	1.12%	1.68%	80%
	11–19 years	1.26%	1.89%	70%
	20–25 years	1.40%	–	70%
Southwest Atlantic Squid jigging vessel	More than 25 years	1.50%	–	50%
	–	1.10%	1.70%	80%

Source: CFSMIA – Zhejiang Branch.

Note: the premium receivable = the insured amount × the premium rate.

Provincial fiscal subsidies = the insured amount × the rate of total loss liability. The premium paid = the premium receivable—provincial fiscal subsidies.

maximum amount for those shorter than 45 metres is ¥500 000. Salvage charges and expenses are subject to 10 percent of the insured amount. It is agreed that in the case of partial loss, the deductible franchise for steel fishing vessels is ¥1 000, and the ratio of franchise is no less than 10 percent.

Both individual fishers (small-scale fishers) and larger fishing vessels belonging to fisheries or ocean companies can benefit from the fiscal subsidies on insurance premiums. However, only the branch of CFSMIA in Zhejiang has the right to provide these subsidies, thus implicitly excluding those insured by domestic commercial insurers or foreign companies.

3.5.4 Capture fisheries risks covered by Shanghai Anxin insurance policies Fishing vessels

Total loss of whole fishing vessel insured caused by force of nature, including:

- natural calamities: severe weather, lightning, tsunami, earthquake, fire and flood;
- contingencies: as a result of accidents causing the fishing vessel to be grounded, stranded, sunk or having collided with other objects.

Partial loss caused by accidents resulting in the fishing vessel being grounded, stranded, sunk or in collision with other objects such as vessels, jetties, lighthouses and navigation aids and other reasonable expenses of litigation thereof. The cost incurred by the insured on salvaging the goods or averting or minimizing a loss recoverable under the policy (providing that such cost shall not exceed the sum insured of the vessel) is covered as well.

Fisherfolk

Fisherfolk from 16 to 65 years old can be insured against injuries and death.

3.6 VESSELS INSURED

Generally, commercial insurers only insure hulls of good quality. On request, some additional risks, for example oil pollution damage insurance, can be included in the coverage.

CFSMIA is the organization of fisherfolk that was established by them to serve both fisheries and fishers, therefore, it is easily accessible. This is generally the case for policy-related agricultural insurance companies.

In the province of Zhejiang, all fishing vessels above 120 HP must be insured against total loss and employer's liability risk. It classifies fishing vessels into four types:

- North Pacific squid jigging vessels;
- offshore fishing vessels;
- accessory fishing vessels;
- Southwest Atlantic squid jigging vessels.

Except for Southwest Atlantic squid jigging vessels, the others are differentiated by age. Insurance of older vessels requires higher premium rates because the total value insured of these vessels is lower.

3.7 EQUIPMENT AND GEARS INSURED

Commercial insurance companies, such as PICC, consider vessel insurance as comprising the vessel, including the hull, lifeboat, machinery, equipment, instruments, rigging, fuel and material, and excluding only the fishnets.

Shanghai Anxin regards this differently: in its policies, the anchor, helm, propeller and navigation equipment of the insured vessel are not covered if independent of the vessel. They are covered only if damaged or lost together with the vessel. The nets and other fishing gears, fuel, catch, provisions, living facilities and private property of the crew are not covered.

In Zhejiang Province, small vessels are usually insured against total loss. Insurance coverage of larger vessels is negotiable and can include additional coverage for specific needs.

3.8 UNDERWRITING

At present the following companies or associations are engaged in capture fisheries insurance:

- PICC;
- China United Property Company Ltd (CUPC);
- China Dadi Property Insurance Company Ltd;
- Dazhong Insurance Company Ltd of China;
- Bohai Property Insurance Company Ltd;
- Ming An Property Company (China), Ltd;
- Shanghai Anxin Agricultural Insurance Company Ltd;
- Anhua Agricultural Insurance Company Ltd;
- Sunshine Agricultural Mutual Insurance Company Ltd;
- CFSMIA and its branches around China.

Both PICC and CUPC are state-owned companies, with extensive business connections around the country and a number of agents worldwide. They reinsure with foreign reinsurance companies. Because of a relatively high threshold setting, their fisheries sector clients are generally state-owned ocean fisheries companies.

These commercial insurers are not treated preferentially by the government and do not enjoy fiscal subsidies.

Policy-related agricultural insurers are partly subsidized by local fiscal revenues. For example, in Shanghai, the public fishing vessel insurance enjoys a special 30 percent subsidy from the municipal revenues and every fisher is provided with free-of-charge personal accident insurance of ¥200 000.

Branches of CFSMIA around the county either coinsure or reinsure with their headquarters or with commercial insurers or policy-related agricultural insurers. They usually enjoy certain subsidies, which largely depend on the condition of provincial and local government finances. The Zhejiang Branch of CFSMIA offers a maximum underwriting capacity on one policy (one vessel) of ¥30 million. The maximum underwriting capacity also depends on negotiations with the provincial government. The subsidy rates vary annually. In 2006, the subsidy was ¥13 million, while in 2007 the subsidy was ¥26 million.

3.9 RISK MANAGEMENT

Insurance companies tend to take the following measures to assess, manage, share and even decrease and eliminate risks involved in underwriting capture fisheries activities:

- They coinsure or reinsure to share risks. Commercial insurers like PICC usually reinsure against oil spill with international reinsurers. In Zhejiang, CFSMIA reinsures with its headquarters, PICC and Dadi Property Insurance Company Ltd. Profitability in recent years in the reinsurance of fishing vessels (e.g. in Zhejiang), is increasing interest among reinsurers. In Shanghai, the CFSMIA Chapter shares its risks by 50 percent with Shanghai Anxin.
- Before insuring, underwriters will inspect the vessels. Claim settlements will be done professionally and efficiently after damage occurs. When a fisher wants to purchase insurance, the relevant certificates and licenses are required. PICC will investigate the age and size of a vessel before determining whether to insure it. PICC can designate its nearest agent to inspect and settle the claim, as it has a network of international agents. As far as CFSMIA is concerned, its agents are generally employees of the Administration of Fishery and Fishing Harbour Supervision; these agents are involved in the assessment and settlement of claims and contribute to information symmetry between insured and insurer.
- Before underwriting takes place, insurers calculate the depreciation of the vessel, taking into account the quality and age of the vessel. The older the vessel, the higher the depreciation rate. The maximum depreciation rate stipulated by Shanghai Anxin is 50 percent.
- When an insurer enters into an insurance contract with a client, often a clause called “under-insurance” will be included. For example, one may insure a vessel at ¥800 000, when the total value of the vessel actually comes to ¥1 000 000. At the time of partial loss, the insurer will pay only a proportion of the ¥800 000 while the insured will have to cover the remaining portion

TABLE 3.2
Vessels evaluation and amount insured – Shanghai Anxin

Types of fishing vessels	Price standard/tonnes	Amount to be insured
Wood	¥4 500/T	Price standard × total tonnage × (1— depreciation rate) × agreed proportion insured
Steel and wood	¥5 000/T	
Steel	¥5 500/T	
Glass steel	Otherwise specified	Otherwise specified

Source: Shanghai Anxin Agricultural Insurance Company Ltd.: www.aaic.com.cn/anxin

TABLE 3.3
Depreciation rate for fishing vessels

Years	Depreciation rate (%)
More than 20 years	50
From 15 to 20 years	40
From 10 to 15 years	25
From 5 to 10 years	15
For 5 years or less	No depreciation

Source: Shanghai Anxin Agricultural Insurance Company Ltd.: www.aaic.com.cn/anxin

TABLE 3.4
Limit on the number of fishing crew covered under an employer's liability insurance

Types of fishing vessels	Number limit
Offshore	10
Changjiang	5
River, lake or tideland	3
Ocean	20

Source: Shanghai Anxin Agricultural Insurance Company Ltd.: www.aaic.com.cn/anxin

TABLE 3.5
Insurance premium tariff of fishing vessels

Risks	Premium rate	Charge rate adjustment
Fishing vessels to be covered against "all risks"	Wood 3.3%	In case of no indemnity in the last insurance year, the client generally enjoys a reduction in the premium rate of 10 percent, upon renewal of the coverage. This reduction could however never be higher than 30 percent of the original premium.
	Steel and wood 2.97%	
	Steel 2.64%	
	Glass and steel 3.85%	
Employer's liability risks	Free of charge	

of the loss. This practice is common in insurance policies to avoid accidental loss and decrease the possibility of fraud. CFSMIA has set in its regulations a maximum level of insurance of 80 percent of the value of the fishing vessel, for those vessels that are less than five years old.

- Within the framework of the insurance agreement, a deductible franchise is generally applied. This means that if the losses are limited and lower than the

deductible, there will be no compensation; similarly, if the losses are high the insurer covers the insured amount minus the deductible.

- Premium rates fluctuate between years and vessels insured. CFSMIA adjusts its premium tariff yearly according to the indemnity situation of the previous year. Shanghai Anxin prescribes a standard premium, which depends on tonnage of the vessel (Table 3.2), and applies a depreciation rate (Table 3.3) for different age categories, the number of onboard crew covered by employer's liability insurance (Table 3.4) and the different premium tariffs based on the material used for the hull (Table 3.5).

3.10 HANDLING OF CLAIMS

Most fishing vessels insured with commercial insurers such as PICC, are engaged in fishing and fish processing in the oceans. Once such vessels are subjected to accidents or damage, they must notify the insurer within 48 hours. If the vessel is abroad, it is necessary to inform the nearest agent and take all reasonable measures to avoid or reduce further losses. After confirming the scope of insurance liability, the insurer will negotiate with the insured about the matters of indemnity, inspection and payments. If the insured vessel needs to be repaired, the insured is requested to invite public bidding and then choose the most favourable quote received. As stipulated by law, the insured should lodge a claim within two years from the date of the accident; otherwise the right to submit a claim is lost.

CFSMIA generally settles claims very promptly and equitably. The procedure is not very rigid. One reason for prompt settlement is that most of the vessels are insured against total loss and the fishing crew is covered against personal risks. The Administration of Fishery and Fishing Harbour Supervision acts as the local office's agent, and generally the individual conditions of vessels and the crew are well known to the agent. CFSMIA was established to serve fishers, which is another reason for the willingness of the agents to handle claims as soon as possible. For example, in 2006, typhoon Saomai caused the deaths of many people and the sinking of fishing vessels in the city of Cangnan in Zhejiang Province. In the disaster relief work, the Zhejiang Chapter of CFSMIA played a very important part in its prompt remuneration of the claims.

3.11 UNDERWRITING EXPERIENCES

At present the domestic commercial insurance companies are independent of the government in terms of management and responsibility for profits and losses. It is therefore not hard to understand why some insurers have withdrawn from non-profitable business areas. Some of the less profitable insurance business was taken over by policy-related agricultural insurance companies.

The commercial insurers engaged in fishing vessel insurance and related businesses seldom have generated profits in recent years; however, they continue to provide fishing vessels insurance policies because of historical connections and relationships. As far as the insurance of small-scale fishing and small fishing vessels is concerned, the extent of the subsidy provided and the scale of activities of the

insured are the two most important factors in determining the profitability of the business for CFSMIA and its individual branches. The higher the subsidy, and the larger the vessels and the number of vessels insured, the more likely it is that the insurer will generate a profit. Of course, the occurrence of natural disasters is a key factor in determining profit and loss. Generally CFSMIA and its branches do not generate much profit; their income and expenditure are balanced in most years, although some years result in a surplus. After one or more positive years the premiums are often set at lower levels, which results in less income for the CFSMIA and its branches.

3.12 CONCLUSIONS

Although fisheries insurance in its current form in China has only been available since the 1980s, it can be argued that it has played – and is still playing – a positive role in the sustainable development of the capture fisheries sector. It has definitely strengthened fishers' security and contributed to improving working conditions and safety on board the vessels. However, it should be noted that the fisheries insurance business is still in its infancy, and there are issues that deserve attention:

- The CFSMIA and other fisheries insurers in China are not sure which development pattern should be followed. Examples from Japan, South Korea and North Europe differ widely, and it is not clear which pattern is most suitable for the Chinese situation.
- The question of whether or not to provide government assistance to the sector after natural disasters that affect the fishing sector has not been resolved in China. Insurers argue that the lack of such assistance is constraining the development of the insurance business.
- The extent of subsidy provided by local government in support of fishery insurance viability is largely dependent on the conditions of local finance. This means that in localities where the local revenue is small, it will be difficult to initiate and maintain a healthy fisheries insurance industry.
- Policy-related insurance companies and the CFSMIA do not have sufficiently experienced professional staff to manage and also master fish production technologies. In view of this, these institutions tend to provide simple coverage that does not always suit the needs of the fishers.
- Asymmetric information continues to result in adverse selection in fisheries insurance. A solution has yet to be found, although the collaboration between CFSMIA and the Administration of Fishery and Fishing Harbour Supervision has made it possible for insurers to access more information than in the past.
- The fact that most fisherfolk are insufficiently educated to understand the need for insurance, as well as the wording of the policies by the insurers, is constraining the development of the business.
- Policy-related insurance companies and the CFSMIA are in urgent need of reinsurance services. However, commercial reinsurers and other direct insurance companies are reluctant to share and reinsure their risks.

3.13 RECOMMENDATIONS

The rapid development of the Chinese economy, including the fishery sector, has caused fishery insurance to become more important.

- China is a large country and the economic situation in its regions and provinces varies greatly. Therefore, it is not practical to adopt a uniform pattern for the development of fisheries insurance in China; the insurance sector should adjust its services to the local needs of the fishers.
- Although it is not mandatory for fishers to be insured, it is advisable that vessels and fishers be covered by some kind of insurance (e.g. like car insurance, which is available in a number of different forms). Insurance, even at basic levels, would definitely provide a degree of security to fisherfolk, and an increase in fishery insurance policies would lead to economies of scale for insurers, lower costs of administration and management per policy and increased economic feasibility.
- Premium subsidies are allocated to insured fishers and ship owners; policy-related insurance companies have little incentive to increase their business. These companies are limited in their ability to compete with commercial insurance companies, because profits are kept low. The possibility of government support in terms of preferential tax regimes and guarantees to make up for the losses should be investigated, to give these policy-related insurance companies a chance to survive in an increasingly competitive market.
- National or regional reinsurance companies should be established, or reinsurers from abroad should be allowed to serve agricultural and fisheries insurance markets.
- The insurance companies should institutionalize development and management policies for the fisheries sector as well, in order to utilize the insurance mechanisms and programmes to increase sustainability and contribute to the implementation of better practices.
- Capacity building within insurance companies and the CFSMIA on fisheries issues is important, as these institutions would be more capable of serving the sectors' needs.
- It is difficult to find an insurer willing to insure individual fishers against health and life risks, because the life insurance companies regard fishers as persons being at high risk of illness. It is recommended that the authorities either subsidize the provision of insurance to these people, who are in high demand of the service, or oblige the companies to allow fishers to access their schemes at reasonable premium rates.
- Vocational training of fishers should include components that emphasize the importance of insurance, how to manoeuvre vessels safely, face perils at sea and stay healthy.

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4. The current state of capture fisheries insurance in Japan

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4.1 INTRODUCTION

Capture fisheries insurance schemes applied in Japan differ greatly from those in other parts of the world. The main differences relate to the important roles of the government and fisheries cooperative associations in the schemes, roles that are more substantial than in most other countries. Therefore, this chapter of the review is organized slightly differently from the other chapters of this document.

4.2 THE INSURANCE MARKET

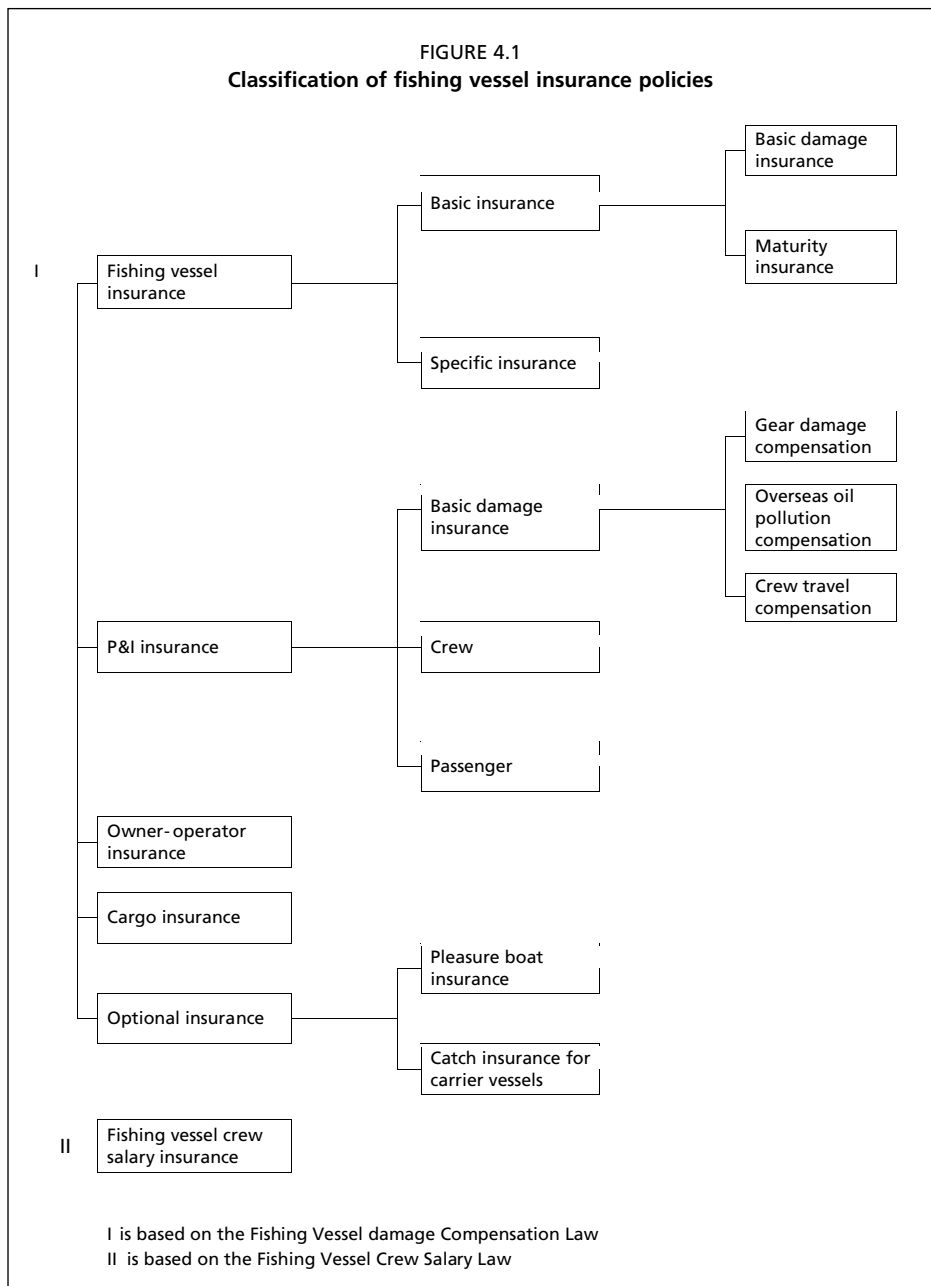
The Government of Japan plays a major role in the capture fisheries insurance market. Its national capture fisheries insurance policy is an integral part of the national insurance policy, which aims to provide an equitable level of support to small-scale fishers who experience damages or losses of fishing vessels, catch, equipment and gears caused by natural disasters or accidents. Thus, the insurance system guarantees fishers the stabilization of their fishing operations.

Fisheries insurance in Japan is divided into two categories: 1) Fishing Vessel Insurance (FVI), and 2) the Fisheries Mutual Insurance Schemes (FMIS). The former is based on the Fishing Vessel Damage Compensation Law (1952), and the latter on the Fisheries Disaster Compensation Law (1964). There is another type of insurance that does not fall under either the FVI or the FMIS. This is the Fisheries Cooperative Association Mutual Insurance System, which is described in Annex 1.

4.2.1 Fishing vessel insurance (FVI)

The FVI has been in operation since 1952 to provide an element of stability in the management of fishery operations. Coverage is provided for damages or losses in the event of accidents or natural disasters, as well as for unforeseen costs and liabilities incurred in the operation of a fishing vessel. The insurance also covers unforeseen losses or damages to fishery products carried by a fishing vessel.

The FVI is a mutual insurance system applicable to fishing vessels of less than 1 000 Gross Registered Tonnage (GRT), which is divided into basic insurance



and specific insurance. Basic insurance is further sub-divided into basic damage insurance and maturity insurance. Under the same Fishing Vessel Damage Compensation Law, a variety of insurance programmes are being implemented, including Protection & Indemnity (P&I) insurance, owner-operator insurance, cargo insurance and fishing vessel crew salary insurance. Figure 4.1 shows the types of insurance policies available for fishing vessels, as well as the linkages

between each policy from a legal point of view. The nine insurance policies illustrated in the upper part of Figure 4.1 come under the legal framework of the Fishing Vessel Disasters Compensation Law, while the Fishing Vessel Crew Salary Law deals with the fishing vessel crew salary insurance policy.

Basic damage insurance: This insurance policy provides compensation for the loss of or damages to the hull, engines and equipment of fishing vessels caused by accidents or natural disasters, including sinking, stranding, or fires, as well as unforeseen costs and liabilities incurred in the operation of a fishing vessel, such as rescue operations of other fishing vessels. The insurance period is one year.

Maturity insurance: This insurance pays a guaranty deposit on the date of maturity in addition to covering the partial loss or damage to fishing vessels. Maturity insurance can be considered a kind of life insurance for the fishing vessel. The insurance period ranges from three, to six or nine years.

Specific insurance: This insurance compensates for the losses or damages of fishing vessels caused by war risks, wars, hostile actions, attacks, captures, seizures, or detention.⁸

Protection and Indemnity (P&I) insurance: This type of insurance consists of three policies, namely, basic damage, crew, and passenger. The basic damage policy covers liabilities for damages caused to other vessels from collision, as well as damages caused to a third party during the navigation of a fishing vessel. Under the crew policy, damages incurred by crewmembers working on the vessels are covered, and compensation can be claimed on the basis of the labour contracts signed. The passenger policy covers death, injuries or liabilities incurred by passengers or sport fishers on a chartered fishing vessel. The standard contract term for these policies is one year.

The basic damage policy under P&I insurance is further divided into three categories:

- 1) a special contract for gear damage insurance, which covers damages incurred to gears of other fishing vessels in operation, as well as damages to the gears operated by foreign vessels within the Exclusive Economic Zones (EEZs) of other nations;
- 2) a special contract for overseas oil pollution insurance, which covers damages caused by pollutants such as oil leaks within the EEZs of other countries. Compensation will be made on the basis of the ordinances of the countries concerned;

⁸ It should be noted that fishing gears can be insured under the above three insurance policies, provided that insurance will be paid only when there has been a total loss of fishing gears, together with the fishing vessel.

- 3) a special contract for crew travel, which covers the liabilities for the crew upon termination of their employment contract in the event of “total loss” of a fishing vessel.

Owner-operator insurance: This insurance pays a fixed amount to the relatives of owner-operators (owner cum crew) who died or were lost at sea as a result of accidents on the vessels. It also compensates owner-operators who suffer from the after-effects of injuries.

Cargo insurance: This insurance covers damage or loss of onboard catch or other cargo items, such as fuel, provisions, bait, etc. caused by accidents involving the vessel or equipment failures, including the loss of refrigeration for freezers and other losses involving onboard storage facilities. The term of this policy is one year.

Optional insurance: Optional insurance consists of two insurance policies, that is, pleasure boat insurance and catch insurance for carrier vessels. The former covers damages caused by pleasure boats of less than 5 GRT, or the costs incurred for the rescue of pleasure boats. The latter covers damages to fishery products carried by freezer carrier vessels.

Fishing vessel crew salary insurance: On the basis of the Fishing Vessel Crew Salary Law this insurance policy guarantees the payment of crewmembers’ salary in the event of the detention of fishing vessels by other countries.

4.2.2 Fisheries Mutual Insurance Schemes (FMIS)

The FMIS has been in operation since 1964 under the terms of the Fisheries Disaster Compensation Law to ensure the stabilization of fisheries and aquaculture operations. The three objectives of the schemes are:

- 1) The promotion of sustainable fishing and aquaculture: The FMIS will cover production costs in the cases of poor catch or harvest and unforeseen natural disasters, thus indemnifying fishers and fish farmers against insurmountable losses and making it possible to continue operations despite immediate losses.
- 2) Protection of production assets: Coverage for unrecoverable costs makes it possible for fishers not to fish when conditions impose unacceptable risks, thus reducing the chance of loss of their production assets (fishing vessels and gears) and catch.
- 3) Finance for re-initiating a fishing business: Indemnities yet to be received can be used as collateral for loans from financial institutions. Fisheries Cooperative Associations (FCAs) can establish mortgage rights on insurance claims of fishers, assuring rapid repositioning of lost assets and continuity of income from fishing.

Under the Fisheries Disaster Compensation Law four types of insurance policies are available:

- harvest insurance;
- aquaculture insurance⁹;
- special aquaculture insurance;
- fishing gear insurance.

Harvest insurance covers the losses from the decrease of catch/harvest value caused by poor catch, the deterioration of fish resources, the poor migration of fish schools, as well as the low level of prices, etc., and is subdivided into two categories: 1) for the harvest of seaweeds, including wakame (*Undaria pinnatifida*), kelp (*Laminariaceae*), agar-agar (*Gelidium amansii*), and shellfish – including abalone – and, 2) for capture fisheries operated by a fishing boat and set net. Fishing gear insurance covers the losses of set nets and purse seines.

4.3 DEMAND AND SUPPLY ISSUES

The Government of Japan treats insurance programmes as important elements of the national fishery disaster countermeasure policies to protect small-scale fisheries. Both FVI and FMIS are essentially mutual assistance programmes operated by the fishers themselves through the offices of Fisheries Cooperative Associations (FCAs) at the village level, the Fishing Vessel Insurance Associations (FVIA) at prefecture level and the Fisheries Mutual Insurance Associations (FMIA) at prefecture level. The central government provides the following support to FVI and FMIS.

4.3.1 Government financial support to fishing vessel insurance

- Premium subsidy: The government provides part of the insurance premium through subsidies. Such premium subsidies are provided only to small-scale fishing vessels of less than 100 GRT; the rate of subsidies differs according to the size of vessels and the type of insurance.
- Backup insurance: The Central Society of Fishing Vessel Insurance Association reinsures and provides backup insurance for vessels and cargo policies, as well as for the owner-operator policies held by FVIAs at prefecture level. The Central Society is further backed up by the government's Special Account.
- Administrative assistance: This covers part of the operating and administrative costs of the FVIAs and the payment of FCAs, which have the responsibility of collecting premiums from fishing vessel owners.

4.3.2 Government financial support to Fisheries Mutual Insurance Schemes

- Premium subsidies: Partial premium subsidies are provided for small-scale fisheries. The level of financial support differs according to the types of fisheries and individual or group entry into the system. There are cases where

⁹ For the purpose of this review on capture fisheries insurance, aquaculture related insurance policies are not discussed here. More information on aquaculture stock insurance and related insurance policies can be found in the Review of the current state of world aquaculture insurance. FAO Fisheries Technical Paper No. 493. <ftp.fao.org/docrep/fao/009/a0583e/a0583e00.pdf>

fishers apply as groups to the insurance scheme, particularly when many fishers are engaged in fishing activities in a specific area.

- Backup insurance: The National Federation of Fisheries Mutual Insurance Associations reinsures the policies held by the prefecture FMIA. If the damages exceed the capacity of the National Federation, the government provides backup insurance. When the claim payment required of the National Federation exceeds a set figure, the government covers 93 percent of the claim amount above the set figure.
- Administrative assistance: Partial government assistance is provided to organizations (i.e. FCAs and FMIA) involved in administering the FMIS.

4.3.3 The role of the Fisheries Cooperatives Associations (FCAs)

The focal points at village level for the insurance programmes are the Fisheries Cooperative Associations (FCAs). At the prefecture level, fishing vessel insurance programmes are undertaken by the Prefecture Fishing Vessel Insurance Associations (FVIAs), while the Prefecture Federation of Fisheries Mutual Insurance Associations (FMIA) undertakes fisheries mutual insurance programmes. The local FCA is generally a member of the FMIA and makes contributions to it. In the case of the FVI, the FCA is not a member of the prefecture FVIA, but is entrusted to collect and remit premiums to the FVIA. The FCA keeps in close touch with their members. The success of the insurance scheme is based on the day-to-day contact between the fishers and their FCA.

The local FCA has important roles and functions in the implementation of vessel insurance and mutual insurance programmes:

- Consultation and guidance: The Fisheries Cooperative Association Law (1948), which is the basis upon which the FCAs are set up, specifically provides for fishing vessel insurance as well as fisheries mutual insurance. The local FCA generally provides guidance to its members to help them sign up for insurance policies.
- Legal representative: The FCA management sometimes signs the insurance contract on behalf of its member fishers. This allows the FCA to take the initiative in safeguarding the interests of its member fishers.
- Administrative contractor: The prefecture FVIAs and FMIA generally contract part of their administrative tasks to the local FCAs. This assists the FVIAs and FMIA in keeping administrative costs to a minimum, and allows these organizations to handle a greater number of insurance policies.

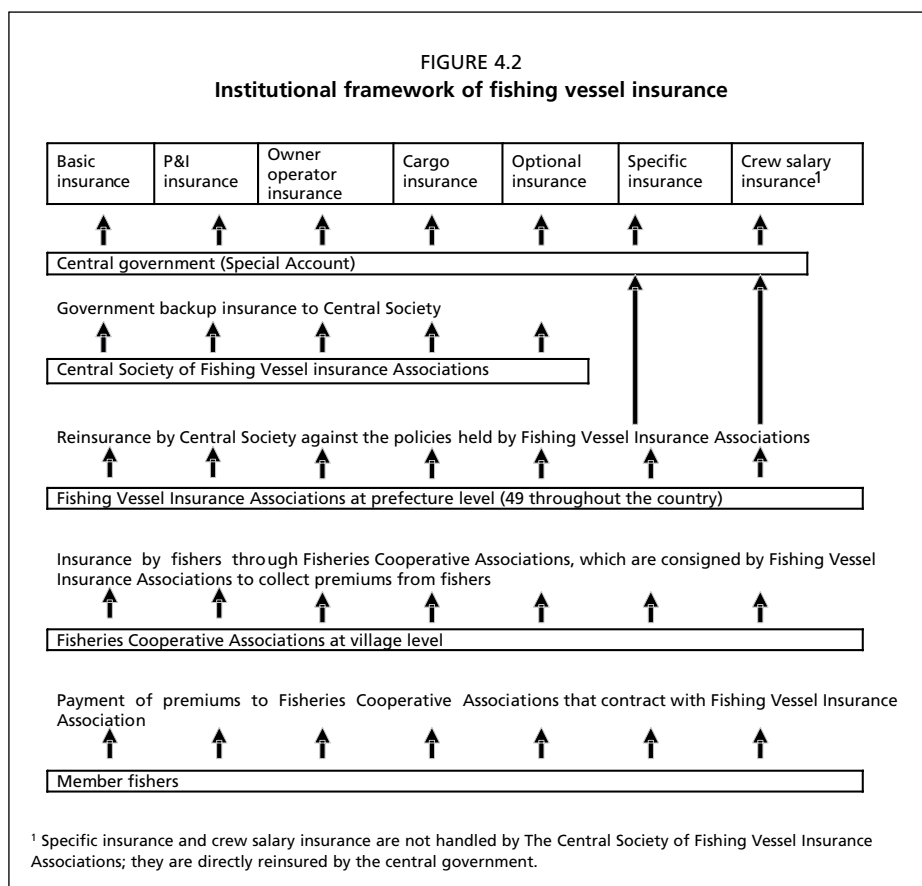
Among the tasks for which the local FCAs are contracted include, for instance, the calculation of insurance contract values, procedural matters (such as notice of damage) and the gathering of information needed for determining premiums and claim settlements. The FCAs also collect data on income from fisheries and aquaculture.

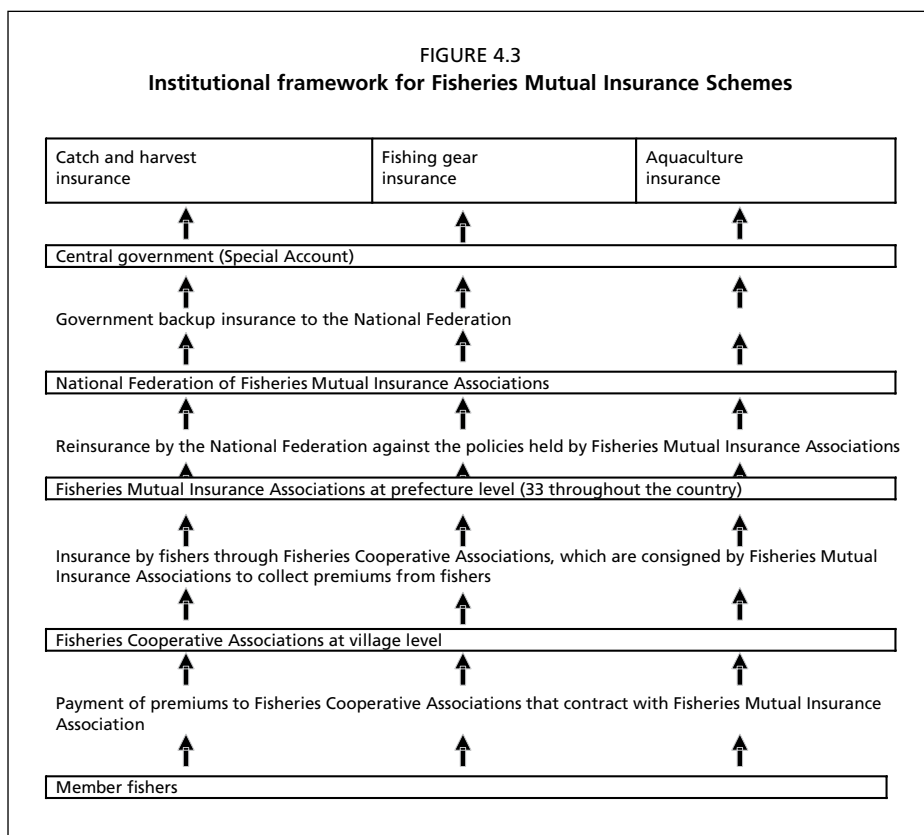
Because, in most cases, fishers market their catch through their local FCA, the FCA carries out all record-keeping tasks related to catch and income for each of its members. These records are essential in determining a contract holder's average

annual income, which is the basis for determining the value of the insurance contract, as well as claim payments in case of damage or loss. By working through the FCAs, the FVIAs and FMIAAs are able to establish both contract and claim values with maximum accuracy and efficiency. Thus, the FCAs can be considered to be essential components of the Japanese fisheries insurance system and are, as such, indispensable to the smooth functioning of the insurance provided by FVIAs and FMIAAs at prefecture level.

4.3.4 Structure of the capture fisheries insurance chain

The structural charts of the fishing vessel insurance (FVI) and the Fisheries Mutual Insurance Schemes (FMIS) are presented in Figures 4.2 and 4.3, respectively. Figure 4.2 shows the institutional hierarchy among insurance agencies for fishing vessel insurance, and Figure 4.3 illustrates fisheries mutual insurance. The arrows show the flow of premiums paid by fishers to the government. When the insurer (prefecture insurance association) is not capable of paying the claims made by fishers, the deficit will be covered by the reinsurance subsidies to be made available by the apex associations. If the fund available from the apex association is still not sufficient, the missing funds will be covered by a special government account.





Fishing Vessel Insurance (FVI)

- Beneficiaries: small-scale fishing vessel owners (while medium-scale fishing vessel owners can hold this insurance policy, only small-scale vessel owners are eligible for the premium subsidy by the government).
- Direct insurance provider: Fishing Vessel Insurance Associations (FVIA) at prefecture level (49 throughout the country).
- Local agent: Fisheries Cooperative Associations (FCA) at village level are consigned by the FVIA to collect premiums from the beneficiaries.
- Reinsurer: The Central Society of the Fishing Vessel Insurance Associations reinsures the policies held by the prefecture FVIAs.
- Government: The government provides backup insurance to the Central Society from a government Special Account.

Fisheries Mutual Insurance Schemes (FMIS)

- Beneficiaries: small-scale fishers (while medium-scale fishing vessel owners can hold this policy, only small-scale vessel owners are eligible for the premium subsidy by the government).
- Direct insurance provider: Fisheries Mutual Insurance Associations (FMIA) at prefecture level (33 throughout the country).

- Local agent: Fisheries Cooperative Associations at village level are consigned by the FMIA to collect premiums from the beneficiaries.
- Reinsurer: The National Federation of Fisheries Mutual Insurance Associations reinsures policies held by prefecture FMIA's.
- Government: The government provides backup insurance to the National Federation from the Special Account of the government.

4.3.5 Legal, regulatory and supervisory arrangements for capture fisheries insurance

The Fishing Vessel Damage Compensation Law (1952) and the Fisheries Disaster Compensation Law (1964) form the legal base for both FVI and FMIS. The organizations involved in capture fisheries insurance at different levels (national, prefecture and village level) all have their own by-laws to define their functions and responsibilities. The Central Society of Fishing Vessel Insurance Association is an apex organization at national level to coordinate 49 FVIAs at prefecture level; its major functions are as follows:

- calculation of insurance premium rates;
- to provide advice, guidance and assistance to the prefecture FVIAs and their members, that is, to the local FCAs regarding the prevention of accidents;
- to provide information that will ensure the safety-at-sea for deep-sea vessels operating in international waters;
- Information dissemination and education relating to fishing vessel insurance practices.

4.4 POLICIES IN FORCE

Tables 4.1 to 4.5 present the size of fishing vessel insurance according to types of policies, namely, basic insurance (which is compulsory), P&I insurance, owner-operator insurance, cargo insurance. Pleasure boat insurance and catch insurance for carrier vessels are also optional. Fishing vessels are not necessarily insured even if they are registered. Although registered, idle vessels are usually not insured; active vessels alone are insured. The rate of insurance coverage, that is, the total number of insured vessels versus the total number of active vessels is estimated to be 90 to 95 percent, although there are no official figures (Table 4.1). Tuna and skipjack fishing vessels are usually insured under fishing vessel cargo insurance, as the value of their cargo is very high (Table 4.2). When the total claims exceed the

TABLE 4.1

Basic insurance

Year	No. of insured vessels	Contracted value in US\$ (million)	Premium in US\$ (million)	No. of accidents	Claims paid in US\$ (million)
2001	224 674	11 091	156.3	62 158	164.5
2002	220 254	10 383	151.4	59 442	147.8
2003	216 336	10 852	162.1	61.069	170.5
2004	212 580	11 242	172.6	64 025	174.6
2005	208 652	10 606	164.5	59 954	158.1

Source: Central Society of Fishing Vessel Insurance, 2006.

TABLE 4.2
Fishing vessel cargo insurance

Year	No. of insured vessels	Contracted value in US\$ (million)	Premium in US\$ (000)	No. of accidents	Claims paid in US\$ (000)
2001	1 017	1 111	2 899	19	1 310
2002	941	971	2 034	17	2 579
2003	905	921	1 909	13	1 770
2004	810	876	1 816	19	1 720
2005	783	764	1 585	9	1 222

Source: Central Society of Fishing Vessel Insurance, 2006.

TABLE 4.3
Protection & Indemnity (P&I) insurance

(i) Collision and other damages

Year	No. of insured vessels	Contracted value in US\$ (million)	Premium in US\$ (million)	No. of accidents	Claims paid in US\$(million)
2001	221 001	126 564	32.5	2 324	20.4
2002	216 796	127 576	30.0	2 297	21.6
2003	213 107	138 929	32.1	2 288	22.8
2004	209 365	149 935	34.0	2 200	22.9
2005	205 276	193 580	31.9	2 113	20.0

Source: Central Society of Fishing Vessel Insurance Associations, 2006.

(ii) Life and injuries incurred by crewmembers

Year	No. of insured vessels	Contracted value in US\$ (million)	Premium in US\$ (000)	No. of accidents	Claims paid in US\$ (000)
2001	10 036	247	370	14	234
2002	10 105	244	365	12	229
2003	10 107	26	393	9	94
2004	11 461	298	437	6	172
2005	12 379	311	363	9	121

Source: Central Society of Fishing Vessel Insurance, 2006.

(iii) Injuries incurred by passengers

Year	No. of insured vessels	Contracted value in US\$ (million)	Premium in US\$ (000)	No. of accidents	Claims paid in US\$ (000)
2001	13 771	38 118	2 590	56	904
2002	14 172	40 248	2 709	55	1 656
2003	18 165	55 699	4 166	68	1 914
2004	18 023	59 029	4 256	66	760
2005	17 518	55 950	3 981	86	1 768

Source: Central Society of Fishing Vessel Insurance, 2006.

total premiums, reinsurance funds are accessed to fill the deficit. When there is a surplus, it is carried over to the following year as reserved surplus.

In 2005, over 208 000 fishing vessels were insured under the compulsory basic insurance scheme. The total premium payments under the scheme were US\$165 million (Table 4.1). Insurance for collision and other damages (which is not compulsory) under the P&I insurance scheme is traditionally in high demand; in 2005 more than 205 000 fishing vessels were insured under the scheme, and

TABLE 4.4

Owner-operator insurance

Year	No. of insured vessels	Contracted value in US\$ (million)	Premium in US\$ (000)	No. of accidents	Claims paid in US\$ (000)
2001	26 361	306	377	22	228
2002	27 615	318	394	29	188
2003	27 820	358	442	33	308
2004	30 233	417	514	31	534
2005	30 968	423	406	24	312

Source: Central Society of Fishing Vessel Insurance Associations, 2006.

TABLE 4.5

Optional insurance**(i) Pleasure boat insurance**

Year	Insured vessels	Contracted value in US\$ (million)	Premium in US\$ (000)	No. of accidents	Claims paid in US\$ (000)
2001	6 123	3 509	354	23	78
2002	7 303	4 882	468	34	34
2003	9 534	7 752	732	55	87
2004	10 793	10 186	901	95	135
2005	11 881	12 874	966	99	146

Source: Central Society of Fishing Vessel Insurance Associations, 2006.

(ii) Cargo insurance for carrier vessels

Year	Insured vessels	Contracted value in US\$ (000)	Premium in US\$ (000)	No. of accidents	Claims paid in US\$ (000)
2001	128	88 771	85	0	0
2002	122	68 075	69	0	0
2003	105	56 556	52	0	0
2004	86	59 645	47	0	0
2005	79	46 338	45	0	0

Source: Central Society of Fishing Vessel Insurance, 2006.

premium payments were nearly US\$32 million (Table 4.3). The number of vessels insured for cargo is showing a decline and was less than 800 in 2005; total premium payments received under the cargo insurance were just over US\$1.5 million (Table 4.2). While basic insurance and collision insurance saw a slight decrease annually, as a result of the reduction in fleet size, there is a positive trend in the purchase of life and injuries insurance for crew and passengers since the year 2001. In 2005, some 12 000 fishing vessels carried life and injuries insurance for crewmembers and over 17 000 fishing vessels were covered for injuries incurred to passengers. Premium payments for these two types of insurance policies were in the same year, US\$363 000 and nearly US\$4 million, respectively.

The number of pleasure boats insured has sharply increased since 2001, when only 6 000 of them were insured. In 2005 this number had increased to nearly 12 000 and premium payments in that year were close to US\$1 million. As of 2005, there were 11 881 insured boats out of a total of 340 000 pleasure boats.

Table 4.6 presents the size of the market for compulsory Fisheries Mutual Insurance Schemes, which consist of catch/harvest insurance and gear insurance.

TABLE 4.6

Capture/harvest and gear insurance**(i) Harvest insurance¹**

Year	No. of contracts	Contracted value in US\$ (million)	Premium in US\$ (million)	No. of accidents	Claims paid in US\$ (million)
2001	13 886	1 782	74	5 896	75
2002	15 235	1 742	71	6 129	86
2003	15 203	1 850	80	6 707	94
2004	15 298	1 990	87	3 773	60
2005	15 414	1 911	83	369	29

Source: Fisheries Agency, 2007.

(ii) Fishing gear insurance² (purse seine, set net)

Year	No. of contracts	Contracted value in US\$ (million)	Premium in US\$ (million)	No. of accidents	Claims paid in US\$ (million)
2001	297	16 051	1 165	17	529
2002	298	16 042	1 085	58	1 635
2003	297	22 408	1 389	38	1 401
2004	305	25 633	1 598	66	2 153
2005	307	25 413	1 623	23	545

Source: Fisheries Agency, 2007.

¹ Compensation under this policy is provided to cover loss of income as a result of the decrease in the value of catch, poor catch, the deterioration of fish resources, the drop in fish prices, poor migrations of fish schools, etc.

² Damage to gears can be caused by a number of things, such as currents, human error, intrusion of giant jellyfish in the net, etc.

Under the fisheries mutual insurance schemes, harvest insurance was in great demand in recent years. In 2005 some 15 000 policies were written and the total premium value was US\$83 million (Table 4.6). Only 307 fishing gear insurance policies were issued in the same year, with a total premium value of slightly over US\$1.6 million (Table 4.6).

4.5 PERILS COVERED

The perils covered are detailed in Section 4.2 above.

4.6 VESSELS INSURED

Any type of fishing vessel can be insured under the FVI and the FMIS provided they are of less than 1 000 GRT and registered in Japan.

A fishing vessel of more than 1 000 GRT cannot be insured by the FVI. These large vessels are generally insured by national commercial insurance companies (e.g. Tokyo Marine & Nichido Fire insurance Co. Ltd), or on the international market. Usually they are reinsured through Lloyd's of London. In 2004, there were only four fishing vessels whose GRT was over 1 000 (the number of such large vessels declined from 12 in 1994 and 6 in 2000).

4.7 EQUIPMENT AND GEARS INSURED

The FVI is applicable to fishing vessels of less than 1 000 GRT and the insurable object includes hulls, equipment and engines. With respect to fishing gears (e.g.

trawl nets, longlines, gillnets) coverage under the FVI compensation will be made only if these items are lost together with the fishing vessel.

Under the FMIS, there are two categories of specific gear insurance policies available: purse seine and set net. Accessories such as floats, sinkers, ropes, etc. cannot be insured. The gears are only covered by insurance when in operation. This means that the insurance policy does not cover the loss of or damage to gears during transport to and from fishing areas. For set nets (composed of leader nets and main nets) indemnities will only be paid if more than 30 percent of the entire netting is damaged or lost. For purse seines, the same 30 percent minimum of damage or loss applies.

Under the FVI there are no restrictions on the types of fishing equipment and gears – all can be covered under the insurance policy.

Buildings and onshore equipment insurance, as well as public liability insurance are not included under capture fisheries insurance policies. They can be sought outside the mainstream fisheries insurance policies.

4.8 UNDERWRITING

The underwriting rules generally applied to all insurance policies handled by the Fishing Vessel Insurance Association (FVIA) and the Fisheries Mutual Insurance Association (FMIA) include, among others, the following:

- An insurance contract comes into effect when the underwriter (FVIA and FMIA) receives the insurance premium from an applicant. This means that the contract becomes effective upon the applicant's payment of the premium to the underwriter through the local fisheries cooperative association, (FCA) and the applicant becomes also a member of the FVIA or FMIA.
- The Fishing Vessel Insurance Association at prefecture level, which is responsible for conducting insurance programmes, cannot refuse to sign an insurance contract without justifiable reasons according to Article 90 of the Law. A refusal can be exercised under the following conditions:
 - fishing vessels of more than 1 000 GRT;
 - fishing vessels excessively large in size and horsepower, vessels that lack stability or strength, hulls or engines whose ages exceed the prescribed years; and
 - fishing vessels whose degree of risk greatly changes or increases.

4.9 RISK MANAGEMENT

As detailed in Section 4.3, the risk management system applied in Japan by the FVI and FMI in collaboration with the government and the fisheries cooperative associations is considered clear, efficient and transparent by the fishers and other stakeholders.

Modern risk management practices are applied by the FVIAs and FMIA. Similarly, for fishing vessels over 1 000 GRT, the insurers apply risk management surveys as an integral part of their decision-making processes. Independent risk assessors undertake risk profiling for the commercial insurers of these large vessels.

TABLE 4.7
Premium subsidies for fishing vessels

	Basic insurance	P&I insurance	Cargo insurance
		General and other damages	
Non-powered	39%	35%	20%
<5 GRT	39%	35%	20%
5–20 GRT	33%	30%	20%
2–50 GRT	23%	20%	15%
5–75 GRT	19%	15%	10%
7–100 GRT	17%	15%	10%

Source: Central Society of Fishing Vessel Insurance, 2006.

TABLE 4.8
Premium subsidies for harvest/catch insurance¹

Classification	Subsidy rates	
	Compulsory entry	Group entry
Type 1 fishery	52%	–
Type 2 fishery		
<10 GRT	48%	24%
10–20 GRT	40%	20%
20–50 GRT	29%	10%
50–100 GRT	21%	6%
Large set net	26%	13%
Small set net	48%	24%

Source: Fisheries Agency, 2006.

¹ Type 1 fisheries include harvesting of seaweeds, namely, wakame (*Undaria pinnatifida*), kelp (*Laminariaceae*), agar-agar (*Gelidium amansii*), and shellfish, namely, abalone. Type 2 fisheries include capture fisheries operated by a fishing boat and set net.

TABLE 4.9
Premium subsidies for fishing gear insurance (i.e. purse seine, set net)

Type of gear	Subsidy rates	
	Compulsory entry	Group entry
Purse seiner <10 GRT	30	15
10–20 GRT	30	15
20–50 GRT	17	8
50–100 GRT	12	6
Set net small size	30	15
Set net large size	17	8

Source: Fisheries Agency, 2006.

The FVI and the FMIS are operated not only on the basis of insurance principles, but also in the spirit of promoting mutual assistance and cooperation. This means that the beneficiaries are simultaneously the insurers. The compulsory system has contributed to generating solidarity among the membership. The rates of government premium subsidies are presented in Table 4.7, 4.8 and 4.9.

4.9.1 Compulsory entry system and government financial assistance

Fishing vessels of less than 100 GRT insured under the compulsory entry system are granted a premium subsidy by the government, provided the following requirements are met:

- more than two-thirds of the members of the FCA must own fishing vessels whose GRT ranges from 1 to 100;
- the vessels must operate more than 60 days a year;
- members must reside within the jurisdictional area of the FCA;
- members must consent to register their vessels under the basic damage insurance.

4.9.2 Eligibility

Eligibility includes fishing vessels covered by the Fishing Vessel Law (1950), and tender vessels owned by FCAs engaged in the transport of fish products, fuel, supplies, bait, etc. The base port of a fishing vessel must be located within the jurisdiction of the prefecture FVIA. Only vessels of Japanese registry under 1 000 GTR are eligible for coverage. Fishing vessels of more than 1 000 GRT and owned by large fishing companies are insured by commercial marine insurance companies.

4.9.3 Insurance coverage

Fishing vessel insurance and contracted value

- Basic damage insurance: The full investment required for the construction of the vessel cannot be insured. The value for insurance purposes is determined on the basis of the standard value table of fishing vessels compiled by the Fisheries Agency;
- Cargo insurance: The contracted value is the contracted unit price of the product covered times the maximum cargo capacity. The maximum payment is based on the maximum load; actual payment is based on the load carried at the time of the loss. However, when an accident occurs during the return trip, supplies, (e.g. provisions, fuel) are not covered.

Fisheries Mutual Insurance Schemes

- **Harvest insurance**
 - Determination of insurance coverage: The following formula is used:
 $(\text{Average annual catch value}) \times (\text{fixed rate: } 0.7\text{--}0.9) = \text{level of coverage.}$
 - Premium: The following formula is applied:
 $(\text{Contracted value}) \times (\text{contract rate}) \times (\text{premium rate}) = \text{premium.}$
- **Gear insurance**
Accidents and insurance:¹⁰ The following formula is applied:
 $(\text{Damages}) \times (\text{contract rate}) \times (\text{compensation rate}) = \text{insurance.}$
This insurance policy is designed to compensate the gear damage (i.e. purse seine and set net) during their operation at sea.

¹⁰ Damages are defined as the balance between the full coverage and the actual catch value of the fishery concerned during the period of insurance. Average annual catch value of the last five years is obtained by calculating the average of the remaining three years, after taking off the highest and lowest values of the last five years.

- Determination of insurance coverage: the compensation is determined on the basis of assessment of the material, the size of netting, the age of gears, etc.
- Premium: The following formula is applied: $(\text{Contracted value}) \times (\text{contract rate}) \times (\text{premium rate}) = \text{premium}$.
- Accidents and insurance: Insurance will be determined on the basis of the assessment of damages or loss of fishing nets in operation caused by natural disasters such as typhoons, storms and swift currents. No insurance will be paid for damages or loss of fishing gears caused by wars, theft and other human-induced accidents.

4.9.4 Contracting procedures

There are three classes of vessel insurance based on the procedure for contracting:

- 1) Individual contracts: individual vessel contracts signed voluntarily;
- 2) Compulsory contracts: all fishing vessels under 1 000 GRT registered or operated in an area defined by the governor of the prefecture (these areas usually coincide with the jurisdiction of the FCA) are required to have basic damage insurance coverage, while owner-operator and cargo insurance policies are optional, and available to those insured under basic damage insurance. Currently 90–95 percent of all vessels insured under the programme fall into this category. It should be noted that the government premium subsidy is granted only to vessels weighing under 100 GRT.
- 3) Group contracts: If more than half the fishing vessels of less than 20 GRT within a defined area (with a minimum number of 15 vessels) purchase insurance coverage under basic damage insurance as a group, the government provides premium subsidies equal to 50 percent of the value of the subsidies obtained under a compulsory contract.

4.10 HANDLING OF CLAIMS

Liability for the underwriter starts on the day following the signing of the contract. This procedure is required to prevent applicants from applying for an insurance policy after the accident has taken place. When an accident has occurred, the insured must immediately notify the underwriter of the accident irrespective of whether or not the accident will be indemnified by the underwriter.

The insured will submit the following documents to the underwriter:

- a document describing the cause and consequences of the accident;
- a document indicating the amount of loss, together with documentary evidence issued by public agencies;
- other relevant vouchers.

In view of the proper handling of the claim, the underwriter may request the Central Society of Fishing Vessel Insurance Associations to provide inspectors for the assessment of damages and the calculation of the magnitude of loss. Inspection of insurance claims is one of the important tasks of the Central Society, which is

staffed with, among others, 15 specialists in the fields of vessel construction and engineering.

The underwriter will be exempted from fulfilling its responsibilities if the accident is the result of inappropriate causes. There are two types of exemptions, namely, legal and relative exemption:

1) **Legal exemption**

The underwriter will withhold the payment of total or partial indemnification if the damages are caused by any of the following reasons:

- willful conducts: willful conducts occur when the insured causes an accident intentionally for the purpose of insurance fraud;
- total violation of legislation: when the accident is caused by the total neglect of legislation (e.g. a fishing vessel is operated without a captain), no compensation will be made;
- violation of laws and regulations: when a fishing vessel is involved in an illegal activity (e.g. smuggling of drugs) and confiscated by the government.

2) **Relative exemption**

In the following cases, the underwriter will withhold the payment of total or partial indemnification depending on the extent of the violation:

- illegal fishing: when the accident has taken place as a result of violating fishery laws and regulations;
- time lag: when it has become difficult to confirm the damages due to delayed notification from the insured; or due to a false statement made by the insured;
- refusal of inspection: when the insured refuses the inspection requested by the underwriter;
- neglect of accident preventive measures: when the insured has ignored measures to prevent accidents (e.g. installation of fire extinguishers).

4.11 UNDERWRITING EXPERIENCES

Tables 4.1 to 4.6 present the performance of capture fisheries insurance in Japan over the period from 2001 to 2005. Basic insurance is by far the most important in terms of the magnitude (Table 4.1). The basic insurance scheme failed to generate surpluses in 2001, 2003 and 2004, when the number of accidents exceeded 60 000 per year. There is a positive correlation between the number of accidents and the total claims paid, as would be expected. During the period under review, the highest number of accidents was recorded in 2004 when Japan was hit by ten typhoons in one year. It was reported that some 6 000 insured vessels were damaged or lost by typhoons, resulting in paid claims amounting to US\$16.6 million. The damages and losses of 800 uninsured vessels amounted to US\$1.9 million; obviously, these were not covered by insurance. Thus, the underwriting experience showed mixed results over the five-year period: for two years a positive, and for three years a negative balance.

Other fishing vessel related insurance policies, i.e. P&I, owner-operator, cargo and optional (Tables 4.2 to 4.5) generally presented positive results over

the reported period. In particular, P&I insurance showed positive results in all five years, while the fishing vessel, cargo, and owner-operator insurance business showed positive results for 80 percent of the period. In terms of profitability for the insurers, the optional insurance (for pleasure boats and cargo insurance for carrier vessels) was profitable. The same can be said about the life and injuries insurances for crew and passengers.

With regards to the Fisheries Mutual Insurance Schemes (Table 4.6), the harvest insurance scheme showed at the start of the century some negative results, but this was turned into profit in 2004 and 2005. An unstable trend with large surpluses in some years, but with a large deficit in others, was noticeable in the fishing gear insurance scheme performance. Damages were mainly related to natural disasters such as typhoons, but also to unforeseeable natural phenomena such as the germination and excessive proliferation of giant jellyfish.

4.11.1 Rate and causes of damages and losses

Table 4.10 presents the rate of accidents under the basic insurance during the period 2001 to 2005, indicating that it ranges from 27 percent to 30.6 percent. This implies that almost one out of three vessels was involved in an accident. The government has tentatively set a target to reduce the accident rate to 25 percent in the near future. In 2004 engine problems were the most important cause of damage/accidents of fishing vessels, followed by navigational problems (Table 4.11). Floating objects and typhoons were other major causes of damage.

4. 12 CONCLUSIONS

4.12.1 The role of the government

The central government, apex fisheries insurance organizations, insurance associations at prefecture level and local fisheries cooperative associations in Japan provide efficient services and financial assistance to small-scale fishers by providing capture fisheries insurance that is beyond the capacity of the private sector. The government has been adapting to changing situations and requirements of small-scale fishers through timely enforcement of relevant laws and regulations, realigning organizational structures, functions and human resource development.

TABLE 4.10
Accident rates¹ in basic insurance

Year	No. of contracted vessels	No. of accidents	Accident rates (%)
2001	224 674	62 158	27.7
2002	220 254	59 442	27.0
2003	216 336	61 069	28.2
2004	212 560	64 992	30.6
2005	208 582	58 066	27.8

Source: Fisheries Agency, 2006.

¹ The rate of accidents is obtained by the following formula: *The number of accidents ÷ the number of contracted vessels x 100.*

TABLE 4.11
Causes of accidents in 2004

Causes	No. of accidents	Rates (%)	Claims paid In US\$ (million)	Rates (%)
Typhoons	6 251	9.6	16 709	9.6
High waves	764	1.2	2 853	1.6
Depressions	1 159	1.8	3 506	2.0
Other weather conditions	505	0.8	2 849	1.6
Engine problems	10 054	15.5	48 146	27.7
Floating objects (e.g. logs) ¹	19 992	30.8	29 123	16.7
Navigation (human) errors	12 559	19.3	31 962	18.4
Entanglement with screws	7 472	11.5	10 122	5.8
Others	6 236	9.6	28 683	16.5
Total	64 992	100.0	173 953	100.0

Source: Fisheries Agency, 2006.

¹ It should be noted that typhoons or heavy storms cause countless damage to woodlands and forests. Fallen trees that are carried ultimately into the sea by rivers, streams and canals cause considerable damage to vessels.

Fisheries insurance aims at the sustainability of fishing operations in the best interests of the welfare and standard of living of small-scale fishers. However, fisheries insurance should not be handled in isolation, and to bring about synergic effects, needs to be reinforced along with policy implementation to support fish marketing, credit and infrastructure development. The promotion of pleasure boat insurance is important as well. In this connection, awareness programmes are being organized in Japan, including pamphlets and bulletins circulated to the target stakeholders. The Government of Japan continues to maintain an adequate operational mechanism in capture fisheries insurance that caters to the changing needs of fishers. In this context, an ongoing assessment of the insurance system is essential to identify key constraints and issues, and to devise a strategy of parallel countermeasures for the future.

The Government of Japan continues to provide financial assistance to fishing vessel insurance and fisheries mutual insurance sectors in terms of reinsurance and premium subsidies. Because fishing is regarded as a high-risk industry, finance for fishing industry development and rehabilitation is generally not easy to obtain. The Agriculture, Forestry and Fisheries Finance Corporation and the Fisheries Modernization Funds are in a position to provide loans for the rehabilitation of fishers afflicted by natural disasters. Government funds are available to ensure the continued access to funds and thus to assist in maintaining the momentum of the rehabilitation progress.

The government will assist in rehabilitating fishers from oil pollution damage as well as reimburse the cost required for removal of pollutants, effluent treatment and beach cleaning. Premium subsidies will be granted to aquaculture mutual insurance schemes to cope with the problems caused by red tides.

The government further aims to intensify the collection and dissemination of information with regard to the oversized jellyfish, which have been causing heavy damage to set net fisheries. Early warning systems and damage prevention methods will have to be devised. Furthermore, efforts will be made to develop

technologies for the effective utilization of the giant jellyfish. In this regard, a joint survey will be carried out in the East China Sea in collaboration with the People's Republic of China and the Republic of Korea.

4.12.2 International agencies

International agencies alone would be unable to assist in overcoming the constraints that Japan is facing in the field of capture fisheries insurance. Agencies, like the Food and Agriculture Organization of the United Nations (FAO), could help developing countries promote fisheries insurance through the dissemination of information, as well as the organization of workshops and training courses. Some assistance could be provided by the Japanese Official Development Assistance (ODA) programmes. For example, the Japan International Cooperation Agency (JICA) may wish to organize training courses on fisheries insurance development by inviting participants from developing countries and thus afford them opportunities to learn from Japanese experiences and current practices in the sector.

4.12.3 Opportunities and constraints to development of fisheries insurance

It is foreseeable that the basic insurance scheme will continue to see a gradual shrinkage in the total number of vessels insured and the total value of the insurance policies under it. This phenomenon has already been witnessed over the last decade or so; it is caused by the general decrease in the number of fishing vessels in all sectors, namely, coastal, offshore and distant water fisheries.

The decrease of ocean-going fishing vessels has been brought about largely as a result of the restrictions imposed on international fisheries by a number of fisheries regulations. Offshore and coastal fisheries have also witnessed downward trends, both in production and in the number of fishing vessels. The reduction in fisheries stocks of targeted fish species is partly attributable to such a decline. An ageing workforce of fishers and the younger generation's limited interest in succeeding them provide additional reasons.

The increase in fisheries insurance is apparent in life and injury insurance for crews and passengers, as well as in pleasure boat insurance services. These growth trends are expected to continue in the near future.

4.13 RECOMMENDATIONS

Because the fisheries insurance system in Japan is well organized and efficient, providing essential insurance services at reasonable costs to all fishers (including small-scale producers) the author of this chapter has no specific recommendations. It is noted that the system is imperfect and needs adjustment from time to time, but the cooperation among the government, insurers and fishers is such that the necessary adjustments are being made when demanded by the insurance sector.

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ANNEX 1

Welfare insurance

The Fisheries Cooperative Association Mutual Insurance System is designed to provide insurance for the members of the FCA against accidents, but this system does not fall under either the FVI or the FMIS. Its institutional and operational framework is based on the three-tier hierarchy of fisheries cooperative associations, namely, FCAs at the village level, the branch office of the National Federation of Fisheries Cooperative Mutual Insurance Associations at prefecture level and the National Federation of Fisheries Cooperative Mutual Insurance Associations at the national level. Nine categories of insurance policies are available:

- 1) **Basic welfare insurance** is a mixture of life insurance and endowment insurance. The system encourages savings, while it extends partial coverage for death, injuries, hospital care and surgery. Redemption of savings is carried out at maturity. This insurance policy is characterized by wide-range security coverage in addition to the deposit of savings.
- 2) **Whole life insurance:** This policy has been designed due to an increase in longevity to cover hospital care, death compensation, etc. Premium payments are terminated at 60, 65 or 70 years of age. However, no maturity redemption is available.
- 3) **Children's insurance:** This insurance is taken out by parents from 20 to 50 years of age to cover the expenditures in the event of death, injuries and hospital care of their children. The policy is available for children under 12 years of age.
- 4) **Crew welfare insurance** is an annual insurance applicable to crewmembers as well as workers on shore. Compensation is made in the event of death, injuries or hospital care. The combination of a low premium rate and extensive coverage make this system very popular. Also, coverage for sport fishers onboard fishing vessels is available.
- 5) **Fishers pension insurance:** The premium is to be paid until beneficiaries reach 65 years of age. Payment of the pension begins from 60 or 65 years of age and continues until the death of the beneficiaries. If death occurs before the age of 75, the pension is paid to the heirs for the guaranteed period (up to 75 years of age). This policy is supposed to supplement the national pension scheme.
- 6) **Basic house insurance** is available for damages or losses of houses and household goods caused by fires, storms, floods and earthquakes. The scheme is a fixed term insurance with redemption payments upon maturity.
- 7) **Car insurance:** This policy provides insurance for injuries and liabilities caused by car accidents. Insurance is paid for injuries or death of the drivers and/or passengers in the car of the insured, as well as for accidents caused by the insured or their spouses driving a third party's car. In addition, coverage is available to pedestrians, third party drivers and/or passengers.

- 8) **Fire insurance** is available for damage to houses or household goods caused by fire, while the basic house insurance is a type of long-term maturity policy with one-year term insurance. The combination of a low premium rate and extensive coverage make the system very popular.
- 9) **Group credit insurance:** In the event of death or disability of FCA members indebted to financing institutions, the policy pays off the balance of the debts.

5. The current state of capture fisheries insurance in India

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5.1 INTRODUCTION

India is among the top ten largest producers of fish in the world and is the second largest producer of inland fish. The country has seen significant growth in production in recent years. The fisheries sector of India provides employment to millions of people engaged fully, partially or in subsidiary activities pertaining to the sector, with an equally impressive segment of the population engaged in ancillary activities.

Fishery is a state issue, which implies that the primary responsibility for fishery development rests with the state governments. The major thrust in development in fisheries has been on optimizing production and productivity, augmenting export of fishery products, generating employment, and improving the welfare and socio-economic status of fisherfolk. The key statistics¹¹ for the fisheries sector in India are the following:

- Fish production during the year 2004–2005 yielded 6.30 million tonnes, comprising 2.77 million tonnes of marine fish and 3.52 million tonnes of inland fish.
- Fish seed production during 2003–2004 was 20 810.51 million fry.
- A network of 429 Fish Farmers' Development Agencies (FFDAs) has been set up covering all the potential districts in all the states and Union Territories (UT) for propagating freshwater aquaculture.
- To provide technical, financial and extension support to shrimp farmers in the small scale-sector, 39 Brackish water Fish Farmers Development Agencies (BFDAs) have been set up in all the coastal states and the UT of Andaman & Nicobar Islands.
- Until 2004–2005 about 670 000 hectares of water area was brought under scientific fish farming through FFDAs.
- Under the Centrally Sponsored Schemes (CSS) for motorization of traditional crafts, approximately 42 950 have been motorized so far.

¹¹ Information available from the Fisheries report, 2004–2005. Department of Animal Husbandry, Dairy & Fisheries. Ministry of Agriculture, Government of India.

- Under the CSS for the development of infrastructure of marine fisheries, the Government of India has sanctioned six major fishing harbours, 58 minor fishing harbours and 189 fish landing centres. Of these, 6 major fishing harbours, 40 minor fishing harbours and 151 fish landing centres have been completed and put to use. The remaining 18 fishing harbours and 38 fish landing centres are at various stages of construction.
- Fish production in the past 15 years has grown by 51.6 percent.

More details are available in Annex 1.

The capture fisheries sector in India is broadly classified on the basis of environment, that is: marine environment and inland/freshwater environment.

5.1.1 Marine environment

India has a long coastline (8 118 kilometres) with an exclusive economic zone (EEZ)¹² of 2 025 km². The marine fisheries sector provides direct and indirect (through affiliated services) employment and household income to over three million people. While the growth in marine fish production during the 1950s and 1970s had shown an increasing trend, in the last ten years (1990s) the marine fish production has stabilized.

Most of the major commercially exploited stocks are showing signs of overfishing, while demand for seafood continues to grow. The current level of marine fish production can only be sustained through closely monitoring the landings and the fishing effort, and by strictly implementing management measures based on scientific evidence.

5.1.2 Inland /freshwater environment

The inland freshwater environment in India is made up of rivers and canals, estuaries, floodplains, wetlands, lagoons and reservoirs. The statistics¹³ related to the catchment area are as follows:

- 14 major rivers >20 000 kilometres;
- 44 medium-sized rivers with catchment areas from 2 000 to 20 000 kilometres;
- numerous small rivers and desert streams.

The combined length of 29 000 kilometres provides the richest fish resource in the world.

Estimated reservoirs consist of a total area of 3.15 million ha (Table 5.1).

5.2 THE INSURANCE MARKET

The insurance market in India is usually divided into two categories – life insurance and general insurance. The insurance markets were not liberalized until 1999, and the only players in both areas were the public insurance companies. Before 1999, the monopoly on offering life insurance products rested with the Life

¹² Under the law of the sea, an Exclusive Economic Zone (EEZ) is a sea zone, over which a state has special rights for the exploration and use of marine resources.

¹³ Information available from the Fisheries report, 2004–2005. Department of Animal Husbandry, Dairy & Fisheries. Ministry of Agriculture, Government of India.

TABLE 5.1
Area under reservoirs

	Small	Medium	Large	Total
Number	1 913	180	56	19 370
Area (ha)	1 485 557	527 541	1 140 268	3 153 366

Insurance Corporation of India, while the monopoly on general insurance was with the General Insurance Corporation of India. Since then, the markets have been liberalized and now more than 35 private sector companies are involved in the provision of life and general insurance services.

The Insurance Regulatory and Development Authority of India (IRDA) has laid down regulations that require the private insurance companies to sell a certain percentage of policies to the rural and social sector. These regulations were laid down in 2002. Since then, the percentage of the rural and social sector insurance policies has increased.

The targeted vulnerable communities for micro-insurance services are 110 million rural households comprising 700 million people. There are 31 micro-insurance services providers. The cost of insurance as percentage of per capita income is less than 1 percent. Also, the premium charges as a percentage of GDP are 2 percent. At present the total number of people in India covered by life insurance is around 30 million (<3 percent of the population).

5.3 SUPPLY AND DEMAND ISSUES

While there are growth opportunities in the capture fisheries sector, based on under-utilized potential of mainly inland water resources, and of marine resources to a lesser extent, there are a number of challenges to overcome.

5.3.1 Number of active fisherfolk

The total number of active fishers across India, according to the 2005 Marine Census organized by the Ministry of Agriculture, was 889 528 with most of the fisherfolk population living in the States of Tamil Nadu and Kerala.¹⁴

5.3.2 Fishing vessels

The same 2005 Marine Census found that the total number of fishing vessels in India was 238 772 in that year and that 43 percent of the vessels were not motorized.¹⁵

Many of the fisherfolk belong to the poorer sections of Indian society. The number of fisherfolk continues to increase. This puts pressure on the available fish stocks, causing further overfishing and reduction in the economic feasibility of capture fisheries. Therefore, the Central Government of India has sanctioned various schemes directed at supporting fishing communities. Budget allocations for the year 2006–2007 are shown in Table 5.2.

¹⁴ A breakdown by state can be found in Annex 2.

¹⁵ A breakdown by state and by type of vessels can be found in Annex 3.

TABLE 5.2
Budget allocation for 2006–2007 for schemes to support fishing communities

Name of scheme	Budget in INR (million)	Approximate budget in US\$ (million) 1 USD = 45 INR
Welfare of fisherfolk	201.0	4.46
Development of inland aquaculture and fisheries	90.00	2.00
Integrated fisheries project	25.10	0.56
Development of marine fisheries	140.00	3.11
Fisheries training extension schemes	19 00	4.22

Source: Ministry of Agriculture, Government of India.

The central government also has some specific projects (currently ongoing) aimed at the development of the fisheries sector and increasing the efficiency of small fisherfolk to produce a larger catch and better maintenance of the quality of the fish caught.

Some of the important ongoing programmes relevant to the capture fisheries sector are the following:

- modernization of artisanal and small-scale fishing vessels;
- introduction of an intermediate range of fishing craft of improved design;
- introduction of resource-specific deep-sea fishing vessels.

The fishery sector related policies and programmes of the central government (also under the Tenth Five Year Plan) not only aim at improving the livelihoods of small-scale fishers, but also take into consideration the welfare and social security aspect of the fishers.

Given the continuing vulnerability of the fishing communities and the high risks involved in fishing as a professional occupation, more promotional and social security measures at the national level have been mandated. Presently, the following welfare programmes are being implemented in the country:

- development of model fisherfolk villages;
- Group Accident Insurance Scheme for active fishers;
- Saving-cum-Relief Scheme for fishers.

The welfare programmes are to be continued in the Tenth Five Year Plan in the same pattern as they were implemented during the Ninth Plan, mainly owing to the fact that they have been evaluated and revised only very recently. Minor modifications that are proposed for the welfare programmes under the tenth five-year planning period are the following:

- to provide additional housing subsidy to beneficiaries in hilly areas to account for the high cost of materials and transportation;
- to cover seasonal fishers also under the savings-cum-relief scheme;
- to include a component for renovation of existing houses;
- to include platforms for fish drying/ fish trading in fishing villages as facilities for the community.

The total budget for the welfare schemes is proposed at INR3 250 million (approximately US\$72.2 million).

Considering the high number of fishers in India, the Central Government of India through its Public Sector Undertakings in the insurance sector, i.e. the

General Insurance Corporation of India (GIC) and its four subsidiaries,¹⁶ along with the private sector – and a few other institutions – are attempting to deliver multiple-risk hedging¹⁷ services to the fisherfolk.

In the Indian insurance market very few private sector insurance companies exist that have proactively provided insurance coverage for capture fisheries. Innovations in developing risk-hedging services have therefore generally been spearheaded by community institutions and non-government organizations (NGOs).

Public sector insurers such as the General Insurance Corporation of India (GIC), provide hull and equipment insurance for fishing vessels, while group accident insurance and life insurance products are generally the domain of fisherfolk cooperatives. These have favourable agreements with the public insurers and provide the service to their members as intermediates.

Moreover, the Central Government Insurance Scheme for Active Fisherfolk includes various welfare programmes for fisherfolk that have some insurance components incorporated. Details of some of these welfare programmes can be found in Annex 5.

The National Federation of Fishermen Co-operatives Ltd (FISHCOPFED) is an apex organization of fisherfolk cooperatives in India. The fisherfolk cooperatives in the country have developed into a three-tier structure operating at the village, district and state levels. This structure, established in 1980, began its first activities in 1982. The overall objective of FISHCOPFED is to facilitate the fishing industry in India through its member cooperatives. The activities it undertakes can be categorized as follows:

- promotional (support training, demonstration, transfer of technology and marketing);
- welfare activity;
- business activity.

Under its welfare related activities, it assists its members in providing insurance services to fisherfolk. There are 17 federations at the state level, 108 central societies at the district and regional levels and over 11 847 primary fisheries cooperative societies at the local village level.

Only 1 860 of these local village level fisheries cooperative societies are focused on marine fisheries, which means that the great majority addresses issues concerning inland capture fisheries. The membership of the primary societies is about 1 378 million, covering about 21 percent of the total active fishers in the country.¹⁸ The entire business operation in these primary societies added up to around INR1 494.9 million in 2006–2007.

¹⁶ The General Insurance Business in India was nationalized in 1972 through the General Insurance Business (Nationalization) Act. The General Insurance Corporation of India is a nationalized reinsurer, having four subsidiaries to carry out general insurance business in India. These are: the United India Insurance Co – Chennai; the National Insurance Co. – Kolkatta; the Oriental Insurance Co. – Delhi and the New India Assurance Co.– Mumbai.

¹⁷ Hedging can be defined as an act or means of preventing the complete loss of an investment – or the like – with one that partially counterbalances or qualifies it.

¹⁸ This figure was provided by FISHCOPFED, and does not correspond to official statistics.

At the state level, some of the states have their own fisherfolk welfare schemes and programmes. For instance, the State of Kerala, which has the second highest population of active fisherfolk, (approximately 602 234 according to the 2005 marine census) leads the effort in state level initiatives for fisheries sector development and management. At present, the State of Kerala has two schemes implemented by the following agencies:

1) Kerala Fishermen's Welfare Board

The Kerala Fishermen's Welfare Board operates a life insurance plus personal accident scheme for fisherfolk. The entire premium payment for the scheme falls under the responsibility of the state government, which means that the scheme is fully subsidized. Life insurance coverage provides the dependents of a fisher in case of death/missing as a consequence of an accident or disaster, the sum of INR0.1 million.

2) Kerala State Cooperative Federation for Fisheries Development Limited (Matsyafed)

Matsyafed is a two-tier cooperative federation with 654 primary fishermen's development welfare cooperative societies. These primary cooperative societies can be subdivided into 340 operating in the marine sector, 183 in the inland sector and 131 women's cooperatives. Some 300 cooperatives are functioning well. The total membership of Matsyafed is 0.3 million fishers and their families.

The administration and management of Matsyafed is vested with a board of directors, which contains 23 members, of whom 15 are elected from primary cooperatives, five are official members and three are unofficial members nominated by the State Government of Kerala.

Various NGOs are also active in the provision of insurance services to fisherfolk. Two of these worth mentioning in this report are the South Indian Federation of Fishermen Societies (SIFFS) and the Trivandrum District Fishermen Federation (TDFF).

SIFFS is a leading NGO in fisheries. SIFFS was registered as the apex body of a three-tier cooperative structure in 1980, under the Travancore Literary, Scientific and Charitable Societies Act of 1955. Primary societies and district federations form the other two tiers of the organizational structure. SIFFS provides life and non-life (including vessel, equipment, gear) insurance services to its members.

TDFF is the only autonomous organization in the Trivandrum district for fishers. Since its establishment in the 1960s, it has implemented a number of activities and programmes aimed at improving the overall welfare of the fisherfolk community. It is managed and governed by the fishers. TDFF provides marine hull insurance, as well as fishing equipment and gears insurance.

5.4 POLICIES IN FORCE

The exact number of marine hull fishing vessel insurance policies in force in India at present is unknown. However, in 2006 the Oriental Insurance Company provided hull insurance coverage to over 600 fishing vessels. Although an exact figure is not

available, the United India Insurance Company also might have in its portfolio a few hundred fishing vessels covered. In addition, the SIFFS and TDFP provide fishing vessel insurance to some thousands of members. However, considering that vessel insurance is only available for newly built vessels (maximum age up to seven years) a large number remain uninsurable. This means that of the over 238 000 fishing vessels the majority is not covered by insurance.

In contrast, as far as life (and disability) insurance schemes for fisherfolk in India are concerned, the number of policies in force is very large. The extent of the various schemes and number of policies in force is illustrated by the following figures:

- The Oriental Insurance Company (through FISHCOPFED) provided group accident insurance for active fisherfolk to over 1.3 million fishers (all its member-fishers and their household members).
- Matsyafed implements personal accident insurance, which covered some 40 000 fisherfolk in 2006.
- South Indian Federation of Fishermen Societies (SIFFS) has an unnamed crew insurance policy. This relatively new insurance product was a success in terms of introduction as in 2006–2007 over 3 300 crewmembers were covered by the issued policies.

5.5 PERILS COVERED

The current institutional policies and insurance schemes available to the small-scale fishing sector cover the following perils:

Oriental Insurance Company

Perils covered are:

- fire or explosion;
- theft by persons who do not belong to the vessel crew and owners;
- jettison;
- piracy;
- breakdown of or accident to nuclear installations or nuclear reactors;
- contact with aircraft or similar objects;
- negligence of master officer, crew or of pilots.

United India Insurance Company

Perils covered include, among others:

- fire or explosions;
- stranding, sinking, collision, and salvage charges.

Perils excluded from the coverage are:

- deliberate damage/destruction of the vessel by wrongful act of any person;
- use of any weapon of war employing atomic/nuclear fission and or fusion;
- insolvency or financial default of the vessel owner/operators/charterers;
- war/civil war, strike, riot or civil commotion;
- any acts of terror or persons acting with political motive.

South Indian Federation of Fishermen Societies (SIFFS)

Perils covered by SIFFS include:

- total loss of either boat or engine or both engine and boat at sea or on shore;
- total loss of fishing nets and tackles on shore due to any perils, such as storm, tempest, flood and inundation (STFI) and riot, strike and malicious damage (RSMD) which occurred in Kerala and Tamil Nadu coasts;
- fishing nets kept on shore against major perils, riot, fire or natural catastrophe, resulting in total loss.

The coverage offered by insurers of larger scale capture fisheries companies in India is not much different from that of other countries and regions. Insurers generally use the Institute Fishing Vessel Clauses as a base that are adapted by the public and private insurance companies to reflect their own requirements. In general the policies provided are of the “named perils” type.

5.6 VESSELS INSURED

5.6.1 Public sector general insurance companies

The following companies provide public sector general insurance for vessels:

- The Oriental Insurance Company has a general hull and machinery policy that covers offshore fishing vessels. The company has provided annual policy coverage for 603 fishing vessels. Insurance premiums collected in 2006 on fishing vessel insurance amounted to INR49 million.
- The United India Insurance Company provides marine hull insurance that covers small-scale fishing vessels, commercial fishing vessels and recreational/sailing vessels.
- Matsyafed insures fishing vessels for the first five years after construction, with a depreciation rate of 10 percent per year in value.
- Trivandrum District Fishermen Federation (TDF) provides insurance coverage for various kinds of fishing vessels (hull), including catamarans.

5.7 EQUIPMENT AND GEARS INSURED

Matsyafed insures the engines on board fishing vessels for three years; the depreciation rate applied is 3 percent per year. Also fishing gears (nets) can be insured for a period of three years, but claims are only accepted on gears if there is total loss of the vessel, engine and gears.

TDF covers, apart from the abovementioned marine hull insurance, also fishing equipment and gears. The coverage provided is for total loss (vessel, equipment and gears) and the maximum compensation provided under the coverage is INR50 000. In case of partial loss or damage to the vessel, engine, or gears, the maximum compensation that can be paid is INR25 000; additional support to get the fisher working again is provided as a loan with favourable conditions.

It is worthwhile to note that group insurance policies for fisherfolk are quite common in India. These group policies (in the case of insurance companies) and schemes (in the case of cooperatives) cover a large group of fisherfolk who are part of a common cooperative/society. Group policies and schemes provide life insurance coverage (for accidents caused while carrying out fishing activities at sea).

For example, Matsyafed provides members also with a life and accident insurance; member fishers are required to pay annual premiums of INR15 for this service. In case of death by accident or missing at sea of fisherfolk, the compensation to the family/dependents of fisherfolk is INR150 000.

Similarly, the South Indian Federation of Fishermen Societies (SIFFS) has an unnamed crew insurance policy, which has been in operation since 2005–2006. This policy is provided by SIFFS to its members for the United India Insurance Company (UIIC) and is purchased by the fishing vessel owner. A unit of five members is defined as a fishing crew. The annual premium for five crewmembers is INR150 plus a 12.24 percent tax (total: INR168.36). In case of death by accident or missing at sea of crewmembers, the compensation to the family/dependents of the crew is INR50 000 per person. SIFFS acts in this service provision as a Nodal Agency on behalf of the insured members.

FISHCOPFED also operates a Group Insurance Scheme for Active Fishermen. Annual premium payments are INR14 per fisher, of which 50 percent is subsidized through a grant by FISHCOPFED itself. The state government pays 50 percent of the premium; therefore the scheme is fully subsidized. In the case of the Union Territories, 100 percent of the premium is borne by the central government. The sum insured is INR50 000 for death/permanent disability, and INR25 000 for partial disability.

5.8 UNDERWRITING

The IRDA has stipulated certain guidelines for underwriters as of September 2005. These are as follows:

- The function of underwriting and rating of the insurance business should be independent of the business development.
- Every insurer requires an internal guide tariff for the smaller valued risks and the simple risks. This is done to ensure that the insurer transfers the proper amount of risk, and some amount is transferred to the reinsurer.
- Risks not covered by the guide tariff must be referred to nominated underwriters¹⁹ stationed at higher offices of the insurer. They will have the authority to accept or decline risks.
- The insurer will have a risk inspection team within the organization or may use the services of outside experts for risks evaluation. These persons will be totally independent of the business development staff, and will only report to the head of the underwriters.

As scheduled by IRDA, the general insurance sector was de-tariffed on 31 December 2006. The transition from a controlled tariffed industry to a market

¹⁹ An underwriter is an official of an insurance company whose main responsibility is to determine whether the risk proposed for insurance is insurable and if so, at what rates, terms and conditions to examine the proposal, inspect the risks and fix the premium rates, terms and conditions of coverage. With the insurance sector moving to a tariff-free environment, the role and responsibility of the underwriters increase tremendously. There is a need for insurance companies to develop underwriting skills at operating levels.

TABLE 5.3
Scheme applied by the South Indian Federation of Fishermen Societies. Figures in INR
(1 USD = 45 INR)

Sl. No.	Asset details	Sum insured*					Premium
		<= 1 year	2nd year	3rd year	4th year	5th & 6th year	
1	Polyester reinforced vessel	50 000		37 500		25 000	
2	Traditional Catamaran – large	15 000	10 000	5 000	Nil	Nil	1% of sum insured + 12.36% service tax
3	Traditional Catamaran – medium	10 000	70 00	4 000	Nil	Nil	
II	Engine	<=6 Months	6 months to 1 year	2nd year	3rd year		
1	Engine	35 000	25 000	20 000	10 000		

*Calculations based on 50 percent of the market value of assets.

TABLE 5.4
Scheme applied by Trivandrum District Fishermen Federation. Figures in INR
(1 US\$ = 45 INR)

Equipment	Age of the equipment	Maximum compensation provided under insurance coverage.(INR)
Vessel	Less than 3 years	12 500
	3–5 years	10 000
	5–7 years	7 500
	More than 7 years	Nil
Engine	Less than 1 year	12 500
	Less than 2 years	10 000
	2–3 year period	7 500
	More than 3 years	Nil

free of tariffs needs to be smooth and efficient. To ensure the same, the roles and responsibilities of various segments need enhancement. One such important activity is underwriting.

The United India Insurance Company applies a maximum insurable sum for individual fishing vessels (including trawlers) of INR10 million. This maximum underwriting capacity is also applicable for vallams²⁰ and catamarans; the terms and conditions and policy premium rates vary for individual cases.

Public and private sector insurers of capture fisheries activities in India require extensive information on every production operation offered for insurance. All applicants, both small and large operators, will be required to complete specialist application forms as part of the insurance process. Properly completed, these will, when combined with underwriting and risk management surveys, analyse the risks and hazards that are relevant to the operation. The insurers will adjust their underwriting approach accordingly.

However, fisherfolk organizations like SIFFS and TDFP have established policy schemes for various types of vessels that do not require extensive information gathering and are more easily accessible to small-scale fishers. The fisherfolk organizations' schemes determine the maximum underwriting capacity on an individual fishing vessel and also have standard compensation sums in case of damage and/or loss of vessel and/or equipment. Two schemes applied are shown in Tables 5.3 and 5.4.

²⁰ A small boat typically used for boat races.

5.9 RISK MANAGEMENT

As in other countries, the public and private insurance companies that provide marine hull coverage for fishing vessels make use of risk management surveys as part of their decision-making processes. As specified by the Insurance Regulatory and Development Authority of India, the insurance providers may use internal and external risk assessors to undertake risk profiling.

Fisherfolk organizations like SIFFS and TDFF (besides serving their members and having through their membership a good source of high quality information) maintain their own risk management procedures, which might include social pressure methods. These methods are generally linked to their policies, rules and regulations and are used to reduce risks involved in fishing by increasing fisher safety at sea. Overall, they encourage better management practices in fishing and reduce the vulnerability of the members to disasters.

5.10 HANDLING OF CLAIMS

Claims must be reported immediately when damage has occurred – also when it is likely that damage to or loss of the fishing vessel or fishing equipment will occur in the near future. In general, the insurance policies issued contain standard guidelines for the policyholders to make claims. Public and private insurers will deal with claims in similar ways as in other countries of the Asian region.

In the case of fishers having insurance coverage through SIFFS, the fishers have to inform SIFFS as soon as possible following the damage or loss occurrence – in any case within 24 hours – for immediate arrangements. On acceptance of the damage or loss information, the SIFFS further contacts the insurer and notifies the SIFF experts committee to send experts in damage assessment and loss valuation to the location of the damage or loss. Following the assessment report, the insurer makes the total loss confirmation with proper certification from the society, peer group members etc. After total loss confirmation, the insurer settles the total sum insured within a stipulated duration; in general the settlement is reached within 2–3 weeks.

Claims under the SIFFS Unnamed Crew Insurance Policy will follow these steps: Whenever there is a claim, the applicant first completes the claim form depicting the nature and scale of damage, along with the reasons for the same. A copy of a so-called First Information Report (FIR) from the local police is to be attached, along with the claim form. In case of the death of a fishing crewmember, a postmortem report from the local health agency also must be enclosed along with a death certificate. Moreover, a detailed report about the accident is to be completed by the SIFFS committee members.

Matsyafed requests that damage and losses be reported immediately to its office. Under its marine hull and fishing equipment policies, claims are followed by a damage assessment by Matsyafed staff. In case of repair work, compensation is paid in cash to cover the costs of items that are covered under the policy. In case of the total loss of the vessel, the payment will be either to the loan-providing institution and/or in cash to the fisher/insured.

Most of the claims are honoured, but a small percentage (10 percent) of the claims made is rejected on grounds of non-compliance with the insurance policy coverage provided. Matsyafed charges 1 percent of claimed value as an agency intermediation fee.

5.11 UNDERWRITING EXPERIENCES

The underwriting experiences related to marine hull insurance of fishing vessels by public insurers have fluctuated largely in recent years. The consequences of the earthquake, followed by a tsunami in December 2004 have resulted in poor underwriting experiences in fishing vessel insurance in the year 2004–2005. On the other hand, interest in the Tsunami Jan Bima Yojna (Tsunami-affected people insurance scheme) as launched recently by the United India Insurance Company (UIIC) has been high ever since (details can be found in Annex 4). Because no similar tsunamis have been recorded since then, the underwriting experience for this scheme was good.

Historically, underwriting experiences in capture fisheries have shown large variations; in some years the loss ratios were positive and in others, negative. A large portion of the insurance claims have always related to losses and damage of vessel equipment (engine failures and breakdown). As a result of the sometimes-high loss ratios on this type of insurance, the availability of insurance services for equipment and gears has decreased. Profitability rates of this type of insurance for public and private insurers have been poor and consequently availability of underwriting services has decreased.

One of the most important causes of high loss ratios is the fact that there have been very few anti-fraud measures introduced to reduce moral hazard issues. The insurance companies have failed to think beyond traditional measures to reduce insurance fraud, and this has resulted in increased loss ratios.

Underwriting experiences of the FISHCOPFED-operated Group Accident Insurance Scheme for Active Fishermen have been excellent. The claim ratio was less than 1 percent in the year 2006–2007. Similar experiences have been recorded from others (e.g. SIFFS – six claims on over 3 300 policies in 2006–2007) that provided life and disability insurance services to fisherfolk. In general, their experiences have been positive in recent years. Additionally, the premium support provided by the central government greatly reduces the administrative and operational costs of providing this service.

5.12 CONCLUSIONS

The private sector insurance industry is not active in providing insurance to the often poor and vulnerable fisher population in India because of bad experience with claims, the high cost of transaction/penetration and low premium income. However, it does provide marine hull insurance coverage for large marine vessels, and a few of the insurers (e.g. Allianz) are entering into the micro-insurance niche market. They are assuming increased social responsibility and are seeing some potential to generate revenues.

Public sector insurers in India do not maintain separate records for hull insurance of fishing vessels. However, the public insurance companies have both the funds available and the social responsibility to meet the needs of the impoverished and vulnerable fisherfolk.

Most of the fisheries sector related insurance policies on the market are group insurance policies operated through cooperatives or schemes developed by cooperatives themselves.

Public sector insurance companies do not provide coverage to the fisheries sector for fishing equipment and fishing gears. There are hardly any asset insurance services available for inland capture fisheries activities; if any are being provided by cooperatives, these are based on the pooling of savings of the members. The market penetration and general popularity of group insurance services compared with individual insurance coverage is much higher, as both the insured and insurer are reaping the benefits of these group insurance schemes in terms of reduced premiums and reduced costs of managing and administering of the schemes.

While the central government has made available substantial resources to finance various welfare schemes in light of developing fisherfolk communities in terms of infrastructure, education and employment opportunities, to date a large part of these resources is remaining untapped. Moreover, there are no initiatives to increase insurance coverage of vessels, gears and equipment of small-scale fisherfolk.

Life and disability insurance coverage is available for small-scale and poor fisherfolk in most regions in India. A considerable portion of the current vessel (hull), equipment and gear insurance for fisheries is a consequence of the demands by credit supplying institutions. After the first few years, and after the credit has been repaid, most fisherfolk do not renew their insurance policies in successive years.

5.13 RECOMMENDATIONS

Increasing the availability of insurance to fishers and access of fisherfolk to insurance services is generally best done through existing structures, such as cooperatives. The partnership model as is currently advocated by some cooperatives and NGOs in India brings many benefits to both the insurer and the insured (small-scale fisherfolk).

One of the benefits that such a partnership model brings is that policies can fit the needs of groups of fishers, in contrast to the “one size fits all” approach. There is a clear need for customized policies that differ according to the nature of the activity, i.e. marine or inland capture fisheries, financial status of fishers – poor or well-to-do – and other aspects such as target species, equipment and gears used.

The utilization of part of the allocated government funds for development of the fisheries sector for the purpose of capture fisheries insurance is critical to the development and extensive dissemination of this service.

It is important to address the information gap between insurer and insured. Cooperatives have a close relationship with their fisher members. They can

therefore be of assistance to the insurer by providing valuable information, thus allowing underwriting services to remain within reasonable costs. Similarly, making use of cooperative services can reduce transaction costs.

Trust is an essential component of the insurance business; at present small-scale fisherfolk have generally a trusting relationship with their cooperatives. Insurance coverage provided through their cooperatives will reduce fraudulent claims, increase timely reporting on claims and improve payment of premiums.

Awareness should be raised concerning the benefits of insurance for fisherfolk, and the acceptance of insurance as a benefit should be increased through promotional activities that target the fisherfolk as a group. For example, use could be made of promotional videos – agents detailing the needs and benefits of the insurance services – and provision of clear information through simple and understandable messages, brochures and leaflets. Insurers could also consider partnering with credit suppliers who provide credit services for the purchase of fishing vessels, equipment and gears.

The existing range of insurance coverage available in the market should be enlarged to address the specific needs of the various fisheries, as well as to increase insurance coverage for:

- quality and quantity of fish catch;
- catastrophic weather conditions;
- health of fisherfolk and their households;
- post-harvest activities.

The losses to the fishery sector caused by storms, cyclones and tsunamis could be reduced by the introduction of effective early warning systems. These will need infrastructure investments and will largely rely on the government for their operation and maintenance. For those insurance services that are currently considered unattractive to private insurers, as well as for the development and introduction of new insurance products that address the needs of small-scale fisherfolk, the government should assist in arranging for insurance and reinsurance facilities. In some cases, the government might be able to act as the reinsurer. Research and development efforts on capture fisheries insurance services should be increased through development of partnerships among insurance companies, research institutes and fisherfolk cooperatives.

ANNEX 1

Fish production data for the past 15 years, in lakh tonnes

Year	Marine	Inland	Total
1991–92	24.47	17.10	41.57
1992–93	25.76	17.89	43.65
1993–94	26.49	19.95	46.44
1994–95	26.92	20.97	47.89
1995–96	27.07	22.42	49.49
1996–97	29.67	23.81	53.48
1997–98	29.50	24.38	53.88
1998–99	26.96	26.02	52.98
1999–00	28.52	28.23	56.75
2000–01	28.11	28.45	56.56
2001–02	28.30	31.26	59.56
2002–03	29.90	32.10	62.00
2003–04	29.41	34.58	63.99
2004–05	27.78	35.26	63.04

ANNEX 2

Fisherfolk population by state

State/UT	Full time	Part time	Occasional	Total	Fisherfolk population
West Bengal	50 924	15 630	4 196	70 750	269 565
Orissa	74 980	34 315	11 987	121 282	450 391
Andhra Pradesh	109 644	13 008	15 962	138 614	509 991
Tamilnadu	185 603	15 954	5 351	206 908	790 408
Pondicherry	9 503	401	437	10 341	43 028
Kerala	124 103	10 488	5 631	140 222	602 234
Karnataka	32 274	4 152	1 206	37 632	170 914
Goa	1 511	817	187	2 515	10 668
Maharashtra	54 901	12 484	4 689	72 074	319 397
Gujarat	68 956	10 185	4 181	83 322	323 215
Daman & Diu	5 600	194	74	5 868	29 305
Total	717 999	117 628	53 901	889 528	3 519 116

Source: Marine Census 2005. Ministry of Agriculture, Government of India.

ANNEX 3

Vessel type and number by state

State/U.T.	Trawlers	Purse seiners	Gill netters	Dol netters	Liners	Others	Total mechanized	Motorized	Non-motorized	Total
West Bengal	610	0	4 355	1 692	66	106	6 829	1 776	10 041	18 646
Orissa	1 340	22	1 760	254	28	173	3 577	4 719	15 444	23 740
Andhra Pradesh	1 802	0	424	0	20	295	2 541	14 112	24 386	41 039
Tamil Nadu	5 300	46	655	11	781	918	7 711	22 478	24 231	54 420
Pondicherry	326	0	177	0	0	124	627	2 306	1 524	4 457
Kerela	3 982	54	428	0	10	1 030	5 504	14 151	9 522	29 177
Karnatka	2 515	505	1 254	0	28	71	4 373	3 705	7 577	15 655
Goa	830	196	47	0	0	14	1 087	932	532	2 551
Maharashtra	4 219	156	2 550	4 409	253	1 466	13 053	3 382	7 073	23 508
Gujarat	8 002	0	2 363	2 425	4	253	13 047	7 376	3 729	24 152
Daman & Diu	315	4	170	71	0	2	562	654	211	1 427
Total	29 241	983	14 183	8 862	1 190	4 452	58 911	75 591	104 270	238 772

Source: Marine Census 2005. Ministry of Agriculture, Government of India.

ANNEX 4

Details of the Tsunami Jan Bima Yojna (Tsunami affected people insurance scheme)

The United India Insurance Company has a policy for the Tsunami affected population living on the coasts of India named “Tsunami Jan Bima Yojna” (Tsunami affected people insurance scheme). Main features of the policy are:

- comprehensive coverage for health and accidents;
- a floater scheme wherein a family of five members is covered under a single sum insured;²¹
- low priced schemes (low premiums) with wide coverage;
- the cost of operation(s) and OPD (out-patient department²²) charges, available only at government hospitals are covered;
- pre-existing diseases are included;
- personal accident deaths coverage for the head of the family;
- maximum claims are set at INR30 000 per year per policy; total expenses per illness are restricted to INR15 000 per year.

Scheme coverage:

- all tsunami affected populations;
- families of five (two spouses and first three dependent children).

The scheme also covers the poorest households (those below the poverty line).

²¹ Average size of a family in the region. The premium will vary for different family sizes.

²² Diseases other than in-patient hospitalization.

ANNEX 5

Welfare funds

Many welfare programmes and schemes that are established by central and state governments are directed towards risk transfer, mitigation and empowering the vulnerable population, including poor fisherfolk communities. The welfare schemes aim at bringing stability and improving the livelihoods of the whole community. Whenever there are adverse experiences faced by any individual and/or community the cooperatives involved in the schemes take steps to reverse such adverse effects.

Considering the large number of fisherfolk who are members of cooperatives, a variety of development programmes by the state and central government are delivered through these cooperatives. Additionally cooperatives themselves implement a range of welfare schemes from their member contributions and savings. Some examples of the welfare schemes for small-scale and poor fisherfolk are the following:

Matsyafed has a loan scheme for its members, which is contributed to by the National Cooperative Development Corporation (NCDC) (INR100–150 million for three years) and by the National Backward Class Development Financial Corporation and National Minority Development Finance Corporation (INR10 million each). The loans provided by Matsyafed to its members carry an interest rate of 10 percent and have suitable loan conditions for the fisherfolk, making it easier for them to access the loans and make repayment according to their incomes.

The TDFP federation of Anjengo region of Kerala includes seven societies that collect INR5 to 10 on each fish catch bill from their members. This fee is deposited in a welfare fund and is managed at the society level. In case of missing fisher members at sea, the societies send out a search and rescue team. The welfare fund bears the expenses incurred for this search and rescue operation. The welfare fund is also utilized to cover the medical expenses of injured member fishers incurred while fishing.

Bajaj Insurance, Allianz Insurance and CARE²³ have recently launched a three-year partnership project that will provide micro-insurance to over 75 000 people in one of the areas hit worst by the tsunami – the southern Indian state of Tamil Nadu. Announced in July 2007, the project will deliver affordable, specifically created insurance products to farm workers and fisherfolk in the coastal communities of Tamil Nadu. An insurance package will be provided that covers the health of tsunami-affected families, as well as the assets of fisherfolk along the coast. For most poor people in this region, this will be their first access to insurance of any kind. The project is financed by Allianz (Germany).

²³ Allianz Insurance with its Indian partner in the insurance sector Bajaj has linked up with CARE (an NGO) working in 66 countries to tackle poverty issues, render people self-sufficient and provide micro-insurance to the poor.

6. The current state of capture fisheries insurance in Europe

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6.1 THE INSURANCE MARKET

The insurance industry in Europe for commercial fishing vessels is limited in the number of suppliers, but a variety of companies specialize in this difficult class of business. The organizations include large composite insurance companies, Lloyd's of London, and also smaller mutual companies that often provide a dedicated customized service to the commercial fishing industries.

Many owners, particularly those that operate larger and more sophisticated vessels, use the expertise of an insurance broker to purchase their insurance. However, there are still areas of the fishing industry where the owner buys directly from the insurer, as this has been a tradition over time. In recent years, fishing vessel owners buying insurance coverage have become more discerning, thus greater attention is being paid to the quality of the insurance security provided and the commitment of the insurer to the fishing industry. Sadly, in recent years the fishing industry has fallen victim to several unscrupulous providers of insurance coverage where the promise of low premiums has been possible owing to inadequate security being offered. When the inevitable losses were encountered, the insurance providers walked away from their liabilities and responsibilities to owners.

It should be noted that Lloyd's of London is in itself a market made up of a number of underwriting organizations trading as syndicates. Needless to say, they are all in business for profit, but do not rely entirely on the proceeds from fishing vessel insurance. In many cases, fishing vessel insurance will account for only a small part of their marine portfolio, but fishing vessel business is used to supplement larger marine divisions. Traditionally, over the years fishing vessels have been a difficult class of business for insurers, and it has not been a profitable sector of the insurance market. Commercial fishing, by its very nature, is one of the most demanding and dangerous of occupations, often referred to as being seven times more hazardous than coal mining. Too many fishermen lose their lives following incidents at sea, given the often hazardous conditions on vessels and the environment in which vessels are forced to work.

In addition to Lloyd's of London, which is not really considered a specialist fishing vessel market, there are a number of larger composite insurance companies

that would include fishing vessel business as part of their overall marine portfolio. In many cases, but not always, their operations will be limited geographically, although there are several larger international insurance companies that provide insurance coverage to the commercial fishing industry in different parts of the world.

Commercial fishing activities for developed countries around the world would result in most of the fishing vessels acquiring insurance protection. While the decline of fleets in Europe, as a result of the Common Fisheries Policy, has resulted in fewer vessels to insure, the supply of specialist coverage to the industry is still plentiful and competitive within this niche sector of insurance business.

The insurance industry today is highly regulated by the applicable laws, controls and governance imposed by the country where the particular insurer is domiciled. In addition, insurers trading internationally may also be required to register and become licensed by insurance regulators in the countries where the insurance business has been sourced. Increased compliance issues have provided greater security for policyholders in the event of problems encountered, either because of claims disputes or, even – on rare occasions – as a result of insurers' insolvency. Governance and regulatory controls are now far-reaching. Some insurance sector stakeholders believe that in certain instances the regulations can be too vigorous, leading to an over-zealous reporting requirement. This creates a substantial additional cost to insurers, which must inevitably be met from the profits of trading and therefore, ultimately at policyholder cost. The requirements obviously change by jurisdiction, although there does seem to be some uniformity across the European Union. Further details can be also accessed through: www.fsa.gov.uk and refer to the Third Non-Life Directive where certain insurers have passport permission to underwrite business throughout the European Union under the Outward Service Directive.

The commercial fishing industries of the world generally continue to be impacted by conservation measures and the effects of government intervention in an attempt to protect endangered species by the use of quotas, or by imposing limited days at sea that restrict the time that vessels are allowed to catch. There are often disputes between the fishing industry and scientists, as overfishing has been perceived to be a growing problem. Certain species are unsustainable unless the level of current catching is restricted. There is certainly a need for a balance between the over-protection of stocks by governments to preserve an industry for future generations and allowing commercial realities to accommodate the increasing demand of a global population, which consumes a greater volume of seafood products every year. Part of this demand is met by the continued growth of the aquaculture industry, but this also must be balanced by the catching sector that has existed for centuries.

In some parts of the world this has led to decommissioning programmes, or buy-back schemes, where through government intervention the number of catching units has been restricted, with vessels being retired from the commercial fishing industry and – in many cases – being scrapped to prevent their re-entry

into other industries at a later date. For the insurance industry, this has reduced the available volume of business; therefore, in general, premium incomes from fishing vessel business as a specific insurance category have continued to fall in recent years.

With the results from fishing vessel business being generally poor, new capital is not being generated or attracted to this class of business. This results in further uncertainty and a contraction within the fishing vessel insurance market, particularly as the number of new vessels now being constructed in Europe continues to decrease year-by-year. This makes the industry older and less attractive to the insurance industry itself. An ageing fishing industry will inevitably produce increasing claims, particularly as the complex machinery on board the vessel becomes older and breakdowns become more frequent and more costly to repair.

6.2 SUPPLY AND DEMAND ISSUES

Access to fishing vessel insurers in Europe is relatively easy and increasingly many owners utilize the expertise of an insurance broker or agent to conduct their business. The buyer of marine insurance has become more discerning over the past decade, probably owing to the increased access to the Internet, where it is possible to obtain a higher volume of information concerning insurance providers than has been possible in the past. The fishing industry over the past decade has become more computerized and the familiarity of Internet use has brought new buying opportunities to vessel owners. The European Fishing Vessel Insurance Companies Association (EFICA), including mutual insurance companies and insurance companies specialized in fishing vessel insurance can be found at: www.efica.org. Merely using a search engine on the Internet will also produce much information on fishing vessel and marine insurance services and companies involved.

A particular feature of European fishing vessel insurance is the number of dedicated mutual insurance companies that have traditionally provided insurance protection to the fishing industry over many years. Many of these niche market mutual companies are active at the local level and quite often will trade only in the country where they are domiciled although, on occasion, their trading can expand internationally. Many of the smaller mutual insurance companies are restricted as to the size and value of vessels that they can accommodate owing to restrictions on capital or limited access to the reinsurance market. However, with the advent of larger and more sophisticated vessels – now with very high values, some in excess of US\$50 million – the use of an insurance broker is quite common, because in many instances the risk has to be spread among a number of markets to allow adequate and full coverage to be achieved. This also allows the market to be protected and preserved. A major loss to a single insurer of the magnitude of the higher valued vessels could otherwise result in the failure of an individual insurer. Indeed, the insurance of larger vessels can be placed internationally, and this is where the professional marine insurance broker is an ideal conduit to access the specialist market providers.

Fishing vessel insurers, including mutual insurance companies, are mindful of their accumulated exposures to risks and the majority – if not all – will have separate reinsurance arrangements for their own continuing protection. Traditionally, this is arranged on an annual basis utilizing the services of a specialist reinsurance broker. Here, the security is likely to be a professional reinsurer, who will provide protection to the direct insurer where his exposure through a single event, such as a “total loss”, will be limited to a pre-determined level. In addition, exposure through catastrophes such as wind storms will be covered, where the direct insurer’s liability may be accumulated geographically and may be unknown, as naturally vessels move from port to port and seasonally to different fishing grounds. Therefore, the reinsurance protection for the direct insurer must accommodate varying accumulated risks in different parts of the world, although traditionally this would be pre-determined by a specific maximum liability.

One of the greatest challenges faced by the insurers of fishing vessels is that of continued climate change. While all insurers face this phenomenon, it is the protection of smaller vessels at sea that presents one of the most demanding challenges, as fisherfolk are traditionally seen as being the hunters of the sea.

It is not known precisely how many fishing vessel insurers there are in Europe. The insurers include composite insurance companies, mutual insurance companies and syndicates. However, it is clear that the number of direct insurance facilities shows a declining trend over the past decade in line with the contraction of the industry and the difficult nature of the business.

6.3 POLICIES IN FORCE

It has not been possible to determine exactly how many policies are in force and it is probably an unknown quantity. Quite often, the number of registered fishing vessels noted by country or state is not an accurate guide to the number of commercially trading vessels, as many registration numbers remain “live” when the vessel may have been retired from the industry many years before. However, decommissioning and buy-back programmes have succeeded in reducing inaccurate numbers, although the actual number of vessels trading and insured around the world must extend into many thousands.

The size of the fishing vessel fleet in Europe per country can be found at: <http://ec.europa.eu/fisheries/fleetstatistics/index.cfm>; however, not all such vessels will be insured. Of those that are, it is reasonable to assume that 60 percent or fewer of “passive gear”²⁴ vessels will carry insurance, and a much higher figure, up to perhaps 90 percent will carry insurance for the “towed gear” vessels. The total number of fishing vessels covered by insurance services in the European Union is roughly estimated at 50 000.

²⁴ Passive gears include among others: lift nets, set gillnets, drift nets, trammel nets, pots, set longlines and hand lines. Towed gears include, among others: purse seines, beach seines, pair seines, beam trawls, bottom trawls, boat dredges and trolling lines.

6.4 PERILS COVERED

The basic policy form used by most insurers is framed around the London market's promulgated fishing vessel clauses, often referred to as the Institute Fishing Vessel Clauses.²⁵ Vessels can also be covered under the Institute Time Clauses, but it is more common to use the clauses specially developed for the industry. These clauses are available from Witherby & Co at: www.witherbys.com. Many marine insurers have adapted these clauses to reflect their own requirements, but in essence they are an "all risk" form and have been adapted to different parts of the world. Most insurers have developed specialist clauses to meet industry demands where the origins of the extensions of coverage are drawn from proposal forms supplied to owners. Mutual companies may also work with "club rules", which can often extend the scope of coverage provided, or provide protection better customized to a region or a particular fishery. Examples of how clubs function and their rules can be found at several websites, including: The Ship-owners Club (www.shipownersclub.com/) and The International Group of P&I Clubs (www.igpandi.org/).

In addition, insurers can quite often limit and modify the scope of coverage offered to the industry, which may be dependent upon the price owners are prepared to pay or the extent of coverage the insurer is prepared to offer, bearing in mind the type of vessel insured, and in particular the age of the vessel and its trading areas. In many instances, a simple form of protection is all that may be required for small-scale vessels, but the larger and more complex vessels may often require extensions of coverage to accommodate their level of sophistication.

In addition to providing Hull & Machinery coverage, Mortgagees Interest and Protection & Indemnity (P&I) coverage are also important to the fishing industries of Europe. The often high borrowing potential of owners when buying new vessels is in itself an area of risk that requires consideration, and this is where the bank or lending institution will seek to protect their liability.

P&I insurance for the owners in the fishing industry in recent times has become increasingly important. The growth of "no win, no fee" lawyers has resulted in an escalation of claims being reported from fishing activities. P&I coverage is provided by mutual companies, as well as by the specialized P&I clubs that are traditionally attracted to the larger risks.

Legal liability in the modern day environment is well publicized and, given the hazardous nature of commercial fishing, it is vital that owners be adequately covered in this area of their business.

6.5 VESSELS INSURED

Insurance coverage is provided to all types and sizes of commercial fishing vessels to include inshore and large ocean going trawlers. Small day-boats that fish with traps for crab and lobster are at the smaller end of the market. Longlining, purse seining and trawling are all fisheries operations that are commonly insured. In certain areas, whaling and sealing are also covered operations.

²⁵ See Appendix 1.

The smallest commercial vessels insured are less than 10 metres in length, while some of the larger factory trawlers being insured at the present time are upwards of 160 metres in overall length.

6.6 EQUIPMENT AND GEARS INSURED

In addition to the hull and machinery risks covered many owners will also seek to cover their gear and equipment stored on board the vessel and, in certain cases, gear stored ashore. In some instances, the value of fishing gears for specialist operations such as pair trawling and purse seining can extend into the hundreds of thousands of dollars and specialist care and maintenance must be employed to ensure the efficiency and extended life of this valuable aspect of commercial fishing.

In many instances, the fish finding and net control systems are of high value and while part would be insured according to the hull and machinery value of the vessel, special net monitoring equipment would be insured increasingly as part of the fishing gear, and this in itself has a very high value.

6.7 UNDERWRITING

Throughout Europe there are many specialized insurers. Some insurers are limited in capacity; therefore their scope of business is often limited to the country in which they are domiciled. However, larger specialist insurers such as Sunderland Marine Mutual Insurance Company Limited in the United Kingdom would trade on a global basis with a number of branch offices in Australia, New Zealand, South Africa, the United States of America and Canada. The company also operates a specialized subsidiary in The Netherlands (Tegen Zeegevaar), and there are a number of specialized fishing vessel insurers throughout the European Union. A number of these are members of the European Fishing Vessel Insurance Companies Association (EFICA), which is a group of specialized fishing insurers that has been in existence for 12 years. The members of EFICA include companies from France, the Netherlands and Portugal, with previous connections with mutual insurance companies in Spain, Belgium and the United Kingdom.

In addition to the members of EFICA and the countries mentioned, the Norwegian fishing industry is well served by a number of mutual clubs extending along the coastline of Norway. Specialist insurance protection is provided to the local Norwegian industry on an almost regional basis, along with some larger composite companies that provide fishing vessel insurance.

Overall capacity is very difficult to determine, as the insurance of fishing vessels is fragmented around the world. A number of factors, including the capitalization of the company, its attitude to risk, and its reinsurance protection will play an important role. The largest vessel insured in Europe is believed to be in the Norwegian market at €50 million. As a considerable amount of reinsurance is no doubt required to insure this vessel, reinsurance for this vessel is almost certainly spread around the world.

6.8 RISK MANAGEMENT

The subject of risk management is vital to marine insurers with most companies linking their individual insurance criteria to their attitude to risk and their knowledge of the specialized areas in which they are trading. Not all fishing vessel insurers will have the same criteria and assessments of risk; therefore the levels of premium will vary. The assessment of risk is often related to the relationship the insurer has to the owner. The level of risk varies from vessel to vessel, but there is increased security for the insurer if the vessel is built to class and maintained with a classification society. The International Association of Classification Societies Ltd is a body of ten different worldwide societies dedicated to maritime safety and regulation. In general, they certify only vessels over 500 gross registered tonnage (GRT). The rules and standards as set by the individual society are continually applied. Further information can be found at: www.iacs.org.uk

Corporate ownerships have to be considered quite differently from the individual owner/operator, and quite often the level of premium determined is neither scientific nor mathematical and can vary quite significantly owing to market, risk vulnerability and market interest on an almost annual basis. Most insurers will utilize the services of a professional independent marine surveyor to determine the general condition and maintenance of a particular vessel, and to ensure that there is an agreed upon maintenance programme in place to determine the quality of risk. Some insurers will employ their own staff surveyors to work with the industry on a localized basis. Increasingly, insurers are seeking greater knowledge as to the qualifications and experience of the captains and crews where risk management on board the vessel is a key part of overall risk assessment.

Increased crew training regimes in certain European countries have been developed with the assistance of insurers to increase the awareness of risk, and to prevent the occurrence of accidents. Naturally, fewer accidents result in lower claims cost, which in turn, allow the insurer to produce more competitive insurance premiums.

Often it is difficult to establish an agreed value for the vessel, as increasingly the value of fishing licenses and the access to catch are, in themselves, of high value. In many instances fishing rights that were free in the past are now individually transferable, as well as traded, and have acquired a high market value over time. There are industries where the value of the right to access the catch by way of quota and licence has a higher value than the hull and machinery value of the fishing unit itself.

This is an area where insurers must exercise greater caution. Quite often the loss of the vessel may not, in itself, cause the owner to lose the rights to the catch, as this part of the owner's business can be traded on the open market. It is therefore important that commercial fishing vessel insurers should restrict their liability to the value of the risk that can be lost. Insurers should ensure that their policy would place the owner in the same position as before the loss, and not in an advantaged position because of a marine casualty.

The underwriter must have detailed knowledge of the industry, risk management practices and the complex nature of risks being covered. As it is such a specialized field, most knowledge is gained through experience and practical application, usually with niche operations. The reduction in the industry has led to a reduction in expertise in the insurance industry. The Chartered Insurance Institute (CII) in London runs training programmes in marine insurance and sets examinations. An Advanced Diploma in Insurance (ACII) or even a Fellowship of the CII (FCII) or equivalent within Europe is now a common requirement of employers. Further details can be found at: www.cii.co.uk

Mutual insurers often have a close relationship with their policyholders or members (as they are defined). In many instances, they maintain extended knowledge of the owners and their families for generations. The service ethos of the mutual insurance company ensures regular contact and understanding of the changing nature of the fishing industry. This relationship is often quite unique, and although conventional insurers may also have similar situations (where an owner is a member of a mutual) the relationship can often be quite different. In many cases, the relationship may well exist with the appointed insurance broker and while he is the elected intermediary of the owner, the owner may also have an extended relationship directly with the insurer as part of the service to the business.

6.9 HANDLING OF CLAIMS

As soon as an insurer is advised of a potential claim, most insurers will instruct an independent surveyor to assess the nature and extent of the loss sustained and report directly to the insurer. In certain instances, it is not uncommon for an adjuster to also be appointed in order to assist in the management of the claim. Either the owner or the insurer can make this appointment, and at times there can be separate representation by adjustors for both insurer and owner.

The marine surveyor would normally work closely with both the owner and the insurer, and in the case of mutual insurance companies it is quite likely that the company's own claims division will become actively involved in the casualty. This will ensure smooth handling of the claim with the owner, to enable the vessel to return to sea as quickly as possible. It is important that insurers investigate the circumstances surrounding the loss in detail, and arrive at a determination of liability as quickly as possible.

Not all accidents or losses are recoverable under a policy, and it is normal for areas of wear and tear or losses resulting from owners' negligence (in their capacity as owners) to be excluded from policies. Depending upon the nature of the loss, it is quite likely that an expert may be appointed by the insurer to help determine the cause of the loss. For example, in the case of fire on board, insurers often use fire experts to assist in determining the cause of the fire.

A number of policies are now extended to include the limited loss of fishing time to assist in compensating owners for their losses beyond the physical nature of the loss, and to assist in their continuation within the industry. In addition,

many owners now have the opportunity to access coverage for legal costs on a limited basis.

6.10 UNDERWRITING EXPERIENCES

As it has been mentioned elsewhere in this Review, the underwriting results for this class of business have been mediocre over the past ten years. Fishing vessel insurers' individual underwriting criteria will no doubt reflect the overall results, but it would appear that there has been considerable improvement over the past five years. Results for the past five years would indicate greater caution being exercised by commercial fishing vessel insurers, and while the cycle of hard and soft insurance markets has an impact, the need to produce profitable underwriting results has been in greater demand owing to the continuing losses over time.

In addition, it is also fair to say that the reduced fishing time has, in itself, had a positive impact on the quality of risk accepted by marine insurers. Inevitably, fewer days at sea reduce the frequency and opportunity for loss and damage to occur.

An increasing area of claims in recent years for underwriting has been the need for wreck removal. Conservation and the need for cleaner seas have seen an increased demand for wreck removal in the event of a casualty, particularly when losses occur in protected areas where pollution is closely monitored.

Over the past five years, there also has been an increase in the self-insured part of the risk. Owners are generally more prepared to accept higher levels of policy deductibles to keep premium costs at manageable levels, as in many cases the returns from fishing continue to decline. The cost of marine insurance to the commercial fisherman is probably the second largest expense next to the cost of fuel, which again, over the past five years, has continually increased; thus making the returns from fishing less attractive. The fishing industry continues to be a dangerous occupation, and with its limited returns has become less attractive as an occupation. In certain parts of the world the future of the fishing industry is in question.

6.11 CONCLUSIONS

- The majority of fishing industries within the European Union continue to age, and with older vessels producing a higher frequency of claims, the industry is not generally seen as being an attractive area for the marine insurer.
- Conservation and preservation of fish stocks for future generations has seen many fisheries industries around the world decline in size quite dramatically. Therefore, the number of vessels insured has also decreased, and in many cases the insurer's spread of the business is reduced. This makes the insurance of commercial fishing vessels for some insurers less attractive than it has been in the past.
- The complexity of the modern and sophisticated commercial fishing vessel requires careful consideration by the underwriter in determining the

risk assessment. In many instances larger, higher valued vessels can only be accommodated in a number of markets, as the exposure for a single underwriter would be too high in the event of a major loss.

- The market for commercial fishing vessel insurance has continued to shrink in recent times as smaller companies have either withdrawn from the market, or have gone out of business, owing to adverse results.
- For larger composite insurers the cost of capital and the poor results from the commercial fishing industry have caused capital to be re-deployed to areas of insurance where underwriting returns are known to be better.
- In general, the influx of new corporate capital in recent years has not been attracted to the insurance of commercial fishing vessels; therefore the market has continued to tighten, with few new fishing vessel insurance facilities being introduced to replace those recently lost in the market.

6.12 RECOMMENDATIONS

- With an ageing industry, caution must be exercised by fishing vessel insurers as to the type and quality of business underwritten.
- The continued spread of risk for higher valued vessels is essential to protect the market in future years.
- Owners must exercise caution in ensuring that the security being offered is robust and capable of being accessed in the event of a loss.
- Increased regulations should be employed to ensure that the policies offered to the commercial fishing industry are adequate for the risks being covered.
- Further consolidation should be considered where cooperation between marine insurance companies could preserve localized specialized insuring units to the advantage of the commercial fishing industry in the years to come. In connection with this, the training programmes in marine insurance of the CII in London, and other similar institutes elsewhere in Europe should be maintained and further developed.
- A number of insurance companies specializing in fishing vessel insurance do promote safety regulations; this should be widely encouraged as safer vessels will inevitably save lives and improve insurers' underwriting results.

7. The current state of capture fisheries insurance in South America

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7.1 INTRODUCTION

Nestled between the Pacific Ocean and the Atlantic Ocean, South America is one of the most productive fishing regions in the world, accounting for 17.9 percent of the global landings in 2005, with Peru and Chile standing out as the main fishing nations producing 14.7 percent of the global landings and 82.1 percent of the region's landings (FAO, 2007a). Both Peru and Chile rely heavily on the Humboldt Current (HC), also known as the Peruvian current, for their fisheries resources, mostly small pelagic species – anchovies, sardines and mackerel – that are used for fishmeal production. The HC region is one of the world's most productive upwelling systems and is the largest in the southeastern Pacific Ocean. The upwelling process brings cold, nutrient-rich waters to the surface that supports fishery resources as well as marine mammals. Periodically, the HC region is disrupted by El Niño events, which could result in dramatic changes in species composition, stock crashes and cascading social and economic impacts.²⁶

Peru is the world's second largest fishing nation in terms of catch, with anchovies accounting for about 90 percent of the total, and is also the world's largest producer of fishmeal. In 2006 Peru accounted for about one-third of global fishmeal production and 41 percent of world exports. Peru and its neighbour, Chile (which is the fourth largest fishing country in the world in terms of catch) accounted for approximately half of the world's fishmeal production (Glitnir Seafood Team, 2007).²⁷ Accordingly, variations in Peruvian and Chilean catches,

²⁶ During El Niño, the ocean grows warmer and the water becomes less rich in nutrients. El Niño events have led to sequential changes, with sardines and anchovies replacing each other periodically as the dominant species in the ecosystem, resulting in negative consequences for the fishing industry. See na.nefsc.noaa.gov/lme/text/lme13.htm and www.worldwildlife.org/wildworld/profiles/g200/g210.html

²⁷ Fishmeal is a natural feed ingredient (aquaculture species and many land-farm animals) that contains well-balanced amino acids, beneficial Omega-3 fatty acids, and essential vitamins and minerals. It contains 6 to 10 percent fish oil that is essential and beneficial in both animal and human diets.

particularly anchovies, strongly influence the trends in world capture fisheries production.

In contrast to the region's significant contributions to global catch, its share with regards to global capture fisheries insurance premiums appears to be marginal. While there are no readily available comparable data on global and regional capture fisheries premiums, general (non-life) insurance premiums can be used as an indicator for the size of the insurance business. The region's share of 1.8 percent of the world's general insurance premiums (direct) implies that the capture fisheries insurance business, being a small part of general insurance business, will be rather small (Insurance Information Institute, 2006).²⁸ Another indicator is the region's share of the global fishing fleet capacity. At the end of 2004, of the estimated 1.3 million decked vessels in the world, the region accounted for only 0.6 percent of the global fishing fleet capacity (FAO, 2007b).

This chapter primarily analyses the capture fisheries insurance markets of Peru and Chile. Information on capture fisheries insurance was collected from the Web sites of institutions and companies engaged in the capture fisheries sector, through contacts with experts of the insurance industry, and through a survey questionnaire which was submitted to the major insurance companies and brokers active in the two countries.²⁹

The chapter analyses the capture fisheries insurance sector in the context of the overall insurance industry and presents conclusions and recommendations for consideration by stakeholders.

7.2. THE INSURANCE MARKET

Both Peru and Chile have been experiencing a period of economic development, making them the fastest-growing and most stable economies in the South American region. Generally, the application of prudent macro-economic management and market-led reforms has also supported the development of the insurance market, including the capture fisheries insurance market.

Because specific data on the capture fisheries insurance market are not readily available, an attempt has been made to analyse the market's structure and size, based on three factors: (1) marine insurance premiums; (2) fishing fleet; and (3) market characteristics of buyers and sellers. In summary, capture fisheries insurance is a marginal business in terms of the total value of premium payments in both Peru and Chile, and the market appears to be dominated by a small number of large fishing companies and large insurance companies.

²⁸ In 2006, Peru and Chile accounted for 0.03 percent and 0.12 percent respectively of the world's general insurance premiums. The regions non-life direct written premiums amounted to about US\$26.9 billion. Some South American countries with relatively smaller premium amounts are not included in the above international insurance list.

²⁹ A survey questionnaire was sent to a number of companies, but none had responded. However, Isabel García and Hugo Andrade, Cosegur Re, Peru, and David Otero, Conosurseguros.cl, Chile provided valuable information/data support.

7.2.1 Premiums

In the case of Peru, total net insurance premiums in 2006 amounted to about US\$1.1 billion, of which general (non-life) premiums constituted about 38 percent. Marine hull insurance premiums accounted for about 7 percent (about US\$29.1 million) of the total non-life premiums (Superintendencia de Banca, Seguros y AFP, 2006).³⁰ During the same period, the total size of the Chilean insurance market in terms of direct written premiums was about US\$4.7 billion, of which general (non-life) insurance constituted about US\$1.6 billion, or about 34 percent. Marine hull insurance premiums accounted for about 1.4 percent of total general insurance premiums, which adds up to some US\$22 million (Asociación de Aseguradores de Chile A.G., 2006). It is thus implied that capture fisheries insurance, which is included in marine hull insurance, is a relatively small sub-section of the overall insurance business.

7.2.2 Fishing fleet

The Peruvian and Chilean fishing fleets that operate in their Exclusive Economic Zone (EEZ) can be divided into two distinguishable fleets: a large-scale industrial fleet and a small-scale artisanal fleet. In Peru, the large-scale industrial fleet comprises industrial pelagic purse seiners and coastal trawlers. The total number of industrial vessels is about 790. The small-scale, or artisanal fleet, comprises about 6 300 vessels, 65 percent of which use oars or sails and 35 percent are motorized. Ninety-nine percent of the small-scale vessels are made of wood, with the remaining one percent made of fibreglass (FAO, 2002).

In the case of Chile, there were 223 industrial fishing vessels and 14 655 artisanal vessels, of which 9 121, or 62 percent, are motorized vessels, in 2006 (Servicio Nacional de Pesca, 2008).

7.2.3 Market characteristics of buyers and sellers

On the buyers' side (purchasers of insurance policies), supported by bank credit lines and funds raised through issuance of stocks, the fishing industry in both countries has experienced a spate of large-scale mergers and acquisitions by the leading companies, which is expected to make the market operationally more efficient and cost-effective (Empresas Copec, 2004; Reuters, 2007b). As an indicator of progress, fishmeal production efficiency has improved in recent years, with the industry now requiring approximately 4.5 tonnes of fish to produce 1 tonne of fishmeal, as opposed to over 5 tonnes 15 years ago.

Altogether, the top ten fishing companies in Peru possess 60 percent of total vessel load capacity and 71 percent of steel fleet vessel load capacity. The top company, which alone accounts for 13 percent of the vessel load capacity (with 71

³⁰ Peru's Superintendencia de Banca, Seguros y AFP is an autonomous institution recognized under the Peruvian constitution responsible for the supervision and regulation of the financial and insurance systems. In Chile, the Superintendencia de Valores y Seguros monitors and regulates the financial solvency of insurance and reinsurance companies.

fishing vessels), is also the world's largest fishmeal producer. In 2007, the company expects its exports to reach US\$400 million in value, largely owing to increases in production and the augmenting demand from China (Glitnir Seafood Team, 2007; Reuters, 2007a).³¹ In Chile, the fishing business is concentrated into one company that possesses 97 fishing vessels with an aggregate loading capacity of more than 41 000 cubic metres. In 2004, the company processed about 1.7 million tonnes of fish that yielded an output of about 393 thousand tonnes of fishmeal (about 42 percent of the national output). Apart from the supply by its own vessels, the company also has agreements with small-scale fishers for the supply of fish (Empresas Copec, 2004).

On the sellers' side (suppliers of insurance policies), Peru's and Chile's market share distribution patterns are similar to the buyers' side. In the case of Peru, four companies were involved in marine hull insurance in 2006, of which three companies accounted for about 99 percent of the premiums, and one company dominated the market with a share of about 71 percent of premiums (Superintendencia de Banca, Seguros y AFP, 2006).³² In Chile, out of 21 companies engaged in general insurance, nine companies were involved in marine hull insurance, of which three companies accounted for about 82 percent of the premiums and one company dominated the market with a share of about 42 percent of the premiums (Asociación de Aseguradores de Chile A.G., 2006).

7.3 DEMAND AND SUPPLY ISSUES

In the context of the Peruvian and Chilean capture fisheries sector, both the demand for and supply of capture fisheries insurance are inextricably linked to the demand for and supply of fishmeal and fish oil products. These two products, in turn, are dependent on the availability of pelagic species (mainly anchovy) produced in the HC region.

Three issues that are widely considered in Peru and Chile as influencing the demand for and supply of capture fisheries insurance include: (1) natural disasters; (2) the availability and affordability of substitutes for fishmeal and fish oil products; and (3) the availability of and access to insurance services by small-scale artisanal fishers.

7.3.1 Natural disasters

The stocks of pelagic species in the HC region fluctuate significantly as a result of El Niño events. The 1998 El Niño was one of the worst ever. This had a significant impact on the fisheries resources in the Exclusive Economic Zones (EEZs) of Peru and Chile. In Peru, the fishing industry lost about US\$1 billion in revenues. An El Niño event combined with overexploitation of fisheries resources could deplete

³¹ Source of Glitner Seafood Team data is Glitzier Securities, Apoyo Consultoria, Copeinca, and International Fishmeal and Fish Oil Organisation (IFFO). See also reference.

³² In 2006, of the thirteen insurance companies, three were mixed operators offering both general and life insurance, four offered general insurance and six offered only life insurance.

a fishery, as happened in 1972–73, when anchovy fisheries crashed (Alheit and Bernal, 1993; Glitnir Seafood Team, 2007; FAO, 2002).

Earthquakes and floods are two other categories of natural disasters that could impact fishmeal and fish oil production. The August 2007 earthquake in Peru, which struck one of the main production areas, Pisco, is reported to have negatively affected the anchovy biomass. The earthquake also caused the destruction of boats and facilities (Josupeit, 2007). Demand for fishmeal for the first half of 2007 also decreased because of heavy floods and rain in China that affected shrimp production, resulting in unsold stocks in China and Peru, which added up to almost 600 000 tonnes (Glitnir Seafood Team, 2007). In mid-November 2007, the Chinese market turned around with significant reduction in stocks and new purchases at higher prices.

7.3.2 Fishmeal and fish oil substitutes

Fishmeal and fish oil are preferred components in the feed of most aquaculture species and many land-farm animals, including swine, poultry and dairy cattle. In 2002, aquaculture used 45 percent of the total global annual fishmeal production, and by 2006 its share increased to 57 percent. This growth was the result of a reduction in the share of fishmeal used for land-farm animals, rather than an increase in the pelagic fish catch. In particular, poultry's share registered a sharp decline from 22 percent to 14 percent over the four-year period. In the case of fish oil, aquaculture's share was about 87 percent of the total global annual production in 2006, with the remaining 13 percent used for a variety of purposes, including direct human consumption and land-farm animal feed. It has been estimated that, by 2012, 60 percent of world fishmeal production and 88 percent of world fish oil production will be used by aquaculture.

The continuing growth in world aquaculture production and the rising prices of fishmeal and fish oil have led to considerable investments in research to find alternative sources of affordable and high-quality plant and animal-based feed ingredients. While all-plant protein-based diets have been used successfully to grow juvenile catfish, carp and tilapia to market size, fish larvae and young fish still require fishmeal to grow at an optimal rate. Fishmeal contains amino acids that most closely meet the dietary requirements of fish (Miles and Chapman, 2006; Jackson, 2006). Further, fish oil appears to be harder to replace because it contains Omega-3 fatty acids that are essential and beneficial for animal and human biological functions. Nonetheless, further research in aquaculture nutrition will continue to find better substitutes that could partially replace and supplement fishmeal and fish oil.

7.3.3 Insurance products for small-scale or artisanal fishers

Large numbers of artisanal fishers generally operate their small-scale fishing vessels without any insurance coverage. They purchase insurance coverage only if it is required by the financial institution, which provides them with a loan for or the lease of the vessel's hull and machinery. Awareness among artisanal fishers of

insurance services provided to the sector is generally low. This results in limited demand for fisheries insurance services from this sub-sector.

7.4 POLICIES IN FORCE

In the absence of availability of specific data on the number of fishing vessels that have insurance coverage and considering that all large-scale industrial vessels are likely to be covered (as they generally belong to large and sometimes multi-national companies), the total number of insured vessels could thus be around 1 000. It is estimated also that virtually all vessels operated by small-scale or artisanal fishers are without insurance coverage. However, the above simple estimate needs further analysis and validation.³³

7.5 PERILS COVERED

The coverage offered by insurers of capture fisheries activities in South America is not much different from that in other regions. Insurers generally use the “Institute Fishing Vessel Clauses”, which are adapted by the marine insurers to reflect their own requirements. In general, the policies are of the “all risk” type, which are then modified with specialist clauses to meet industry demands.

7.6 VESSELS INSURED

The vessels of the large-scale industrial fleet, consisting of industrial pelagic purse seiners and coastal trawlers, are generally covered by insurance. Small-scale artisanal vessels (often having wooden hulls) can be insured by the industry, but this is not yet common practice.

7.7 EQUIPMENT AND GEARS INSURED

Apart from the vessel hulls, insurance is also available for engines, freezer equipment, fishing gears and electronic systems (e.g. monitoring, net control, navigation and fish finders).

7.8 UNDERWRITING

It is difficult to determine accurately the number of the specialist underwriting companies that serve the fishing industry in South America. The 13 companies in Peru and Chile that are involved in marine hull insurance have also the capacity to underwrite fishing vessels. In general, the insurers require extensive information on the fishing operation offered for insurance. Specialist application forms are to be completed and underwriting and risk management surveys are undertaken to analyse the risks and hazards of the applicant’s business.

The overall underwriting capacity is difficult to determine, as the insurance of fishing vessels is fragmented. As in other regions, the individual underwriting

³³ According to industry sources, artisanal fishing vessels generally operate uninsured. They purchase insurance coverage only if there is a mortgage on or lease of the vessel’s hull and machinery.

capacity may reach over US\$1 million on a single object; however for the coverage of large industrial fishing vessels, reinsurance generally is sought.

7.9 RISK MANAGEMENT

As in other regions, risk management surveys are an integral part of all sectors of the South American insurance industry; therefore risk assessments of the fishing industry are common practice. Risk management surveys are carried out usually by independent surveyors, and can be considered an integral component of the decision-making processes related to an application for insurance coverage by a fishing company.

7.10 HANDLING OF CLAIMS

Generally, independent loss surveyors are used to assess claims against policies and to report back to the insurer. Claims and potential claims must be reported immediately to the insurance companies. In some cases, an adjuster is appointed to assist in the management of the claim. This appointment can be made either by the insured or by the insurer, and sometimes there are separate adjusters appointed by both insured and insurer.

The fisheries insurance policy documents issued in South America generally contain standard procedures for claims, which are similar to those in other regions of the world.

7.11 UNDERWRITING EXPERIENCES

No information is available on general underwriting experiences, particularly loss experiences in capture fisheries insurance (hull, gears and equipment insurance) from either Peru or Chile.

7.12 CONCLUSIONS

South America is one of the most productive fishing regions in the world, accounting for almost one-fifth of the global landings. The region's fisheries resources mainly include small pelagic species that are used for fishmeal and fish oil production. Peru and Chile, two of the top five fishing nations in the world, together account for about half of the world's fishmeal production. However, in contrast to the region's significant contributions to global catch, its share in global capture fisheries insurance premiums is marginal. Capture fisheries insurance is a marginal business in the domestic insurance market of the two countries.

With the continuing growth in world aquaculture production that is heavily dependent on (1) the supply of fishmeal and fish oil, (2) the rising prices of both products, (3) the increased operational efficiency of the Peruvian and Chilean fishing companies as a result of recent mergers and acquisitions, (4) a more effective conservation and management of pelagic fish resources (particularly during the El Niño events) and (5) prudent management of the economies, it is expected that the demand for capture fisheries insurance will expand slightly in the near future.

The limited awareness among small-scale artisanal fishers of the benefits of capture fisheries insurance is hampering the development of the insurance services provided to them. At present, the policy conditions offered and the premiums requested do not meet the needs of the small-scale fisheries sector, a situation that will continue if demand from these fishers remains limited.

The range of perils covered, risk management and claim handling practices as applied by the insurance industry in South America to the fishery sector are similar to those applied in Europe, Oceania and the United States of America.

7.13 RECOMMENDATIONS

Recommendations to the stakeholders of the capture fisheries insurance business are grouped into two categories: domestic and international.

7.13.1 Domestic recommendations

- Government agencies, fishing companies and other stakeholders need to continue their contributions to sustainable enhancement of the value of fisheries resources, particularly in periods following El Niño events, through active participation in the development and implementation of resource conservation and management programs.
- Fishing and insurance companies need to conduct an in-depth review of the capture fisheries insurance sector to bridge the information and data gaps highlighted in this Chapter, and to identify other possible measures for further development of the capture fisheries insurance services.
- The Andean Development Corporation (ADC), Peru, signed an agreement with a leading insurance company in September 2007 to expand access to micro-insurance services, through regulated microfinance institutions and non-governmental organizations (NGOs), to micro-enterprises and so-called low-income sectors. While the activities are at an early stage of implementation, it would be useful to examine the feasibility of extending these services to the small-scale artisanal capture fisheries sector.³⁴
- Since many small-scale fishers are not yet fully aware of the benefits and value of capture fisheries insurance to increase the sector's economic viability, to decrease vulnerability to disasters and to ensure the use of sustainable practices, gears and equipments, there is room for more raising of awareness of capture fisheries insurance in the region.

7.13.2 International recommendations

As part of sharing of knowledge in the area of development of sustainable capture fisheries resources, it would be useful if FAO, as the U.N. agency having the mandate to promote sustainable development of fisheries, should conduct, in collaboration with governments and other stakeholders, case studies on risk

³⁴ For more information see also: www.caf.com/view/index.asp?ms=17&pageMs=45235&new_id=45805

strategies adopted by small-scale or artisanal fishers, including exploring the feasibility of insurance schemes that fit the needs of the small-scale producers. These case studies could include small-scale artisanal fishers in other regions as well, particularly in Asia and Africa.

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8. The current state of capture fisheries insurance in Africa

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8.1 SOUTH AFRICA

The South African fishing industry comprises approximately 20 marine fisheries. These range from the main intensive large-scale fisheries such as the hake, sole, anchovy, sardine, tuna, toothfish, linefish, crustacean and squid fisheries (outlined in Table 8.1) to the small-scale fisheries. Typically, the small-scale fisheries are effort restricted, limited in both size and production value and are characterized by low investments. Such fisheries include the oyster (2004–2005: total allowable effort (TAE): 145 pickers), white mussel (2004–2005: TAE: 145 pickers) and seaweed (TAE: 23 rights holder) resources. Annually, the South African fishing industry is worth approximately R4 billion (\pm US\$143 million), with the hake deep-sea trawl fishery accounting for slightly less than 50 percent of the value (at current hake values). As a whole, the industry employs some 29 000 persons directly (The Benguela Current Large Marine Ecosystem Programme (BCLME), 2006b).

In addition to the large-scale fisheries, there are small-scale fisheries that are primarily based on the mussel, bait, oyster, rock lobster and abalone resources. In addition, there are also open access recreational fisheries. The Department of Environmental Affairs and Tourism's Directorate Marine and Coastal Management is the responsible governing agency for managing the country's living marine resources. As a component of their policy to extend access rights to historically disadvantaged individuals, the department is in the process of promulgating new fisheries legislation designed to enable small-scale fishers to sell their catch.

Historically, the South African fishing industry has comprised a small number of vertically integrated operators that dominate most of the sectors. Since the first democratic elections in 1994, and the political imperative for Black Economic Empowerment, there has been a reallocation of fishing rights from large companies to small and medium-sized companies. Thus, while prior to 2001, there were approximately 400 rights holders in the industry, during 2001, medium-term rights (four-year rights) were allocated to more than 3 900 individuals or commercial entities. The government is now in the process of finalizing the allocation of long-term rights, typically 10 to 15 years. While the final number of

TABLE 8.1
The major types of commercial fisheries operating in South Africa

Fishery	Number of rights holders	Fleet size (vessels)	Type of vessel (GRT ± S.D)	Total allowable catch
Offshore demersal hake fishery ^a	53	23 Freezer 53 Wet fish 4 Combined	Freezer (906.7 ± 713.6)	137 526 tonnes
Inshore demersal hake trawl fishery ^a	16	28	Trawl (95.9 ± 58.4)	Hake: 10 010 tonnes Sole: 851 tonnes
Hake longline ^a	141	88	Longline (90 ± 56)	10 440 tonnes
Small pelagic purse seine ^a	113	90	Purse seine (135 ± 88)	Pilchard: 223 767 tonnes Anchovy: 181 192 tonnes Pilchard bait: 21 072 tonnes
Mid-water trawl (horse mackerel) ^a	17	Changes annually	414 to 5 640 tonnes	31 500 tonnes
West coast rock lobster ^a	233	271	Trap and hoop net boats (<25 to ±100 tonnes)	2 613.7 tonnes
Tuna pole and line ^a	150	164	Tuna pole (70 ± 42)	Global TAC of 29 200 tonnes ^c
Large pelagic longline	40	26 Tuna directed 14 Swordfish directed	Tuna directed (433 ± 322) Swordfish directed (120 ± 48)	Effort restricted fishery
Linefish ^d	62	62	Ski boat	Effort restricted
Patagonian toothfish ^b	5	2	-	450 tonnes
Shark longline ^b	6	6	Longline	Effort restricted
Squid ^b	121	136	Ski boat/deck boat	Effort restricted (2 422 crew)
Prawn trawl ^b	5	8	Trawl	Effort restricted fishery

^a Data compiled from the 2003–2004 fishing season (BCLME, 2006a).

^b Data compiled from DEAT – Marine and Coastal Management (www.mcm-deat.gov.za).

^c Catch in the tuna fishery is regulated by the International Convention for the Conservation of Atlantic Tunas (ICCAT). A global total allowable catch (TAC) of 29 200 tonnes has been allocated to the four major fishing nations active in the region: Taiwan, South Africa, Brazil and Namibia. The share of the global TAC that South Africa will be allocated has yet to be determined.

^d Represents medium-term rights allocations (2001–2005/6).

rights holders has yet to be determined, the value of these rights is estimated at approximately R70 billion (±US\$10 billion).

8.2 NAMIBIA

The Namibian fisheries can be best characterized as large-scale, industrial operations with minimal artisanal fishing. The principal fisheries include the hake demersal trawl and longline fishery, monk and sole demersal trawl fishery, the large and small pelagic purse seine fisheries, horse mackerel mid-water trawl fishery, the deep-sea trawl fishery, red crab fishery and west coast rock lobster fishery (BCLME, 2006a).

A summary of Namibia's fisheries is presented in Table 8.2. Across all the fisheries, there are a total of 132 rights holders that operate 281 vessels. The country's fisheries are currently going through a period of "Namibianization"

TABLE 8.2

Namibian fisheries and fishing fleet (data compiled from the 2003–2004 fishing season)

Fishery	Number of rights holders	Fleet size (vessels)	Type of vessel (GRT± S.D)	Total allowable catch
Small pelagics	22	14	Purse seine (443 ± 132)	25 000 tonnes
Horse mackerel Mid-water trawl	13	21	Trawl (4 273 ± 1571)	350 000 tonnes
Hake demersal trawl and longline	38	36 Freezer trawlers 84 Wet fish trawlers 20 Longliners	Freezer trawler (1 071 ± 759) Wet fish trawler (529 ± 343) Longliners (229 ± 173)	180 000 tonnes
Monk and sole demersal trawl	9		Trawl (274 ± 48)	12 000 tonnes
West coast rock lobster	21	39	Trap boats (79 ± 114)	405 tonnes
Deep-sea red crab	3	2	Demersal longline trap 619 and 443)	2 000 tonnes
Large pelagics	21	35 Longliners 6 Pole and liners	Longliners (142 ± 100) Pole and line (308 ± 264)	Tuna: 3 371 tonnes Swordfish: 192 tonnes ^a Sharks: 2 535 tonnes Other: 261 tonnes
Deep-sea trawl	5	6	Trawl (709 ± 684)	2 050 tonnes

^a Represents catch data for 2003.

Source: BCLME, 2006a

which, along with other policy options, includes encouraging landings, processing and value addition within Namibia (through permit conditions), and the allocation of medium to long-term rights to Namibian individuals or companies. While the rights holders are Namibian, the vessels that are used to fish the resource are often operated under foreign flags. Thus, many rights holders have developed partnerships with foreign fishing companies. With respect to freshwater fisheries resources, Namibia does not possess any major inland water bodies upon which to base freshwater fisheries.

8.3 MOROCCO

The Moroccan fisheries are characterized by three major sectors: the industrialized coastal fleet, the small-scale artisanal fishery and the high seas fleet (Atmani, 2003).

The industrial coastal fleet comprises approximately 2 500 vessels (of which 1 814 were active in 2001). The fleet includes purse seiners, trawlers and longliners. The majority of the fleet comprises purse seiners that target the sardines, anchovy, mackerel and horse mackerel stocks for the shore-based canning and processing industries. In 2001, the pelagic catch was recorded at 861 000 tonnes and accounted for 83 percent of the total landings from the fishery. With respect to the demersal component of the catch, the trawl and longline component of the fleet target a wide range of white fish species including hake, sea bream, red mullet, sole, turbot

and assorted sharks. In 2001, 117 075 tonnes of demersal fish were landed from this component of the fishery.

There is little information pertaining to the small-scale artisanal fishery. However, surveys suggest that it is based on around 5 000 vessels that are operated by 45 000 small-scale fishermen. Vessels include canoes and small plank boats, some of which have engines. While there are no current catch data available, the fishery is small-scale in nature, and as such, the fish will either form an important component of household food security or be sold on the local market.

In comparison with the industrial coastal fishery, the high seas fleet represents a much smaller fishery in terms of catch, however, in terms of value, it is the most valuable component of the country's fisheries. In 2001, the high seas fleet accounted for 122 485 tonnes of product valued at US\$445 million as opposed to a catch of 978 519 tonnes valued at US\$223 million derived for the coastal fleet. Catch in the high seas fleets is dominated by the cephalopods (octopus, cuttlefish and squid) and sparids – combined, these account for 90.6 percent of the catch. The remaining catch comprises crustaceans (shrimp) and pelagics, which account for 9.3 percent and 0.1 percent of the catch respectively. With respect to the fleet, there are 446 vessels in the fleet with a combined capacity of 144 369 GRT.

Regarding foreign access to the country's fish resources, in 2006, Morocco adopted a new four-year fishing agreement with the European Union. The agreement allows the European Union to deploy 120 vessels in Moroccan and Western Saharan waters, and fish an annual quota of 60 000 tonnes of small pelagic species. It should be noted that this agreement is far smaller than the previous European Union/Moroccan fishing agreement that allowed 600 European Union vessels into the country's waters. The reduction in the amount of effort allocated to the European Union fleet is testament to the government's policy of increasing local capacity by promoting investment in the local fishing and fish processing industry.

8.4 MAURITANIA

The Mauritanian fishing industry contributes up to 50 percent of the country's exports and 25 percent of the state's revenue (UNEP, 2006). The major stocks that are available for exploitation include crustaceans, cephalopods, chondrichthyans, and pelagic and demersal species. The sector comprises two major components: the artisanal sector and the industrial sector.

The artisanal sector includes Mauritanian and Senegalese fishers who are allowed access to the Mauritanian waters under a bilateral agreement between the two countries. The fishery is based on motorized canoes and plank boats, and accounts for some 80 000 tonnes of fish per annum. A combination of the proximity of the artisanal fishing grounds to shore, and the utilization of cost effective fishing methods that allow fish to be caught alive, enable much of the catch to be exported as high value product (UNEP, 2006).

The industrial fleet comprises national and foreign vessels. The foreign vessels operate as chartered fleets with licence agreements between the Mauritanian

government and other countries, or under private access agreements between private operators and the government. As there is very little fish processing capacity in the country, the majority of the catch is either processed on board, or alternatively, exported as raw material for processing in another country.

Current bilateral fishing agreements that are in force include those with Algeria, Japan, Morocco, the Russian Federation, Senegal, Tunisia and the European Union (UNEP, 2006). Most notably, the European Union has a history of exploiting the fisheries resources in the Mauritanian Exclusive Economic Zone (EEZ). In August 2006, a new six-year fisheries partnership agreement was reached with the European Union. The agreement will provide access to approximately 200 European Union vessels, which will have access to the crustacean, cephalopod, hake and other demersal species, small mid-water pelagic stocks and tuna resources.

8.5 THE INSURANCE MARKETS

The African insurance market is characterized as a diverse market comprising local insurers, brokerage firms, risk assessors and adjusters. To spread risk, access to the international reinsurance markets such as Lloyd's of London (www.lloyds.com) is commonplace. As one of the largest global reinsurance markets for marine risk, Lloyd's of London has representatives in most African countries, and as such, through this network, is in a position to provide varying levels of insurance services to the continent's fishing industries. The level of insurance that can be provided depends upon the local regulatory framework. In South Africa and Namibia, Lloyd's (through their local representatives) is licensed to underwrite both direct insurance services as well as provide reinsurance. In contrast, in Morocco and Mauritania, the insurance markets have not been liberalized, and Lloyd's is not able to provide direct insurance services. In Mauritania, the insurance industry is operated as a monopoly that is run by the Société Mauritanie – Assurances et de Réassurances (SMAR); in Morocco, Lloyd's does not have a license to underwrite direct business. With respect to reinsurance, Lloyd's is licensed to provide reinsurance in both Mauritania and Morocco, however, in Morocco it is required to cede an obligatory 10 percent of all business to the Société Centrale de Réassurance (SRC) (www.scrmaroc.com). In contrast, local Moroccan insurance companies are required to offer the SRC up to 50 percent of any reinsurance contracts.

In addition to the activities of the insurance underwriters operating at the country level, there are two major insurance organizations that operate at the larger continental level: the African Insurance Organization (www.african-insurance.org/), and the African Reinsurance Corporation (www.africa-re.com/).

8.5 1 The African Insurance Organization (AIO)

The AIO was established in 1972 with the objective of promoting the insurance and reinsurance industry in Africa. The organization comprises representatives from the insurance and reinsurance industry, brokers, supervisory bodies, and insurance related institutions and associations. The AIO functions through a

series of forums and associations. These include the African Reinsurance Forum, The Association of African Insurance Supervisory Authorities (AAISA), and The Association of African Insurance Educators and Trainers (AAIET).

8.5.2 The Africa Reinsurance Corporation (Africa RE)

The African Reinsurance Corporation (Africa RE) was established in 1976 with the aim of reducing the outflow of foreign exchange from the continent by retaining a substantial proportion of the reinsurance premiums that are generated on the continent. Africa RE has a membership of 41 governments. The founding agreement enables any member state to authorize a national institution (bank or insurance company) to act on its behalf. Some member governments have exercised this right and set up their own institutions. For example, in Namibia, Africa RE has ceded control to Namibia RE. Africa RE operates by ensuring that a proportion of all reinsurance business is ceded to it. The level of reinsurance that is ceded to the Corporation varies among countries. For example, in Namibia, reinsurers have to offer 20 percent of all reinsurance underwriting to the corporation, while in Morocco and Mauritania, this figure is only 5 percent of the contract value.

8.6 DEMAND AND SUPPLY ISSUES

It is reasonable to suggest that the demand for insurance services in the industrial large-scale fisheries across Africa is currently being met. Indeed, of the 146 fishing companies that were contacted in South Africa and Namibia (representing 17 fisheries) all reported to have access to insurance services. With respect to foreign fleets operating in African waters (e.g. in Morocco and Mauritania), it is likely that they too are adequately served by the global insurance industry. With respect to the status of the insurance services available to artisanal fisheries, the responses to the survey did not provide evidence of small-scale artisanal fishers having access to insurance. The subsistence nature of many of these small-scale fisheries and the concomitant financial insecurity that are often associated with these communities suggest that they are not covered by insurance. In general, in many fisheries communities the institutional mechanisms and financial systems available to implement such policies (e.g. microfinance loans, specialist brokers) are absent. Indeed, a recent study of the status of the artisanal fisheries in Lake Malawi indicate that there are no insurance services available to the fishers (LMAFDP, 2006), a situation that is likely to persist across the Great Lakes region.

8.7 POLICIES IN FORCE

The number of policies that are in effect in the survey countries is unknown. However, it is reasonable to assume that all large-scale industrial vessels operating at present are insured, and thus, it is reasonable to suggest that the number of policies in force is equal to the number of vessels that are officially registered to fish. Taking this into consideration, the number of vessels and hence policies in force in South Africa and Namibia are estimated to be around 1 250. In the absence of vessel registrations for the Moroccan and Mauritanian industrial fisheries, it is

not possible to estimate reliably the number of policies in force. Nevertheless, Atmani (2003) indicated that there were approximately 3 000 vessels operating in the coastal and high seas fleets off Morocco, and thus, a maximum of 3 000 policies would be in operation in that country. With respect to Mauritania, the paucity of vessel information precludes a reliable estimation of the number of policies that are in force in the country.

8.8 PERILS COVERED

The terms and conditions of the insurance policies that are available to the South African and Namibian fishing industries can be classified as either “all risks” or “named perils”. Insurance is available for vessel hulls, engines, and the concomitant freezer equipment, fishing gear, and electronic systems (e.g. navigation and fish finders). Some insurers indicated that with respect to gear loss, they would exclude the loss of fishing gear “over the side”; while others indicated that the cover for the loss of gear was restricted to those instances in which the vessel itself was lost. In addition to the vessel insurance, the insurers indicated that they were in a position to insure buildings and onshore equipment, public, employers, products, transport and marine liabilities and aquaculture insurance. As a considerable part of the industrial, large-scale fleet operating in Moroccan and Mauritanian waters originates from Europe, the findings of the European Regional Review (Chapter 6 in this document) will apply also to these countries.

8.9 VESSELS INSURED

The vessels that are insured in South Africa include steel, glass reinforced plastic (GRP), and wooden fishing vessels between 25–4 000 Gross Registered Tonnes (GRT). The types of boats that are insured depend upon the target fishery (inshore and offshore fisheries) and include the following vessel classes: trawlers, purse seiners, longliners, trap boats, tuna pole boats, and factory ships. In Namibia, the vessels reported as insured ranged between 25–4 400 GRT. The types of vessels that are insured include: trawlers, purse seiners, longliners, trap boats (including lobster boats), and tuna vessels. It should be noted that other types of vessels might be also insured (e.g. recreational fishing boats, commercial ski boats). Although no specific information was obtained about the Moroccan and Mauritanian types of vessels insured, this information may be included in the list provided by the European Regional Review (Chapter 6 in this document).

8.10 EQUIPMENT AND GEARS INSURED

In addition to providing vessel insurance, all the respondents indicated that they were in a position to provide insurance for all fishing gears, on-board processing equipment, and electronic systems (navigational aids, fish finders).

8.11 UNDERWRITING

It is difficult to determine accurately the number of specialist underwriting companies that serve the fishing industry in Africa. However, in South Africa and

Namibia an estimate of the number of insurance companies involved in the fishing industry was made using a survey. This survey of 90 fishing companies across nine of the industrial fisheries revealed that in South Africa, there are at least six insurance companies that serve the industry. In Namibia, a survey of 56 fishing companies across eight fisheries revealed five insurance companies working in the sector. It should be noted that while the provision of marine insurance is a relatively specialist field, it is likely that there are more companies operating in both countries.

It was also noted that while South African insurance companies were able to operate in both countries, it was reported that this was not the case for the Namibian companies.

With respect to size of the risk that companies were able to underwrite, the respondents indicated that most companies could underwrite up to US\$1.5 million per policy. Beyond this figure, it was likely that the companies would look to the reinsurance markets to spread their risk.

With respect to the microfinance sector, which includes the provision of credit and savings services to small-scale and artisanal fisheries, the survey found no evidence of microfinance institutions providing micro-insurance services to fisherfolk in either South Africa or Namibia. Nevertheless, as Namibia's fisheries are essentially industrial in nature, and there are relatively few marine and freshwater artisanal fisheries in South Africa, it is likely that there is relatively little demand for such products in these two countries. In contrast, many other African countries have substantial artisanal components to their fisheries (e.g. Malawi, Mozambique) and it seems these fisheries are not being served by the insurance sector at present.

Insurers of capture fisheries activities, as in other sectors, require extensive information on every production operation offered for insurance. All applicants, whether small or large companies, will be required to complete specialist application forms as part of the insurance process. Properly completed, these will, when combined with underwriting and risk management surveys, analyse the risks and hazards that are relevant to the African capture fisheries companies. Insurers will adjust their underwriting policies assessments accordingly.

8.12 RISK MANAGEMENT

Risk management surveys are an integral part of all sectors of the insurance industry, and risk assessments of the fishing industry are no exception. All the respondents from South Africa and Namibia indicated that they use risk management surveys as a component of their decision-making processes. All the respondents indicated that they use independent risk assessors to undertake risk profiling.

8.13 HANDLING OF CLAIMS

In South Africa and Namibia, all the respondents indicated that independent loss adjusters are used to assess claims against policies. Concomitant with other sectors of the insurance industry, claims must be reported immediately, and policies have

standard guidelines for the policy-holders to make claims. Insurers will deal with claims in Africa in exactly the same way that they deal with them in all other regions reviewed.

8.14 UNDERWRITING EXPERIENCES

The limited number of responses on this issue precludes an accurate estimation of the sectors' underwriting experience. Nevertheless, from the information supplied by South Africa and Namibia, it is evident that there is no clear pattern to their experiences. Thus, while one year may prove to be highly profitable for one company, it may prove less so for another. Taking the reported experiences into consideration, it is evident that in general, the insurance companies experience fairly good fisheries sector underwriting results. Considering the years that companies have been underwriting, in the period from 1997–2006, 46 percent of the years were reported as good, 20 percent as neutral, 14 percent as bad, and 20 percent as very bad.

8.15 CONCLUSIONS

The results of the study indicate that in general, sophisticated fisheries insurance services are available to the continent's large-scale industrial fisheries, and that in at least two of the surveyed countries (South Africa and Namibia) a complex system comprising local insurers, brokerage firms, risk assessors and adjusters has developed to serve the fishing industry. While some countries have yet to liberalise their insurance markets, it is evident that local insurers and brokers have access to the international reinsurance markets.

The future of the African fisheries insurance industry is likely to be intrinsically dependent upon the future status of the fishing stocks. Indeed, the survey revealed that the loss of fish resources was deemed the major threat to the insurance industry. While some African countries possess functional fisheries management institutions that can set scientifically derived and justifiable fishing quotas, and can afford compliance and surveillance operations to enforce regulatory frameworks, many African countries do not have such capabilities. Clearly, the poor status of fisheries management and compliance on the continent is of concern to the insurance industry. Unsustainable harvesting is negatively impacting fish stocks, resulting in the reduction or closure of fisheries with a concomitant loss of business for many stakeholders, including the insurance industry. It is however extremely difficult to predict how changes in resource structure will affect the insurance industry. For example in South Africa, recent years have seen a significant reduction in the abalone fishery – providing less business for the insurance industry. In contrast, during the same period, there have also been efforts to open new experimental fisheries – such as octopus fisheries – which are likely to provide new opportunities for the insurance industry.

In addition to the activities of the insurance underwriters operating at the country level, there are two major insurance organizations that operate at the larger continental level: the African Insurance Organization (AIO), and the

African Reinsurance Corporation (Africa RE). These institutions are designed to promote local insurance and reinsurance capacity across the continent and by doing so, develop the local industry and retain premiums within the African context.

Of concern is the access to and availability of insurance products to the continent's small-scale artisanal fishing communities. Typically, such communities are resource poor and often characterized by low levels of education. The development of insurance aimed at serving these communities will require different approaches than those used to address the needs of large companies. Realistically, the deployment of new approaches to provide services to small-scale and poorer segments of fisherfolk will require significant input from government agencies, microfinance institutions and the insurance industry. The availability and uptake of insurance products by this sub-sector could not be properly addressed during the survey; it is likely that currently there are very few, if any, products available to the small-scale fisheries sector in Africa. It should be noted however, that no evidence of fisheries insurance services reaching small-scale fisheries was found during the survey.

8.16 RECOMMENDATIONS

While the availability of sophisticated insurance products to the continent's large-scale industrial fisheries is not in doubt, there is very little information pertaining to the insurance status of the continent's artisanal fishers. While there is little doubt that there is both the need and the potential to develop insurance products for these fishers, there is currently only a limited understanding of how such products could be designed and deployed. The development of appropriate insurance products will need significant research efforts to establish the current insurance needs among small-scale fisheries, as well as the interventions that would be appropriate (e.g. legislative interventions, policies, credit schemes and microfinance). Once these issues have been addressed, it will be possible to develop approaches for improving the access to and availability of insurance services to these fisheries.

It is evident that insurance products that are designed to promote insurance in the artisanal/small scale commercial arena will need to be kept simple and easy to operate. Claims and assessment procedures will need to be transparent and straightforward – small-scale fishers often have had limited or no education. The complex insurance products that are available to the commercial operators will invariably lead to misunderstandings and low product uptake if they are not substantially adjusted for the small-scale sector. In addition, in many instances, it is likely that the fishers will not be familiar with the general “concept” of insurance, and thus insurance companies and governments will need to develop programmes to educate fisherfolk about the role of insurance in the operation of their fishing activities.

From a governmental perspective, there will be a need to develop policy and a legislative framework around the issue of insurance products for artisanal/small

scale fishers. Moreover, requirements for subsidizing what are in the first instance likely to be perceived by the insurance industry as high-risk policies will need to be addressed, as will the appropriateness of developing commercial or mutual products, and the appropriateness of designing products for individuals or fisher associations.

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9. The current state of capture fisheries insurance in Oceania

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9.1 INTRODUCTION

As its name implies, the marine and inland waters of the Oceania region, comprising New Zealand, Australia and the Pacific Island nations, generate fisheries resources that contribute significantly to the economic and social development of the countries in the region. However, in the global context, the region's contribution to global capture fisheries production has been marginal. In 2005, the region accounted for only 1.5 percent of the total capture fisheries production, with New Zealand contributing 0.57 percent, Australia 0.26 percent, and the Pacific Island nations only 0.67 percent (FAO, 2007a). Of the estimated 1.3 million decked vessels worldwide of various types, tonnage and power, Oceania accounted for only 0.4 percent, with the bulk coming from New Zealand and Australia, at the end of 2004 (FAO, 2007b).³⁵

In view of their similar geographical location, the two countries share a number of common features, such as fishing zones that unsurprisingly support similar types of fisheries and an awareness of the consequences of uncontrolled fishing and the need to implement sound conservation measures. Due to limited potential from capture fisheries, the future prospects for development of commercial fisheries in both the countries lie in aquaculture, which has seen a marked increase in the levels of production.

This chapter primarily analyses the capture fisheries insurance markets of New Zealand and Australia. Information on capture fisheries insurance was collected from the Web sites of institutions and companies engaged in the capture fisheries sector, through contacts with experts of the insurance industry, and through a survey questionnaire which was submitted to major insurance companies in the two countries.

³⁵ "Decked" refers to a fixed structural deck covering the entire hull. Virtually all decked vessels are mechanized.

9.1.1 New Zealand

The country's Exclusive Economic Zone (EEZ), comprising 4.4 million sq km, is the fourth largest in the world, and produces about 1 percent of the world's fish catch. The EEZ is largely surrounded by high seas, and meets with the Australian EEZ on the Norfolk and Macquaire ridges. Depth ranges are diverse: 72 percent of the EEZ has waters of over 1 000 m, 22 percent between 200–1 000 m, and only 6 percent less than 200 m. Fishing is heavily reliant on species found in waters at depths ranging from 200–1 200 m (Ministry of Fisheries of New Zealand, 2004).

Marine fisheries dominate the fishing industry, with about 750 000 tonnes of seafood harvested annually. The major species harvested are: hoki, hake, ling, orange roughy, oreos, squid, silver warehou, spiny red rock lobster, paua (abalone), and snapper. Another 20 000 tonnes of fish, mainly comprising tuna, toothfish and orange roughy, are harvested by New Zealand flagged vessels on the high seas (Ministry of Fisheries of New Zealand, 2004). Except for a small commercial fishery for native eel species, inland freshwater fisheries are purely recreational. Around 20 percent of the population is reported to be involved in recreational fishing (FAO, 2007c).

By the early 1980s, fishing pressure had reduced the size of a number of New Zealand's major fisheries. To prevent overfishing, and to help manage fisheries in a sustainable manner, in 1986 New Zealand introduced a Quota Management System (QMS) whereby the Ministry of Fisheries sets an annual Total Allowable Catch (TAC) limit for each quota management area based on an assessment of the population size of all major commercial fish species. For non-commercial users (e.g. customary Maori fishers, who have strong cultural ties with fisheries, and recreational fishers), a quantity of stock is set aside for them before the Total Allowable Commercial Catch (TACC) is set. Of the 130 commercial species, 96 are currently managed under the QMS (Ministry of Fisheries of New Zealand, 2007a).³⁶ The top ten export species account for 80 percent of the TAC (hake, hoki, ling, orange roughy, paua, rock lobster, salmon, snapper, squid and green shell mussels) (The New Zealand Seafood Industry Council Ltd., 2007).

The Ministry of Fisheries is presently developing a series of proposals that are intended, among others, to raise further the overall value obtained from shared fisheries – the fisheries in which commercial, customary and recreational fishers participate. The Ministry is currently seeking the views of all of the stakeholders, and it is expected that final decisions on the proposed shared fisheries reforms and the nature and timing of implementation will be made in mid-2007 (Ministry of Fisheries of New Zealand, 2006). The outcome of the reforms, in terms of increased and sustainable fisheries resources, is also expected to contribute positively to the development of the capture fisheries insurance sector.

³⁶ Based on information available for current stock size under QMS, 82 percent have reached or are near target levels. For the remainder of those stocks, which represent the main commercial stocks, strategies are in place to rebuild.

9.1.2 Australia

The Australian Fishing Zone (AFZ), comprising nearly 9 million sq km and extending 200 nautical miles out to sea, is the third largest fishing zone in the world (Australian Government, 2007a). Despite the impressive size of the fishing zone, Australia only ranks 52nd in the world in terms of fish production (at the time of this review). The comparatively lower production of fish is partly due to the low nutrient or fish food levels in Australia's waters. The northern tropical waters are somewhat richer in nutrients, but those regions are remote from the main fish markets in Australia. In 2003–04, the real value of seafood produced was AUD2.2 billion (1 US\$ = 1.35 AUD in 2004), of which capture fisheries production accounted for around 68 percent and aquaculture production the remaining 32 percent. There has, however, been a dramatic rise in the real value of aquaculture production (22 percent since 1997/98), which suggests that the sector will provide the major impetus to fisheries growth in the medium- and long-term. The export value of fisheries during that period was AUD1.65 billion, or 75 percent of the total value of seafood production. The fishing industry concentrates on high value export species, five of which – rock lobsters, sea pearls, prawns, abalone and tuna – combined make up AUD1.4 billion, or 85 percent of the total seafood exports (Australian Government, 2007b).

The commonwealth (federal government) and the states jointly share responsibility for the management of fisheries in Australia. In general, the commonwealth is responsible for the management of fisheries outside the three nautical mile territorial sea, with the states responsible for fisheries in all other waters adjacent to the state. As in the case of New Zealand, Australia also remains committed to managing fisheries in accordance with the principles of ecologically sustainable development. Accordingly, the government's current initiative includes the development of a "World's Best Practice Harvest Strategy Policy for Commonwealth Fisheries" (Australian Government, 2007c). When implemented, the Policy is expected to provide the fishing industry, including the associated insurance industry, with a more certain operating environment, thereby promoting business confidence, investment and economic stability.

9.2 THE INSURANCE MARKET

In general, the insurance market is well developed and efficiently regulated. As a result of their strong economic ties, a number of insurance companies operate in both the countries. Common information and lessons learned are shared and applied widely, and agencies such as the Australian and New Zealand Institute of Insurance and Finance and the Insurance Councils of New Zealand and Australia, also provide useful services for the development of the insurance sector.

9.2.1 New Zealand

The Insurance and Superannuation Unit (ISU) of the Ministry of Economic Development (MED) is the country's insurance market regulator. In particular, ISU ensures that insurance markets, including capture fisheries, comply with

their respective responsibilities. A notable feature of the insurance industry is that it largely operates on a model of self-regulation that has contributed to the development of a responsible and stable insurance market. There is now general consensus within the industry that, to achieve better outcomes and meet international guidelines and principles, it needs to further raise the regulatory standard levels. The industry recognizes that, to achieve its desired objectives, more reforms are needed in a number of areas, such as enhancing the monitoring and enforcement power of the ISU that would allow it in a timely manner to identify troubled insurers and assist them in their rehabilitation, as well as aligning some out-dated insurance legislation with current industry needs, including the Insurance Companies Deposits Act 1953 that is considered inadequate in both quantitative (low deposit requirement for general and other insurers) and qualitative (fails to address governance and risk management issues) terms. While the industry as a whole stands to gain from the proposed reforms, the consumers or policyholders are expected to be better off in terms of low risks and costs.

Accordingly, the government, with the MED as the lead agency, is currently undertaking a review of financial products and providers, the key objective of which is to develop an effective and consistent framework for the regulation of non-bank financial institutions and financial products. The MED will prepare policy recommendations for consideration by the cabinet, with legislation planned for introduction in 2007/2008 (Ministry of Economic Development, 2006). It is expected that the outcome of the review will also benefit the insurance companies, agents and brokers, who deal with capture fisheries insurance, and contribute to the overall development of the fisheries sector.

9.2.2 Australia

Established in July 1998, the Australian Prudential Regulation Authority (APRA) is the agency responsible for the prudential regulation of the Australian financial services industry, including the insurance markets. APRA is funded largely by the industries it supervises. A recent assessment of Australia's financial system by the International Monetary Fund (IMF) indicated that, overall, the system is strong and stable and that there is generally a high level of compliance by APRA with international standards and, in a number of areas, Australia is at the forefront of best practices. Further, as part of the general insurance reforms, prudential standards continue to be strengthened (International Monetary Fund, 2006).

9.3 DEMAND AND SUPPLY ISSUES

9.3.1 New Zealand

The establishment of the EEZ in 1977, and the introduction of the quota management system in 1986, stimulated many companies in New Zealand to invest in fishing vessels and onshore factories to process the catch. Consequently, the fishing industry evolved from being a predominantly domestic supplier to one of the nation's leading export industries, with over 90 percent of the landed fish making its way to the export markets. The expansion of export markets gave rise

to the need for providing capture fisheries insurance coverage. Compared to the industry total, the market share of capture fisheries insurance is small. The market is dominated by a small number of sellers and buyers and a large number of agents and brokers. A major constraint affecting the demand and supply of insurance products is the limited potential of capture fisheries.

This section reports on the issues affecting the demand for, and supply of, capture fisheries insurance products based on an analysis of the characteristics of the capture fisheries insurance market, namely the size of the business and the degree of market concentration of buyers and sellers.

The size of business

- Capture fisheries insurance is a marginal business compared to other business classes in the insurance market. While exclusive data on the size of capture fisheries insurance is not readily available, its relative business position could best be explained by considering the gross and net written premiums made by the marine hull and cargo insurance business. The insurance industry's gross written premiums in 2005 amounted to about NZD2.9 billion (net written premiums, NZD2.5 billion), of which marine hull and cargo insurance business, one of the seven business groups, accounted for about NZD111.8 million (net written premiums, NZD79.0 million), or only 3.7 percent (3.1 percent of net premiums) of the total (Insurance Council of New Zealand, 2007a).³⁷ The marginal position of capture fisheries insurance is further reinforced when it is compared with the motor insurance business (commercial and private), which constituted the major share of the premiums made by the industry (36 percent gross and 41 percent net).

Market concentration of buyers and sellers

- The market is characterized by a small number of relatively large fishing companies (buyers of insurance products) that dominate the market and an equally small number of relatively large insurance companies (sellers of insurance products) that dominate the market. Policies are generally sold through a large number of agents or brokers making the market competitive. The market does not appear to exhibit any significant negative behaviour, such as higher insurance policy prices owing to collusion by the sellers. While, in essence, the market structure resembles bilateral oligopoly – a market with oligopoly (few sellers) on the selling side and oligopsony (few buyers) on the buying side – more rigorous market and economic analyses are warranted to validate this market classification.
- On the buyer's side, eight large fishing companies provide 80 percent of the fish production, with the balance contributed by a large number of medium and smaller, usually inshore, fishing operators (Ministry of Fisheries of New

³⁷ Industry Statistics based on seven business groups, including marine hull and cargo. Premium data are year-end: 12 months to September. US\$1= about NZD1.42 in 2005.

Zealand, 2007b). In terms of the types of fishing vessels that are supposedly covered by insurance, of the 1 547 registered fishing vessels, 1 433 are less than 24 m in length. In contrast, the large companies have relatively larger vessels, such as factory freezer trawlers that are over 60 m. A small number of New Zealand flagged vessels (59) also operate on the high seas, mostly in the western and central Pacific and the Southern Ocean. A limited amount of foreign licensed fishing takes place within the EEZ by only United States vessels in accordance with the United States of America Tuna Treaty. Apart from the United States vessels, the only foreign flagged vessels permitted to fish within the EEZ are those that operate under charter arrangements with New Zealand fishing companies, currently numbering 48.³⁸

- The seller's side most likely consists of four major insurance companies, including two European companies, and a large number of agents and brokers, who are usually members of the Insurance Brokers Association of New Zealand.³⁹

Issues

Despite the size of New Zealand's fisheries, a major constraint has been the limited potential from capture fisheries harvest, which in turn limits the extent to which fishing companies can viably invest in capture fisheries and hence seek insurance protection to minimize risks. As indicated earlier, the Ministry of Fisheries' recent initiatives to enhance the value of fisheries resources are expected to benefit all stakeholders, including insurance companies.

Economic issues, mainly fluctuations in fish export prices, fuel costs and foreign exchange rates could also affect the demand for and supply of insurance products. Although such economic issues are influenced also by factors external to the country, the government could play an important role in addressing the issues through sound management of the economy. A number of insurance companies have highlighted the generic issue of the ageing of the workforce, an issue that affects other sectors of the economy as well, and requires a national

³⁸ Data on the number and size of fishing vessels, except for large companies, are based on the report: New Zealand plan of action to prevent, deter and eliminate Illegal, Unregulated and Unreported Fishing, pp. 9–10. (available at www.fish.govt.nz/en-nz/Publications/Historical+Documents/IUU+Fishing/default.htm)

Data on the size of large companies' vessels are based on information collected from Web sites of the top three companies by quota ownership:

Sealord Ltd: www.sealord.co.nz/xml/default.asp?globalSubPage=catch2

Talley's Fisheries Ltd: www.talleys.co.nz/fleet.aspx

Sanford Ltd: www.sanford.co.nz/mainpage_susSeafood_fleet.asp?category=susSeafood¤tPage=fleet&subContent=freezer. www.seafood.co.nz/n280,53.html

Ministry of Fisheries current data (16 April 2007: www.fish.govt.nz/en-nz/Fisheries+at+a+glance/default.htm) show a reduction in the number of commercial fishing vessels to 1 372, possibly owing to fishing companies' strategy to consolidate their efforts and increase operational efficiency in view of the limited fisheries potential and other factors, such as high fuel costs

³⁹ More information on this association can be found at: www.ibanz.co.nz/

strategic response.⁴⁰ Global climate change effects are also areas of concern and the importance of measures to mitigate those are recognized by the fishing and insurance industries. Pollution of fisheries as a result of sewage leakages and industrial waste runoff, as in many fish producing countries, does not appear to be a major area of concern. The case of a recent court action brought by aquaculturists against local authorities over polluted water runoff into the ocean is considered as a one-time incident (Van Anrooy et al, 2006). The country is generally conscious of the adverse effects of environmental issues, and prides itself on its commitment to maintain the surrounding 'pristine' waters.

9.3.2 Australia

While it has been difficult to establish specific data on the number and size of fishing and insurance companies involved in capture fisheries operations, it appears reasonable to expect that, as in the case of New Zealand, the Australian capture fisheries insurance market is also small, and is dominated by a small number of large buyers and sellers who are supported by a large number of agents and brokers. Three sets of data lend support to this market assessment: market share of capture fisheries insurance, number of New Zealand insurance companies that operate in both New Zealand and Australia, and size of the fishing fleet.

In the financial year ending June 2006, 133 private insurers of general insurance business (i.e. other than life and health insurance) reported a gross premium revenue of AUD28.2 billion; of this, motor vehicle and householders classes of business accounted for the largest proportions of the total, at about 31 percent and 12 percent, respectively. Although comparable data on capture fisheries insurance is not readily available, based on similar data on marine and aviation class of business, the share of capture fisheries insurance appears to be marginal. The marine and aviation class of business reported gross premium revenue of AUD600 million, which accounted for only 2 percent of the total (Australian Prudential Regulation Authority, 2007). On the number of insurance companies involved in capture fisheries, the same four major companies, (which have offices in Australia as well, including the two European companies) dominate the market, supported by a large number of agents and brokers.

Australia is reported to have more than 9 000 fishing vessels, the majority of which are under 10 m and owner-operated. However, major fisheries, such as the various shrimp fisheries, the western rock lobster fishery, the North West Slope trawl fishery, the South East fishery, and Sub-Antarctic fishery, have much larger vessels with significant investment by a small number of larger fishing companies. However, data on actual levels of investment in Australian fisheries are limited (FAO, 2003).

Finally, again owing to similarities, the nature of demand and supply issues affecting the insurance market mirrors that of New Zealand's particularly limited potential of capture fisheries.

⁴⁰ Details can be obtained from the Department of Labour website: www.dol.govt.nz/ This also affects Australia: www.aph.gov.au/Library/pubs/rn/2004-05/05rn35.pdf

9.4 POLICIES IN FORCE

In general, the global marine insurance market, dominated by the ‘London Market,’ is influenced by the United Kingdom marine insurance law and practice that are based on the United Kingdom Marine Insurance Act (1906) and the ‘Institute Clauses’ (London) covering hull and cargo policies (refer to Appendix 1 for details). Moreover, as members of the Commonwealth,⁴¹ the marine insurance law and practice of New Zealand (Marine Insurance Act, 1908) and Australia (Marine Insurance Act, 1909) are generally consistent with those of the United Kingdom.⁴² Accordingly, the insurance companies involved in capture fisheries in New Zealand and Australia are also influenced by the rules, terms and conditions of the policy based on the London Institute Fishing Vessel Clauses.

This and the following sections of the regional review provide some specifics on the terms and conditions of policies mainly based on responses to the survey questionnaire provided by a leading insurance company of New Zealand, subsequently referred to as the Insurer. The Insurer, who is also substantially involved in capture fisheries insurance and operates in Australia as well, is a member of the Insurance Council of New Zealand, which comprises 20 member companies who write approximately 95 percent of the country’s general insurance business (Insurance Council of New Zealand, 2007b). Where relevant, preliminary responses from other insurance companies and information gathered from public sources are also reported in this section. The responses provided by the Insurer operating in New Zealand, particularly those that are policy and operations in nature, are also applicable to the situation in Australia.

The number of policies sold by the Insurer is close to 100. When this number is placed into perspective, it appears to be small considering that there are more than 1 500 fishing vessels. However, value-wise, the policies sold could have a much higher ranking. According to a rough estimate, the total number of policies could be 300–400, implying that, under some policies, more than one vessel is covered. In the case of some 9 000 vessels in Australia, using New Zealand’s estimate as a guide, the total number of policies could be 1 800–2 400. However, as a word of caution, these figures are simple estimates and should be treated accordingly. The total number of capture fisheries insurance policies in force in Oceania is therefore estimated between 2 100 and 2 800.

9.5 PERILS COVERED

Capture fisheries insurance policies currently underwritten are generally of the “all risks” type.

⁴¹ An association of independent states comprising the United Kingdom and a number of its former dependencies.

⁴² The Australian Marine Insurance Act (1909) was reviewed by the Australian Law Reform Commission (ALRC) in 2000–01. ALRC 91. 2001. A Review of the Marine Insurance Act, 1909. For further information, see www.alrc.gov.au/submissions/ALRCsubs/2003/1222.htm

9.6 VESSELS INSURED

The vessels being insured are commercial/industrial fishing vessels, most of which are owner operated, either fleets or individual vessels. The Insurer is not prepared to insure vessels that operate predominately outside New Zealand's coastal territorial waters, i.e. beyond the economic zone.

9.7 EQUIPMENT AND GEARS INSURED

All machinery and gears on board owned or operated by the owners or their employees can be insured. In addition to fishing vessels and equipment insurance, transport and marine liabilities classes of insurance cover are also available to fishing companies. The following activities are currently being insured:

- near shore/in-shore fisheries;
- trawling;
- purse seining;
- longlining;
- lift net fishing;
- tuna pole fishing.

Underwriting crayfishing (lobster) vessels is being done with caution, although the risks are considered high because the fishing takes place in close proximity to rocks and reefs.

9.8 UNDERWRITING

Information on gross (with reinsurance) and net capacity, in value terms, on any single risk (i.e. at any single location or in respect to an aggregation of locations) could not be obtained. The insurers contacted were not prepared to divulge this information as it is considered commercially sensitive. In general, the insurers restrict themselves to underwriting capture fisheries insurance within their national EEZ, as risks outside this area are considered very high. The repair facilities in some countries are poor as well, adding to the geographical restriction. Insurance services are available through brokers and agents, and other companies in the two countries also follow this arrangement.

In general, it can be said that insurers require extensive information on every production operation offered for insurance, and all applicants will be required to complete specialist application forms as part of the insurance. These forms will, together with the underwriting and risk management surveys, assess the risks and hazards that are relevant to the fishing activities. Insurers will base their underwriting approach on the assessment.

9.9 RISK MANAGEMENT

Independent surveyors are generally contracted for carrying out risk management surveys.

9.10 HANDLING OF CLAIMS

Independent loss adjusters (often internationally operating companies) are used for the assessment of claims against the policies following incidence of an insured loss.

9.11 UNDERWRITING EXPERIENCES

Capture fisheries insurance has been available in New Zealand and Australia for over 25 years. One of the most active capture fisheries insurers rates its experiences over a period of eleven years of operations, from 1996 to 2006, as follows: “good” for nine years, five of which were in the immediate past and “neutral” for two years. The experiences have been generally good because of selective underwriting of risks, rather than just taking on vessels without doing research on the operator.

9.12 CONCLUSIONS

Despite possessing the third and fourth largest fishing zones in the world, a major constraint faced by the fishing and insurance industries of the two countries is the limited potential from capture fisheries harvest, which stems from the low productivity of the waters surrounding them. The growing global demand for the countries’ high-value, export quality fish products puts further pressure on their scarce fisheries resources. It is, however, encouraging to note that, as world leaders in the sustainable management of fisheries resources, the countries continue to introduce new management and conservation measures backed by rigorous technical studies. The countries also have a global reputation for efficient management of their financial systems, including insurance markets. Furthermore, new insurance-related reforms are being introduced to achieve better outcomes. It is hoped that the countries’ continuing initiatives to bring about further improvements in fisheries and insurance sectors will provide an impetus to the capture fisheries insurance market.

Nonetheless, given the fisheries resource constraints and other factors, such as high fuel costs and ageing workforce, capture fisheries insurance business in both countries is not likely to expand in the near future. Rather, the business scenario in the immediate future appears to be stable, with the focus of the stakeholders in the fishing industry being on the enhancement of resources and the consolidation of business efforts. On the other hand, with the impressive growth of aquaculture, there could be an increase in the aquaculture insurance sector.

9.13 RECOMMENDATIONS

Recommendations from this regional review to the stakeholders of the capture fisheries insurance business in Oceania can be grouped into two categories: (1) domestic, and (2) international.

9.13.1 Domestic

- Government agencies and fishing and insurance companies should continue to contribute to the enhancement of the value of fisheries resources through

active participation in development and the implementation of resource conservation and management programs.

- While the governments have plans and programs to address the generic issue of the ageing of the workforce, the fishing and insurance companies could conduct their own assessment regarding the issues specifically facing the capture fisheries insurance sector, such as technical or professional skills gaps, and develop and implement appropriate measures, including capacity enhancement and training programs.
- In the context of the governments' ongoing reforms of the insurance sector, the insurance companies engaged in capture fisheries also could examine the possibilities of increasing profits through innovations and measures to reduce costs.

9.13.2 International

- The global capture fisheries and insurance industries could gain from the experiences of the two countries. To bridge the information gaps in this survey, it would be useful to conduct an in-depth study to understand better the synergies between the capture fisheries and insurance industries. The findings of the study, including lessons learned and best practice cases, need to be widely disseminated to other countries, including research, academic and financial institutions, as well as international development organizations.

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10. The current state of capture fisheries insurance in the United States of America

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10.1 INTRODUCTION

Bounded by the Pacific and the Atlantic oceans, the United States of America enjoys rich and diversified fisheries resources that contribute substantially to the economic development and dietary needs of the country. In the global context, the United States of America ranked third in terms of capture fisheries production in 2005. However, the country's fisheries contribution was small, accounting for only 5.2 percent of the global production. The country's contribution to the regional production was relatively significant, accounting for about 62 percent of North America's capture fisheries production in 2005 (FAO, 2007a).

Production level has, however, tended to remain relatively stable over the past five years. Accordingly, policymakers' top priority is to achieve sustainable yields through conservation and management measures, including the termination of practices leading to overexploitation of fishery resources and the rebuilding of depleted and overexploited fish stocks. Given this background, production is likely to increase marginally in the near future, and trigger a corresponding demand for capture fisheries insurance.

One of the issues faced was the availability of specific information on capture fisheries insurance. To the extent possible, this was addressed by gathering related information from the web sites of institutions and companies engaged in the capture fisheries sector. Valuable responses are presented to a survey questionnaire by one marine insurance company and a brokerage company, which works with marine underwriters.⁴³

⁴³ The survey questionnaire was sent to a number of companies, of which the above-mentioned two responded. Recognizing that the nation's commercial fishing fleet is diverse in terms of size and gear type, and consequently varies significantly within and among fisheries, the constrained conclusion is that the two surveys do not fully reflect the position of all the companies in the capture fisheries insurance sector. Nonetheless, overall the responses mirror the sector's position in terms of the impact of liability claims on premiums and profits (sections 10.4 to 10.11).

This chapter first provides a summary of the structure of the capture fisheries sector, then analyses the capture fisheries insurance sector in the context of the overall insurance industry, as well as the responses to the questionnaire provided by the two insurance companies, and finally presents conclusions and recommendations for consideration by stakeholders.

10.2 SHORT SUMMARY OF CAPTURE FISHERIES PRODUCTION

The National Marine Fisheries Service (NMFS), a federal sub-agency of the National Oceanic and Atmospheric Administration (NOAA) of the Department of Commerce, is responsible for the management, conservation and protection of living marine resources within the United States Exclusive Economic Zone (EEZ) and beyond for anadromous species, such as salmon. Six regional science centres and eight regional fishery management councils (Councils) that were established under the Magnuson-Stevens Fishery Conservation and Management Act (MSRA) assist NMFS. The United States EEZ, the largest such zone in the world, encompasses an area 1.7 times greater than its territorial landmass, and is located from 3 to 200 nautical miles seaward of the 48 contiguous states, Alaska, Hawaii, and United States-affiliated islands (except off Texas, the Florida Gulf Coast and Puerto Rico, where the EEZ extends from 9 to 200 nautical miles). The states, regional Marine Fisheries Commissions and some municipalities and counties are responsible for the management of inshore marine fisheries, with the NMFS playing a supportive and advisory role.⁴⁴ NMFS also provides scientific and policy leadership, and implements international conservation and management measures (National Marine Fisheries Service, 2007a).

In terms of commercial landings by distance from shore, the bulk originates from within the EEZ. In 2005, 66 percent of the landings by volume took place in the EEZ, or between 3–200 nautical miles, 32 percent within 0–3 nautical miles, and only 2 percent in international waters, or beyond 200 nautical miles. In terms of the landings by value, the three zones' respective contributions were: 55 percent, 43 percent and 2 percent (National Marine Fisheries Service, 2005). Seven states accounted for about 74 percent of total domestic landings by volume, with Alaska representing the highest value (about US\$1.3 billion, or 45 percent), followed by Massachusetts (US\$0.4 billion, or 14.7 percent) (Glitnir Seafood Team, 2007). In terms of total domestic landings by weight, the top five species were: Alaska pollock (37 percent), menhaden (13 percent), salmon (9 percent), hakes (6 percent) and cod (6 percent). In terms of total domestic landings by value, the top five species were: lobsters (11 percent), scallops (11 percent), crabs (10 percent), shrimp (10 percent) and salmon (8 percent) (National Marine Fisheries Service, 2005).

⁴⁴ Marine fisheries account for the bulk of the total U.S. fishery sector catch. The largest contributions by inland capture fisheries are the landings made from the Great Lakes, where the fisheries are managed by the U.S. Great lakes states and the Canadian province of Ontario under the coordination of the Great lakes Fishery Commission, and from the Mississippi River Basin. The two sources account for less than 1 percent of the volume and value of United States fisheries. For more information see [www.fao.org/fi/fcp/en/United States of AmericaA/profile.htm](http://www.fao.org/fi/fcp/en/United%20States%20of%20AmericaA/profile.htm)

In terms of edible exports, in 2005, three species: salmon, 16.9 percent, Alaska pollock, 12.8 percent and lobster, 8.4 percent, accounted for about 38 percent of the total value. In terms of weight, the United States exports accounted for about 80 percent of its domestic catch (Glitnir Seafood Team, 2007).

Over the past five years, domestic landings have tended to remain relatively stable between 4.3 and 4.4 million tonnes, decreasing slightly to 4.3 million tonnes in 2006 – a pattern that also reflects global landings. Domestic landings, however, reached a peak of about 4.8 million tonnes in 1994, an indication of the greater potential of capture fisheries resources, which could possibly be achieved and even surpassed through appropriate conservation and management measures. NMFS is committed to achieving the goal of maximum sustainable yields and is engaged in a number of initiatives that include, among others, preventing overfishing, restoring overfished stocks, streamlining regulatory operations and conducting advanced fisheries research. A recent development to that end is the ongoing work on the future of the nation's marine fisheries ("Vision 2020") by the Marine Fisheries Advisory Committee (MAFAC).⁴⁵ The MAFAC has prepared a draft document that describes trends, their potential impact on marine fisheries, and a series of recommendations (National Marine Fisheries Service, 2007b).

10.3 THE INSURANCE MARKET

The United States insurance market is the largest in terms of premiums, and one of the most advanced and efficiently regulated markets in the world. All types of insurance, including capture fisheries, are regulated by states (The McCarran Ferguson Act, 1945), with each state having its own statutes and rules. The insurance department of each state oversees insurer solvency, monitors market conduct and reviews and rules on requests for rate increases for coverage (Insurance Information Institute, 2007). The National Association of Insurance Commissioners (NAIC), a voluntary organization of the chief insurance regulatory officials of the states, develops model legislation and rules and regulations for the industry, many of which must be approved by state legislatures before they can be implemented

An attempt to present the size and structure of the capture fisheries insurance business has been made based on a simple analysis of three factors: premiums, fishing fleet and market characteristics of buyers and sellers. In summary, capture fisheries insurance is a marginal business in terms of premiums. The United States of America has one of the largest fishing fleets in the world, an indication of the potential client base of the insurance companies. And the market appears to be characterized by a small number of large fishing and insurance companies in each of the fisheries regions of the United States of America.

⁴⁵ The MAFAC advises the Secretary of Commerce on all living marine resource matters that are the responsibility of the Department of Commerce. The Under Secretary for NOAA is the chair of the Committee.

10.3.1 Premiums

In 2006, world insurance premium volume, including life and non-life sectors, totalled US\$3.7 trillion, of which the United States of America, with US\$1.17 trillion in premiums, was the largest insurance market (Insurance Information Institute, 2007). In the United States of America, property/casualty (non-life) net premiums written totalled US\$447.8 billion, of which commercial lines totalled 231.5 billion, (51.7 percent) and personal lines totalled US\$216.3 billion, (48.3 percent). In the absence of specific comparable data on capture fisheries insurance premiums, ocean marine's net premiums written (which totalled about US\$3.1 billion, or only 1.3 percent of commercial lines net premiums written) indicates that the size of capture fisheries share is marginal (Insurance Information Institute, 2007).

10.3.2 Fishing fleet

FAO reports that the number of vessels over 100 gross tonnage increased by 3.5 percent between 2003 and 2005 in the United States of America (FAO, 2007b). According to the United States Coast Guard, in 2006, the total number of commercial fishing vessels was 80 580, of which 21 996 (five net tonnes or more, and approximately 25 ft [7.6 m] or more) were vessels with valid Coast Guard documentation, and the balance of 58 584 (less than five net tonnes) was registered by states/jurisdictions.⁴⁶

While it would have been useful to present the specific number of insured fishing vessels and the amount of insurance premiums associated with such vessels, the absence of readily available data prevents this. Generally, the fishing states do not require owners of commercial fishing vessels to carry insurance on their vessels. Consequently, the states do not capture information on whether a vessel is insured or not. Nonetheless, based on anecdotal information, it is estimated that the number of vessels insured could be over 79 000. This estimate assumes that all Coast Guard documented vessels and over 95 percent of state registered vessels are insured. It is suggested here that this estimate be further refined to be of statistical value.

Regarding the amount of premiums paid, an indication is provided using data from a different source regarding fishing vessels premiums for a select number of countries. In 2006, the United States fishing vessel premiums amounted to about US\$17.0 million compared to Norway's US\$38.9 million and France's US\$32.5 million. Canada's premiums were relatively lower at US\$6.6 million

⁴⁶ State/Jurisdiction numbers are based on 2006 Boating Statistics, and the Documented Vessel count is based on the Coast Guard's Marine Information for Safety and Law Enforcement (MISLE) database. With adjustments, the total number is 82 047 (see www.homeport.uscg.mil/mycg/portal/ep/home.do). It was confirmed that fishing vessel insurance is not mandatory in the three key fishing states of Alaska, Florida and Massachusetts that constitute more than 30 percent of the total state registered vessels. The insurance estimate is based on the adjusted number of vessels. Owners of fishing vessels are, however, required to carry insurance by those financial institutions that provide credit/loans on their vessels.

(International Union of Marine Insurance, 2007). To put Canada's premium amounts into perspective, there were about 23 240 registered commercial fishing vessels in 2004, and it is estimated that 60 percent of those were less than 35 feet (Department of Fisheries and Oceans Canada, 2007).

10.3.3 Market characteristics of buyers and sellers

To understand the market characteristics of buyers (purchasers of insurance policies), the profiles of a number of seafood producers – who are also members of the National Fisheries Institute (NFI), the nation's leading advocacy organization for the seafood industry – were broadly reviewed.⁴⁷ In terms of market share by catch, it appears that a small number of large companies or associations of companies that have their own fishing fleet are market leaders. In addition, the market shares vary with the species and location of catch. On the other hand, based on different sources, the market also consists of a large number of commercial fishers who operate small businesses aimed at addressing the local market for fish and fishery products. Their fishing businesses are often sole proprietorships with small crews who are engaged in fishing activities using small boats (Randall and Brown, 2006; United Fishermen of Alaska, 2007).

To provide an idea of the magnitude of the market share of large companies on the basis of fishing vessels owned and operated by them, some typical examples follow: The first relates to a company that is recognized as the largest harvester and processor of clam products in the world. The company operates 34 vessels to harvest the largest offshore clam allocation in the industry, which is processed at four state-of-the-art plants in four states.⁴⁸ The second example is of a company that claims to be a leading harvester and marketer of scallops and other seafood from the waters of the North and Mid-Atlantic, using its own state-of-the-art vessels. Aside from these vessels, 49 independent boat owners provide additional business to the company.⁴⁹ The final example is a trade association representing seven companies that own and operate 19 United States flag catcher/processor vessels (approximately 55 000 tonnage) that participate principally in the Alaska pollock fishery and west coast Pacific whiting fishery. By weight, these fisheries account for more than one-third of all fish harvested in the United States of America each year. The length of the vessels range from 201 ft to 376 ft (61 to 114 m) and, by capacity, from 1 058 tonnage to 7 419 tonnage, with the latter considered the largest catcher/processor in the United States fleet. Of the seven companies, one alone owns seven vessels, having an aggregate capacity totalling 26 312 tonnage.⁵⁰

The suppliers' side (sellers of insurance policies) appears to reflect the same characteristics as the demand side: a small number of relatively large insurance companies (including brokers and fishing vessel owners associations) in each of

⁴⁷ More information can be found at : www.aboutseafood.com/about_NFI/who_we_are.cfm

⁴⁸ More information can be found at: www.seawatch.com/

⁴⁹ More information can be found at: www.atlanticcapes.com/about.html

⁵⁰ Four companies are listed as members of the National Fisheries Institute (see APA Directory). Data on capacity of three vessels of one company are not on the website. www.atsea.org/

the country's fisheries regions. A review of the list of members of the American Institute of Marine Underwriters (AIMU), a trade association representing the marine insurance industry as an advocate, educator and information centre, shows that the AIMU represents 49 insurance/reinsurance companies in the United States of America. The companies include the largest ocean marine reinsurer in the Americas, and the largest underwriter of pollution liability insurance for marine vessels in the United States of America (both of which also provide fishing vessel coverage).⁵¹ While most member companies generally offer a range of marine insurance products, including cargo, hull, and Protection and Indemnity (P&I), a few (eight) mention coverage provided to fishing vessels as well. However, the lack of reference to fishing vessels does not necessarily imply that the companies do not provide such coverage. Further, even companies that do highlight fishing vessel coverage have an unknown relative market position, owing to the lack of readily available quantitative insurance-related information. Another issue is that, besides the companies listed as members (given the large number of vessels in operation), throughout the United States of America there is supposedly a large number of other companies providing fishing insurance coverage that are not members of the AIMU. Overall, it can be argued that the market concentration for fishing vessel insurance is moderate.

The level of market share concentration of fishing vessel insurance brokerage companies is high in the United States of America, because only a small number of large companies appear to dominate this business. Information collected from two brokerage companies showed that they are among the largest brokers of coverage for cold-water fishing and other marine industries specifically in the Pacific Northwest. The first is also ranked as the fifth largest insurance brokerage firm in the world, and the largest bank-affiliated insurance brokerage firm in the United States of America. The second is ranked as the sixth largest such organization in both the United States of America and in the world.⁵²

On the supply side, as indicated earlier, the market also comprises self insurance pools or mutual associations that are operated by fishing vessel owners whose vessels and operations present similar risks, and who have similar attitudes on safety and loss prevention.⁵³ Several such associations also seek reinsurance from commercial reinsurers to protect themselves from catastrophic losses. Peer review capability is reported to have yielded good safety performance results for hull and machinery insurance. As in the case of the large insurance companies, information on the specific market shares of these associations is not available.

⁵¹ The list of AIMU members also includes: insurance and reinsurance brokers, claims settling/surveying services and law firms. Data as of November 2007. More information can be found at: www.aimu.org/

⁵² Rankings are based on Business Insurance magazine. More information can be found at: www.bbinsurance.com/aboutUs.shtml, wfis.wellsfargo.com/ (About Wells Fargo Insurance Services) and www.seapacmarine.com/about.htm

⁵³ See The National Academies. 1991. Fishing vessel safety: Blueprint for a national program. p.137. (available at www.nap.edu/openbook.php?record_id=1622&page=137)

10.3.4 Demand and supply issues

The demand for and supply of capture fisheries insurance are strongly influenced by the demand for and supply of fishery products, both domestically and globally. Simply put, if there is a demand for fishery products, fishing companies strive to supply quality products at competitive prices that yield positive returns. For these market dynamics to work, it is presumed that there will be a corresponding supply of fish. Further, as part of their risk management strategy (which also has a direct impact on supply prices), it is expected that companies will take out appropriate insurance coverage. As a related issue, the supply and demand for fishery products in both the international and domestic markets could also be affected by other factors, such as severe weather, fluctuations in import prices of fish and fuel prices that are external to the fisheries sector.⁵⁴

In the United States domestic market, demand for edible fishery products continues to increase owing to population growth and the growing recognition of the health benefits of fish consumption (Glitnir Seafood Team, 2007). In 2006, Americans consumed 7.5 kg of fish and shellfish (edible meat) per capita, up 1.4 percent from the 2005 per capita consumption of 7.4 kg. According to FAO, the United States of America was ranked the third largest consumer of seafood in the world in absolute terms (National Marine Fisheries Service, 2007c). This growth is expected to continue, with health experts encouraging a doubling of the current consumption levels (National Marine Fisheries Service, 2007b). The United States of America is heavily dependent on the supply of imported fish, which accounted for about 86 percent of the total edible seafood supply in the market. Policy-makers expect aquaculture to narrow the gap in demand, and accordingly have prepared a ten-year plan for marine aquaculture development. It has been estimated that domestic aquaculture production could increase from about 0.5 million tonnes annually to 1.5 million tonnes per year by 2025 (National Oceanic and Atmospheric Administration, 2007). However, with aquaculture's current contribution amounting to only 8.8 percent of total production, its impact is likely to be marginal in the near future.

In the case of capture fisheries, economic feasibility and environmental and social sustainability of the sector are the keys to success. MAFAC reports that, even with the most effective conservation and management systems in place that could result in elimination of overfishing and the creation of optimal environmental conditions, the demand for marine fisheries resources will continue to grow at a pace that far exceeds the wild harvest supply (National Marine Fisheries Service, 2007b). Although capture fisheries production levels have stagnated in recent years, there is the potential for increase in the future through the concerted efforts and commitment of all stakeholders, including NMFS, fishing companies and

⁵⁴ In 2005, hurricane Katrina wreaked havoc on the Gulf of Mexico, causing massive damage to an area that produced 10 percent of the shrimp and 40 percent of the oysters consumed in the United States. More information can be found at: www.thefishsite.com/fishnews/1520/hurricane-katrina-decimated-shrimp-fleet-oyster-beds

insurance companies. In this context, three issues being addressed by NMFS and other stakeholders have implications for the development of the capture fisheries insurance sector:

- 1) rebuilding fish stocks to increase capture fisheries production, which in turn will trigger a demand for – and supply of – capture fisheries insurance;
- 2) ensuring fishing vessel safety (which is inextricably linked to insurance);
- 3) providing access to affordable health insurance to commercial fisherfolk to prevent them from leaving the profession (Randall and Brown, 2006).

10.3.5 Rebuilding stocks

The fisheries sector continues to be plagued with overcapacity issues although the majority of the domestic assessed fish stocks are either not overfished (75 percent) or not subject to overfishing (80 percent). Based on recent stock assessments, the number of stocks subject to overfishing increased from 45 in 2005 to 48 in 2006, and the number of overfished stocks increased from 43 to 47 (National Marine Fisheries Service, 2006). It has also been reported that in 2006, the capacity of the existing United States fishing fleet exceeded the target catch levels of many stocks, resulting in a race for fish and consequently lower economic returns (National Marine Fisheries Service, 2007b). Recognizing the importance and magnitude of the issue, NMFS has targeted ending overfishing and rebuilding stocks to the level that provides maximum sustainable yields as its top priority. The Magnuson-Stevens Fishery Conservation and Management Reauthorization Act of 2006 (MSRA) provides NMFS and Councils with new management tools and requirements to meet fishery conservation goals. Broadly, the MSRA:

- sets a firm deadline to end overfishing by 2011;
- uses market-based incentives to replenish fish stocks;
- strengthens enforcement of fishing laws;
- improves information and decisions about the state of ocean ecosystems;
- advances international cooperation and ocean stewardship.⁵⁵

Despite the issues of overcapacity, habitat degradation and pollution, it is encouraging to note that there have been cases of success in conservation and management of United States fisheries, particularly in Alaska where the state constitution mandates sustainable use of fisheries resources. In terms of species, the Alaska pollock fishery, the largest United States fishery, is one of the best managed in the world and has been certified by the Marine Stewardship Council as “well-managed and sustainable fisheries”.⁵⁶ The role of the Pollock Conservation Cooperative (PCC) (comprising fishing companies) to foster conservation has been commendable. PCC members voluntarily agree to limit their individual catches to a specific percentage of their sector’s fishing quota and thereby eliminate

⁵⁵ See Fact sheet: Magnuson-Stevens Fishery Conservation and Management Reauthorization Act. Signed as a bill by President George W. Bush on 12 January 2007. www.whitehouse.gov/news/releases/2007/01/20070112-1.html

⁵⁶ More information can be found at : www.alaskapollock.org/index.html

overfishing. In recognition of its commitment to sustainable fishing, PCC received the 2006 Stewardship and Sustainability Award from NOAA. It is pertinent to highlight here that valuable lessons could also be learned from Canada, which has an international reputation as a world leader in oceans management.⁵⁷

10.3.6 Ensuring safety of fishing vessels

Despite recent improvements in safety, commercial fishing remains one of the nation's most hazardous occupations, often resulting in losses of vessels and lives owing to natural, mechanical and human risk factors. The recent review of lost fishing vessels and crew fatalities from 1994 to 2004 by the United States Coast Guard revealed that there were 1 398 lost vessels and 641 fatalities: an average of 127 lost vessels and 58 fatalities for each of these years (United States Coast Guard, 2006). The review reports that when vessels have the safety equipment prescribed by Federal Regulations (Commercial Fishing Industry Vessel Safety Act of 1988), and fishers use the equipment properly, their chances of survival increase significantly. The review further points out that most of the current fishing vessel safety regulations focus on emergency response, in lieu of preventing vessel loss. It would thus be necessary to make further improvements in safety through efforts to prevent vessel losses. To this end, it is encouraging that the National Institute for Occupational Safety and Health (NIOSH), the federal agency responsible for conducting research and making recommendations to identify and prevent work-related illness and injury, has made progress in collaboration with other stakeholders. NIOSH is working in four areas:

- 1) to develop tailored interventions to prevent vessel loss;
- 2) to develop strategies to prevent fatalities from falls overboard;
- 3) to develop strategies to prevent severe injuries;
- 4) to establish marine safety training.⁵⁸

The findings of the 1994–2004 review also provide a good understanding of risk factors that fishing companies need to mitigate in order to minimize financial losses, and consequently avoid payment of higher insurance premiums (Box 1).

A major fallout concerning safety issues is that liability claims arising from injuries and fatalities could financially strain insurers and consequently have an adverse impact on the availability and affordability of insurance. A significant portion of liability claims involves court cases where injured fishers build their cases on both the doctrine of “unseaworthiness” and the Jones Act, particularly for “pain and suffering” owing to the negligence of vessel owners. The size of such claims can be substantial, and some insurance experts have also identified the issue as a major constraint to capture fisheries insurance development.

⁵⁷ More information can be found at : www.dfo-mpo.gc.ca/us-nous/vision-eng.htm

⁵⁸ Lincoln, Jennifer, Ph.D. 25 April 2007. Testimony: Statement by Jennifer Lincoln, Ph.D. National Institute for Occupational Safety and Health, Commercial Fishing Vessel Safety, United States House of Representatives. www.hhs.gov/asl/testify/2007/04/t20070425c.html

BOX 1**1994–2004 Fishing vessels safety review: major findings**

The major findings are as follows: a) most fishing vessel losses (71 percent) occurred while engaged in non-fishing operations, such as travelling to or from port; b) flooding (35 percent) and fire (25 percent) were the leading causes of the fishing vessel losses; c) nearly 42 percent of all vessel-related fatalities occurred on steel hulled vessels, which are generally larger than vessels of other hull materials and operate farther offshore, with larger crews; d) hull/machinery failure accounted for 69 percent of the fishing vessel losses owing to flooding; e) water exposure (75 percent) was the most significant factor in personnel loss (51 percent of all fishing deaths were attributable to flooding, sinking or capsizing of the vessel and another 24 percent to falls overboard); f) in cold waters fishers survive more than twice as often when lifesaving equipment (survival suits) is used; g) loss of lives was much lower among those vessels that had participated in the voluntary dockside exam program and received a safety decal.

10.3.7 Providing health insurance to commercial fishers

The small size of the commercial fishers' business, along with the high risks associated with commercial fishing, makes it difficult for them to afford health care insurance coverage. Most fishers are reported to be uninsured, with the rate of uninsured being three to four times greater than the national average. Research carried out by the United Fishermen of Alaska (UFA) indicated that the lack of access to health insurance has become one of the serious barriers to entry into the fisheries of Alaska (the state that accounts for about half of the nation's seafood) by new participants, particularly young people who are otherwise reported to be seeking alternative employment in fields with health benefit packages. The issue is further compounded by the fact that the workforce is ageing and will require young entrants. The UFA, however, points out that further research is necessary to determine the actual extent of this problem and provide appropriate solutions (United Fishermen of Alaska, 2007).

The State of Massachusetts has a successful plan (Fishing Partnership Health Plan, FPHP) that provides health care to all the fishers within the state, and is available to all who choose to sign up for it. Studies have shown that with this plan the rate of uninsured dropped from 43 percent to 13 percent and that the cost of health delivery to the fishing industry was lower than was originally presumed (Randall and Brown, 2006; United Fishermen of Alaska, 2007). To prevent the potential loss of the workforce, it would be useful to conduct further studies on the plan to examine whether the concept and operations would be applicable in other states.

10.4 POLICIES IN FORCE

The marine insurance company (IC) is prepared to insure all types of commercial fishing vessels, except crabbers, and the total number of vessels currently insured by it is 1 000 (November 2007) compared to a national estimate of 79 000 insured fishing vessels.⁵⁹ It is useful to point out here that in NIOSH's and the United States Coast Guard's reviews crab-fishing workers had the highest risk for a fatal fall overboard. The number of fatal accidents among crabbers was the second highest of all fleets, accounting for 24 percent of the total number of fatalities (United States Coast Guard, 2006). The brokerage company (BC) is involved in insurance of approximately 200 vessels (November 2007), ranging from 32 ft to 125 ft (9.7 to 38 m). The types of vessels insured include gillnetters, seiners, purse seiners, small tugboats and barges. In the near future BC plans to also insure larger tugs and barges. However, it is not prepared to insure airboats.

10.5 PERILS COVERED

Capture fisheries insurance policies underwritten by the IC are only of the "named perils" risks type. The IC has developed its own policy terms and conditions and application forms. Capture fisheries insurance policies underwritten by the BC are of the "named perils" type for fishing vessels and of the "all risks" type for yachts and cargo. The BC developed its own application and, as a brokerage company, it follows the policy terms and conditions of its underwriters.

10.6 VESSELS INSURED

The IC currently insures the fishing vessels involved in near shore/in-shore fisheries, trawling and fishing with traps. The BC insures vessels involved in the following activities:

- off-shore fisheries;
- purse seining;
- gillnet fishing;
- fishing with set-nets (fykes);
- recreational fishing;
- diving for lobster/fish (rare);
- tuna fishing.

10.7 EQUIPMENT AND GEARS INSURED

The IC insures all installed gears. The BC insures equipment and gears that include:

- fish finders;
- emergency position-indicating radio beacon (EPRIP-Loran);
- auto pilots;

⁵⁹ For a better understanding of the IC's relative position with regard to the total number of insured vessels in the nation, information on the size and type of vessels also needs to be considered.

- smoke alarms;
- weather scanners.

In the future, the BC plans to also insure new types of EPRIP systems.

10.7.1 Other classes of capture fisheries related insurance

In addition to fishing vessel/equipment insurance, the IC provides the following classes of insurance coverage to fishing companies:

- buildings and onshore equipment;
- marine liabilities.

The BC's coverage includes:

- buildings and onshore equipment;
- public liability;
- employers' liability;
- product liability;
- transport liability;
- marine liabilities.

10.8 UNDERWRITING

The IC's net underwriting capacity on any single risk (i.e. at any single location or with respect to an aggregation of locations) is US\$1 million. The IC is not restricted to underwriting domestic capture fisheries risks only; it underwrites such risks in Canada as well. The BC's net capacity on any single risk is US\$2 million. In addition to its underwriting activities in the United States of America, the BC provides similar services in Canada and Panama.

10.9 RISK MANAGEMENT SURVEYS

For risk management surveys both the IC and BC make use of independent specialized surveyors.

10.10 CLAIMS HANDLING

To assist and guide its customers in the claims process, the IC has two claims centres staffed with marine specialists, plus a 24-hour pollution response team. The IC uses own loss adjustment experts while the BC uses independent loss adjustment experts.

10.11 UNDERWRITING EXPERIENCES

When the IC was requested to describe fisheries underwriting results since it started its underwriting fisheries business, it rated its performance "neutral".⁶⁰ The BC, which has been involved in capture fisheries insurance for 25 years, rated its performance "bad" for 2006 and "neutral" for the four previous years. Only in 1997, did the BC consider its performance "good". The responses imply that the returns on capture fisheries insurance are marginally positive.

⁶⁰ Based on a "very bad, bad, neutral, good and very good" scale.

10.11.1 Fisheries insurance development constraining factors

The IC considers “personal injury” the main constraint to further development of the capture fisheries insurance business. The BC considers “tuna fishing on Protection and Indemnity (P&I) insurance” the main constraint.

10.11.2 Fisheries insurance promotion

Both the IC and BC see a role for fishers’ organizations and cooperatives in promoting fisheries insurance, particularly among small-scale fisheries.

10.12 CONCLUSIONS

Despite the fact that the United States of America is the third largest capture fisheries producing country in the world, its global market share in terms of fishing vessel insurance premiums is relatively modest. The capture fisheries sector is receiving increasing attention from fisheries policymakers and other stakeholders, owing to the stabilization of production in the midst of a growing domestic and international demand for safe and healthy fishery products. However, studies point out that, even with the most effective conservation and management systems, the demand for fish will continue to grow at a pace that far exceeds the supply in the wild. To cater to the demand, the country is heavily dependent on imports, and this trend is expected to continue in the near future. Three subjects, which are being addressed by NMFS and other stakeholders and which have implications for development of the capture fisheries insurance sector, merit special attention:

- 1) rebuilding fish stocks to increase capture fisheries production, which in turn will trigger a demand for and supply of capture fisheries insurance;
- 2) ensuring fishing vessel safety, which, in addition to saving lives, could reduce costly injury-related liability claims and hence make insurance more accessible and affordable;
- 3) providing affordable health insurance to commercial fisherfolk to motivate and prevent them from leaving the profession.

Considering past production trends and the effects of the implementation of NMFS’s conservation and management measures, it is likely that capture fisheries will register a marginal increase in the near future. Accordingly, the demand for capture fisheries insurance is likely to expand marginally in the near future, with the focus likely to be more on renewals. However, this projection could be affected by factors that are external to the fisheries sector, such as severe weather, and fluctuations in fish market prices and fuel prices.

10.13 RECOMMENDATIONS

Recommendations to the stakeholders in the capture fisheries insurance business are the following:

- Government agencies and fishing and insurance companies need to continue their contributions to sustainable enhancement of the value of fisheries resources through active participation in the development and implementation

of resource conservation and management programs. A recent case in point that has implications for further enhancement of the capture fisheries sector is the development of “Vision 2020”.

- Government and other stakeholders need to continue to address the issue of fishing vessels safety with more emphasis placed on preventive measures.
- Commercial fishing associations need to conduct further research on the issue of health care insurance coverage for fishers, and develop possible solutions for implementation by the government and insurance companies.
- Fishing and insurance companies need to conduct an in-depth review of the capture fisheries insurance sector to bridge the information and data gaps highlighted in this chapter, and to identify other possible measures for further development of the sector.

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11. The current state of capture fisheries insurance in the Russian Federation

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11.1 INTRODUCTION

For a better understanding of the current status of the capture fisheries insurance business in the Russian Federation, it is useful to first recognize that the development of the fisheries and insurance sectors, as in the case of other sectors, has been largely influenced by the political, social and economic transformations that have taken place since the break up of the Soviet Union in 1991. In essence, both the fisheries and insurance sectors faced the challenges of the Russian Federation's transition from a centrally planned economy to a market-based economy. Although the transition process has often been turbulent, with many roadblocks on the way, it is encouraging to note that generally the reform programs are progressively yielding desired outcomes.

While availability of specific information on capture fisheries insurance appears to be a generic issue affecting most countries, as has been reported in other chapters of this document, it is more so for the Russian Federation, as the country tries to adapt to the growing demands of market-based information collection and reporting systems. It is useful to note that even specific information on the overall size of the insurance market in standard classes of the insurance business is not available. In the context of this chapter, the lack of information has been further compounded because the response to the survey questionnaire by the insurance companies contacted was marginal. Only one insurance company in the Russian Federation, VSK Insurance House, responded positively, and with valuable information.⁶¹ This chapter was prepared based on the information from VSK Insurance House and other relevant information on the insurance and fisheries sectors collected from publicly available sources.

This chapter first provides a summary of the structure of the capture fisheries sector, then analyses the capture fisheries insurance sector in the context of the

⁶¹ A survey questionnaire, in both Russian and English languages, was sent to a number of companies, of which one had responded.

overall insurance industry, as well as the responses to the questionnaire provided by VSK Insurance House and, finally, presents conclusions and recommendations.

Stretching from the Baltic Sea in the west, to the Pacific Ocean in the east, and from the Arctic Ocean in the north, to the Black Sea and the Caspian Sea in the south, the Russian Federation is blessed with access to an impressive fisheries resource base. In all, the Russian Federation's marine fisheries are active in twelve seas surrounding it, and in waters outside of its exclusive economic zone (EEZ). In addition, its inland fisheries resources contain a large number of river basins and lakes. In 2004, the Russian Federation was the eighth largest producer of fish in the world, having a production of 2.9 million tonnes of marine and inland capture fisheries (FAO, 2007). Marine fisheries accounted for about 92 percent of the catch, while 8 percent originated from inland waters. It is estimated that there were 219 100 workers in the marine sector in 2005.

According to estimates by the Russian Statistics Committee (RosStat), the total catch increased to 3.2 million tonnes in 2005, but production was still well below historic levels (close to 4.7 million tonnes in 1996, and about 40 percent of the production of 15 years ago). The main species produced by marine capture fisheries include Alaska pollack (30–40 percent), blue whiting (11 percent), herring (10 percent), and Atlantic and Pacific cod (9 percent). Salmon makes up only 7 percent of the total catch of the fleet, but this species is very important to the fishery economy in terms of value. The recent increasing production trend is likely to continue in 2006 and 2007, with an estimated increase of 5 percent annually. The main drivers behind the increased output are: continued improvements to the Russian Federation's fishing fleet, including new investments in large capacity ships (35–40 000 tonnes), increased production in the Russian Federation's EEZ, and strong domestic demand for fish and fish products spurred on by rising consumer incomes (USDA Foreign Agricultural Service GAIN Report, 2006). The government's long-term development plan for the fishing industry calls for increasing capture fisheries production to 5.5 million tonnes by 2020 (USDA Foreign Agricultural Service GAIN Report, 2003). In the medium-term, production is expected to increase to 4.5 million tonnes by 2008 and 4.7 million tonnes by 2010 (USDA Foreign Agricultural Service GAIN Report, 2006).⁶²

11.2 THE INSURANCE MARKET

The state monopoly over insurance was abolished throughout the Soviet Union in 1988. Since then, a competitive market based industry has started to develop slowly. While the Russian Federation insurance market is still at an early stage in the transition from a state monopoly into a fully developed competitive industry, its current state is generally characterized by growth and expansion. The market

⁶² According to estimates by Russian scientists, the potential catch within the waters under national jurisdiction (including currently non-fished stocks) could be as high as 9–10 million tonnes, and the potential catch outside Russia's waters could be 2–2.5 million tonnes. More information can be found at www.fao.org/fi/website/FIRetrieveAction.do?dom=countrysector&xml=FI-CP_RU.xml&lang=en

has huge potential and in 2004, as part of the ongoing reform of the insurance sector, the government took a number of legislative initiatives to further develop the sector (Organisation for Economic Co-operation and Development, 2005). As a consequence, foreign investors now have greater access to the Russian Federation insurance market, particularly due to the removal of most restrictions for investors from the European Union. The life and non-life insurance businesses have been separated, the minimum capital requirements have been raised for all insurance companies, and the system of insurance regulation and supervision has been improved by separating the responsibilities for the two functions.

The Ministry of Finance is responsible for all functions of insurance regulation and legislation. Its insurance related objectives include supporting the development of a competitive insurance market, ensuring financial stability in the insurance market and protecting the interests of consumers, enterprises and the state. As an output of the 2004 legislative initiative, a newly formed unit, called the Federal Insurance Supervision Authority, became responsible for all supervisory functions, including issuing licences, monitoring the activities of about 1 200 insurance companies and ensuring compliance with solvency regulations. The Ministry of Finance still has the responsibility of coordinating the activities of the Supervision Authority. In addition to the main office in Moscow, there are seven regional offices, one for each of the federal regions of the Russian Federation (excluding the central region which is covered from Moscow).

The All-Russian Insurance Association (ARIA), of which many insurers in the Russian Federation are members, is an institution that is actively engaged in promoting insurance among the public, and supporting direct insurance and reinsurance companies active in the Russian Federation, including those having foreign ownership or control.

11.3 DEMAND AND SUPPLY ISSUES

Generally, the demand for and supply of capture fisheries insurance are greatly influenced by three factors: first, the availability of fish; second, the profitability of commercial fishing activities; and third, the profitability of insurance products. In the Russian context, with the government attaching increasing importance to enhancing fisheries resources in a sustainable manner to meet the growing domestic and international demand for fish and fish products, it is foreseen that capture fisheries production will continue to increase gradually, and meet the government's medium-term (three years) production target. Fishing companies will be motivated to make higher profits through further investments in fishing operations, including the use of more efficient fishing vessels. Again, as the fishing companies continue to expand their operations, it is expected that they will try to minimize production and financial risks, and demand increased insurance coverage. In response, the insurance industry, which is becoming increasingly efficient as a consequence of ongoing reform programs and international linkages, will offer insurance services that will be financially beneficial to both the fishing companies and the capture fisheries insurance companies.

11.3.1 Market size

Capture fisheries insurance is a small business compared to other business classes in the insurance market. Although exclusive information on capture fisheries insurance is not readily available, its relative size could best be explained by considering the marine, aviation and transport (MAT) insurance group's share of the total premium income made by all classes of business.⁶³ In 2003, MAT's share was only 4.4 percent of the total (US\$3.5 billion) in contrast with motor insurance group's (physical damage and liability combined) dominant share of about 50 percent. During the four-year period ending in 2003, MAT's market growth pattern showed a 66 percent increase (Organisation for Economic Co-operation and Development, 2005). While demand for marine capture fisheries insurance is expected to grow in absolute terms in the future, the 2003 market share pattern is likely to continue, as demand for motor insurance will not only increase with economic growth, but is also expected to do so at a faster rate.

11.3.2 Market concentration of sellers and buyers

The market on the sellers' side (insurance companies) is characterized by many, mainly small companies. In 2003, there were about 1 200 companies, of which about 40 percent had a premium income of less than US\$500 000. On the other hand, there were a number of large companies, with the top thirty companies having a combined premium income of about US\$8.3 billion, over 55 percent of the total market premium income (Organisation for Economic Co-operation and Development, 2005). In 2004, Ingosstrakh (one of the two former state monopoly insurance companies that were subsequently privatised) ranked second among the top ten insurance companies engaged in the non-life insurance business, with a gross written premium of about US\$587.8 million. Another company, the VSK Insurance House, ranked sixth, has a gross written premium of about US\$259.0 million.⁶⁴ In terms of marine insurance in the Russian Federation, Ingosstrakh is the market leader, followed by VSK Insurance House.⁶⁵

As the industry matures and strives to further achieve higher operational standards, including meeting quality capital requirements and accounting norms, the number of direct insurance companies is likely to decrease – as in the recent

⁶³ Separate data on the marine insurance business are not readily available, which implies the magnitude of the issue of obtaining data on capture fisheries insurance. Further, as stated in the OECD 2005 study, one unusual feature of the Russian Federation insurance market is that a high percentage of the premiums shown in the official statistics are derived from the so called "financial schemes", or from non-insurance or pseudo-insurance transactions. Nonetheless, it is important to understand that these schemes are legal, and simply tend to exploit loopholes in tax legislation. The total premium income referred to in this section (US\$3.5 billion) is after a deduction of about US\$9.3 billion of the so-called "financial schemes". Data on premiums are based on estimates provided by the United Financial Group (UFG) in Moscow.

⁶⁴ More information can be found in: International insurance fact book 2006–2007: Russia. www.internationalinsurance.org.

⁶⁵ Based on gross written premium, number of ships and gross tonnage as reported by VSK Insurance House.

past – because some companies may not be able to comply with these standards. This process of market consolidation is expected to result in greater operational efficiency for the capture fisheries class of insurance business.

Progressive liberalizing of the insurance market continues, allowing more international competition. Nevertheless, the total market share of majority controlled foreign companies is still small, estimated to be below 5 percent of the market in standard class insurance business. The market share of all companies with some foreign shareholding is relatively larger (but still under 20 percent). Information on the involvement of foreign companies in capture fisheries insurance of Russian fleets is not readily available.

On the buyers' side (fishing companies), the overall industry structure includes privatized former state-owned enterprises, collective fishing farms (groups of enterprises using small and medium-size fishing vessels), new commercial enterprises (small companies or "spin-offs" of larger former state-owned enterprises or companies starting their business by buying or leasing vessels from insolvent enterprises), and joint ventures (with foreign partners). As in the case of the insurance market, former state-owned large enterprises dominate the market. Although information on fishing companies and the markets they operate in is poor, it could be generally said that, in line with the trend in the insurance industry, the fishing industry also is undergoing a period of consolidation towards making it more efficient.

The poor condition of the Russian fishing fleet is one of the factors that has contributed to a decrease in wild catch taking place in the last decade. According to various sources more than two-thirds of the fishing fleet, estimated between 3 500 and 4 000 vessels in 2002, was in poor condition as a result of ageing and lack of proper maintenance. In addition, there were and still are too many specialized vessels for catching specific species (mainly cod, pollack and crab), and not enough vessels for the catching of other species, such as herring, flounder, and species from the Pacific Ocean, including tuna. To address these important issues, the government has initiated measures to modernize the fishing fleet. In 2005, the number of powered fishing vessels was 2 256 (an 8 percent increase over the previous year) (FAO, 2007). In the absence of availability of data on the number of fishing vessels that have insurance coverage, for the purposes of this review it is assumed that all powered vessels are covered. However, this simple assumption needs further analysis and validation.

11.3.3 Demand for fish and fish products

There has been a growing demand for Russian fish and fish products in both the international and domestic markets. Seafood exports totalled US\$457 million in 2005, up by 40 percent from 2004. To enhance exports, the government is paying increasing attention to addressing issues related to poaching and illegal landings in foreign ports, and to the compliance with international fishery export standards (hygiene). The domestic market for fish and fish products is booming owing to a number of factors:

- The rise in consumer disposable income (a 20 percent growth in 2005 in major metropolitan areas);
- shifts in consumer preferences toward healthy, nutritious and low-fat foods;
- concerns about the risks of avian influenza from poultry products;
- increased investments in new fish processing facilities;
- higher prices of other animal protein products;
- improved marketing channels (Svec and Muran, 2007).

It should be noted here that the supply and demand for Russian fish and fish products in both the international and domestic markets will be affected strongly by external factors, such as fluctuations in the exchange rate and the price of oil.

11.4 POLICIES IN FORCE

This section is based largely on responses to the survey questionnaire provided by VSK Insurance House,⁶⁶ as well as collected and analysed secondary information. VSK Insurance House provides a wide range of insurance services, including capture fisheries insurance, through its more than 400 branches and offices spread throughout the Russian Federation. The company ranked second in terms of the marine insurance business. In recognition of its high quality professional services in the marine sector, the company's Marine Hull and Liability Division was awarded the International Organization for Standardization (ISO) 9001–2000 accreditation. VSK Insurance House is also a member of the ARIA. The total number of vessels insured (hull and machinery) by the VSK Insurance House was 1 432 in 2006, an increase of 187 over the number insured in 2004. The number of fishing and fish processing vessels insured was 224 (18 percent of the total number of vessels) in 2004 and 243 (17 percent of the total number of vessels) in 2006. The total gross registered tonnage (GRT) at risk was 2.7 million tonnes in 2006 and 2.0 million tonnes in 2004. The total gross premium written was US\$12.9 million in 2006, an increase of US\$7.0 million over what was written in 2004. Of the total premium income under its marine business VSK Insurance House reported that fishing and fish processing accounted for 17 percent in 2006 and 26 percent in 2004.

11.5 PERILS COVERED

Generally, capture fisheries insurance policies underwritten in the Russian Federation are of the "all risks" type. VSK Insurance House has a policy that any vessel over 20 years of age would be subject to a risk assessment survey/condition survey by an internationally recognized independent surveyor.⁶⁷

⁶⁶ This section also makes extensive use of the information provided at the company's Web site (www.vsk.ru).

⁶⁷ The condition survey examines technical defects and maintenance conditions, carries out tests, and provides recommendations.

11.6 VESSELS INSURED

The vessels being insured are commercial fishing vessels owned and operated by fishing companies (national and foreign) both inside and outside the Russian Federation EEZ.

11.7 EQUIPMENT AND GEARS INSURED

All machinery and gears on board, owned or operated by the owners, can be insured.

11.7.1 Other classes of capture fisheries related insurance

In addition to fishing vessels and equipment (hull and machinery) insurance, other classes of related insurance services are available in the Russian market, including:

- coverage for loss of earnings (resulting from any mishap or misfortune covered by the hull and machinery policy);
- Protection & Indemnity (P&I) insurance, which covers, among others, liabilities related to cargo, crew, passengers and persons other than seamen);
- builders' risk insurance (loss of or damage to ships under construction);
- ship's crew liability insurance (to provide compensation in case of accidental death or temporary or permanent disablement).

11.7.2 Fisheries activities being insured

Fishing activities currently being insured in the Russian Federation include the following:

- offshore fisheries;
- near shore/in-shore fisheries;
- trawling;
- purse seining;
- longlining.

11.8 UNDERWRITING

In line with the country's liberalization of international market policy, the insurers are not restricted to underwriting capture fisheries risks in the Russian Federation only. In the case of VSK Insurance House, overseas business accounted for about 25 percent of the portfolio in 2006. The capture fisheries insurance services provided by the largest insurers in Russia are available through brokers and agents.

Reinsurance cover for marine lines of business is provided by both Russian-owned and foreign-owned reinsurance companies. In the case of VSK Insurance House, reinsurance of marine hull portfolio is placed through Lloyd's brokers in reputable reinsurance international markets on the excess of loss basis. Reinsurance is used for underwriting values (any one loss) in excess of US\$1 million. The maximum underwriting capacity applied is US\$15.0 million. Crew liability insurance is reinsured on proportional basis.

11.9 RISK MANAGEMENT

The insurers in the Russian Federation use risk management surveys to assess the physical risks inherent in fishing, and to ensure that certain standards of operation are maintained on the fishing vessels they insure.

Surveys are generally carried out by specialists from the insurance industry's inspection force of professional surveyors, who are familiar with vessel construction, gears and equipment on fishing vessels, and the peculiar risks and hazards related to various types of fishing.

11.10 CLAIMS HANDLING

The handling of claims in the Russian Federation is well developed. Use is made of internationally accepted principles. Most insurers active in the sector use both in-company expertise and external loss adjusters in their claims handling practices. As in all other areas, claims handling relies on prompt reporting and the level of mitigation efforts.

11.11 UNDERWRITING EXPERIENCES

The marine insurers in the Russian Federation generally have extensive experience underwriting fishing vessels. Over the years, they have gained comprehensive knowledge and extensive practice in providing hull and machinery insurance and associated lines of marine insurance business. Their long-term exposure to the international markets has broadened this knowledge and understanding, and the use of internationally accepted claims settlement procedures is now common practice. The largest marine insurers in the Russian Federation have an in-house team of dedicated professionals, who are experts in marine hull insurance and liabilities. These professionals have generally graduated from maritime academies in Moscow, St. Petersburg and Murmansk, and have extensive sea-going, vessel management and navigation experience.

VSK Insurance House pursues a conservative underwriting policy based on a well-crafted diversification strategy of lines of business and geographical spread, to allow its portfolio to adapt to changes in market conditions. VSK Insurance House reported that over the last decade its capture fisheries underwriting experiences fluctuated between neutral and good.

However, it is clear that the fisheries underwriting results in the Russian Federation over the decade have been affected negatively by the decline in fisheries production and fishing vessel accidents arising from the poor conditions of ships, as well as from human negligence.

11.12 CONCLUSIONS

The development of capture fisheries and insurance sectors has been largely influenced by the political, social and economic transformation that has taken place since the disintegration of the former Union of the Soviet Socialist Republics in 1991. As market reforms mature and the Russian Federation's economy prospers, both sectors are expected to grow and become more efficient in their operations.

With the government attaching increasing importance to enhancing fisheries resources in a sustainable manner to meet the growing domestic and international demand for fish and fish products, it is likely that capture fisheries will continue to grow and achieve their medium-term (next three years) production target. To that end, the government needs to effectively address the problems related to widespread Illegal, Unregulated and Unreported (IUU) fishing, and facilitate the modernization of the Russian fishing fleet.

Although capture fisheries insurance is still a small business compared to other business classes in the insurance market, it is expected to grow in absolute terms and respond to the new demand. The insurance sector, which is progressively becoming more efficient as a consequence of ongoing reform programs, will respond to market demand and offer services beneficial to both the fishing companies and the insurance sector.

11.13 RECOMMENDATIONS

Recommendations to the stakeholders of the capture fisheries insurance business can be grouped into two categories: (a) domestic, and (b) international:

11.13.1 Domestic recommendations

- Government, fishing companies and other stakeholders need to continue their contributions to the sustainable enhancement of fisheries resources through active participation in the development and implementation of resource conservation and fisheries management programs. Of particular importance is the need to urgently and effectively address the issue of IUU fishing.
- While some insurance companies, particularly the former large state-owned companies, have gained considerable knowledge, skills and experience in providing capture fisheries insurance, the government, in collaboration with the fisheries sector and the ARIA, is advised to carry out technical and professional competencies analyses, as well as develop and implement appropriate capacity enhancement measures to facilitate the sustainable development of the sector.

11.13.2 International recommendations

- Countries like the Russian Federation, China, the former Soviet republics and other countries in rapid transition could learn from each other's experience in developing capture fisheries and insurance sectors. These countries could also learn from the experiences of countries with a well-established insurance sector and a well-managed fisheries sector, such as New Zealand, Australia and a number of countries in Europe and the Americas. International agencies, such as FAO (having the mandate in the United Nations system on fisheries development) should, in collaboration with the governments and other stakeholders, take the initiative of conducting detailed studies and holding seminars to disseminate widely the findings of this and other studies.

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12. Conclusions and recommendations

12.1 CONCLUSIONS

The main conclusions that can be drawn from this review are the following:

- The number of fishing vessel (hull) insurance policies in force at present is estimated at around 500 000 worldwide, of which some 40 percent (208 000) can be found in Japan, 20 percent in China, 16 percent in the United States of America and 10 percent in Europe.
- As world fish captures show a stable⁶⁸ trend, and as the number of vessels has been relatively stable as well in recent years, the demand side of the fishing vessel insurance market does not seem to change much over time.
- The reduction in fishing fleet sizes and the construction of new fishing vessels in some regions and countries is being compensated for by the increases in fleet sizes and construction efforts in other regions. This results in fishing vessel insurers shifting their attention to these growing markets, while continuing efforts to maintain market shares in the traditional markets.
- Market concentration on the demand side, together with reducing stocks in traditional fishing areas and reduced profit margins in fisheries, make the capture fisheries insurance market less attractive to some insurers than in the past.
- Fishing vessel insurance services are currently available to all large fishing companies and substantial worldwide producers, although some markets (Japan, Europe, the United States of America, Oceania and the Russian Federation) are better served by insurance services than others and competition in certain markets is negligible.
- The fisheries insurance industry is highly regulated by national governments, which generally have laws and regulations in place to govern, regulate and control the insurance business (including fishing vessel insurance). Market entry barriers are still common in a number of countries. This affects the level of competition in the insurance market negatively and causes unfavourable conditions for fishers in terms of selecting suitable insurance services.
- The small-scale fishing sector (except in Japan, Europe and the United States of America) is not well served by the insurance sector. Most small-scale producers do not have access to insurance services and commonly insurance services that address their specific needs and conditions are unavailable in

⁶⁸ It should be noted that inland capture fisheries landings have been increasing between 2000 and 2005 to about 9 percent.

their countries' coastal and inland fishing regions. This means that the large majority of the 30 million fishers worldwide are unable to purchase insurance coverage for their vessels, equipment and gears.

- The access of those involved in small-scale fishing (in the developing countries) to life and health insurance services appears to be improving rapidly, while access to vessel insurance is only available in a few countries (e.g. China, India, Viet Nam) and rising very slowly.
- Most fishing vessel (hull) policies in force (worldwide) are of the "all risk" type, although they are frequently modified to take into account the specific situations in each country and region. The Institute Fishing Vessel Clauses commonly form the basis for the policies used in the fishing vessel insurance industry.
- Protection and Indemnity (P&I) insurance of capture fisheries activities has become increasingly prominent in recent years, particularly in Europe, Oceania and Japan.
- In Europe, Oceania and Japan, all types and sizes of fishing vessels can be insured; this is not the case for all regions and countries. In South America, China, India, Africa and, to a lesser extent, the Russian Federation, it is generally more difficult to obtain insurance for small-scale vessels than for the large-scale ones.
- Insurance coverage of machinery (engines), fishing gears (purse seines, trawl and gillnets, longlines), processing equipment (including industrial freezers), electronic systems (such as navigating aids, net monitoring and control systems, fish finders, radar, global positioning system (GPS), radio beacons, auto pilots, smoke alarms, etc.) and lifeboats is commonly available (for larger vessels) in the international fisheries insurance market.
- The insurance of modern fishing vessels, along with equipment and gears, of which the combined value is sometimes estimated in millions of United States dollars, generally requires assistance from the reinsurance market. It is fairly common for direct fishing vessels insurers to underwrite a vessel from US\$1 up to a maximum of US\$1.5 million, and seek reinsurance for the remainder of the value insured.
- All fishing vessel insurers have risk assessment and management procedures in place and carry out risk management surveys. Independent marine surveyors are commonly used to determine the conditions of the vessel(s) offered for insurance.
- Vessel maintenance programmes, risk awareness programmes and plans, programmes to increase safety-at-sea and related measures, training programmes on risk assessment and management, and better management practices (BMPs) are increasingly applied and promoted by fishing vessels insurers.
- In the case of a claim, most insurers will instruct an independent loss surveyor and sometimes also a specialized loss adjuster to manage the claim. Mutual insurance companies generally have their own service or division dealing with damage and loss surveys and claims handling.

- The underwriting experiences in the fishing vessel insurance class of business over the last decade show a wide diversity. Results seem to have improved in Europe and the Russian Federation in recent years. They were generally good in Oceania and Africa, and were balanced in China and Japan in recent years.
- Fisheries related P&I and group life and accident schemes in recent years generally showed underwriting results that were positive (sometimes even rated as excellent).
- Low profitability and bad experiences in the 1980s and 1990s in the fishing vessel insurance market have resulted in the establishment of few new fishing vessel insurance facilities in recent years. The fishing vessel insurance sector is competing with other, more profitable, sectors.
- The limited number of people having specialized skills and experience with marine insurance (including fishing vessel insurance) causes insurers to stay away from fisheries underwriting activities.

12.2 RECOMMENDATIONS

Many of the recommendations that came forth from the various regional reviews and desk studies largely confirm that the suggested actions in the 1996 Zengyoren/FAO/APRACA *Regional Conference on Insurance and Credit for Sustainable Fisheries Development in Asia* (FAO, 1999)⁶⁹ still need to be properly addressed. Therefore, some of their recommendations are repeated below.⁷⁰

The recommendations in this section are directed towards different stakeholders, hence are here divided into general recommendations (concerning all stakeholders, including policy and decision-makers, banking institutions, insurance agencies, fishers, fishing crew and fishing vessel owners) and recommendations to specific stakeholder groups, including governments, fishing vessel underwriters, fishers, fishing vessel owners and development agencies.

12.2.1 General recommendations

- The development of legal, regulatory and policy frameworks at the national level in support of fisheries insurance should be undertaken in the short term in a participatory manner, with the involvement of the main stakeholders in the sector. (*)
- Governments, NGOs, training institutions, and fishers' organizations should undertake information and dissemination campaigns to develop awareness about the FAO/ILO/IMO Code of Safety for Fishermen and Fishing Vessels 2005 and the Voluntary Guidelines for the Design, Construction and Equipment of Small Fishing Vessels 2005.

⁶⁹ More information on this conference and its outcomes can be found in: Fisheries insurance programmes in Asia – experiences, practices and principles. Hotta, M., 1999. FAO Fisheries Circular No. 948. FAO. Rome. This document can also be found at: [ftp.fao.org/docrep/fao/005/x4363e/X4363E00.pdf](ftp://ftp.fao.org/docrep/fao/005/x4363e/X4363E00.pdf)

⁷⁰ Repeated recommendations are marked with an asterisk (*)

- Many small-scale and impoverished fishers are not yet fully aware of the merits and value of fishing vessel insurance, which can increase the sustainability of the sector and ensure long-term production, as well as their livelihoods. There is room for increased raising of awareness. This should be carried out as a joint effort of insurance companies, governmental agencies, NGOs and fisherfolk organizations.
- Governments, together with fishing and insurance companies, should address the generic issue of the ageing of the workforce by conducting assessments on the age structure of the fishing employment basis, as well as the availability of experienced specialists in fisheries insurance, including issues such as the technical or professional skills gaps, and the development and implementation of appropriate measures to avoid or reduce future gaps, including capacity enhancement and training programs.
- Research and development efforts in relation to improvement and promotion of fisheries insurance services should be increased, through partnerships of stakeholders in the sector (including among others fisherfolk cooperatives, insurance companies, research institutions, and government fishery officers).

Governments should:

- recognize fisheries insurance as an integral part of fisheries sector development and management policy and legal frameworks; (*)
- evaluate the socio-economic costs and benefits of fisheries insurance programmes; (*)
- conduct technical seminars and training courses on insurance matters within the government institutional setting that deals with capture fisheries, targeting fisheries policy and decision-makers, extension officers and technical and administrative staff; (*)
- assist insurance agencies in carrying out feasibility studies for the establishment of pilot insurance programmes for capture fisheries insurance, and particularly programmes that address the small-scale sector;
- increase awareness and build capacity among “new” insurers on the state of the national fisheries industry and its development needs in terms of insurance services;
- cooperate with insurers, fisherfolk organizations and NGOs to improve further the provision of insurance service to the fisheries sector;
- include, where appropriate, insurance components in welfare, development and poverty alleviation programmes;
- invest in early warning systems, disaster prevention and mitigation systems and programmes that address the needs of the fisheries communities⁷¹.

⁷¹ Specific recommendations on this subject can also be found in: Disaster response and risk management in the fisheries sector. Westlund, L., Poulain, F. Bage, H. & van Anrooy, R. 2007. FAO Fisheries Technical Paper No 479. FAO, Rome (available at www.fao.org/docrep/010/a1217e/a1217e00.HTM)

Fisheries sector insurers should:

- increase efforts to promote safety-at-sea measures, as well as implement vessel maintenance programmes, risk awareness programmes and better management practices by the fishing industry;
- develop, strengthen and support training programmes in marine insurance to ensure that specialist underwriting, surveyor and loss adjustment skills and experiences will also be available to the industry in the future;
- work towards ensuring mid-term fisheries insurance capacity by supporting the expressed needs for new fisheries insurance facilities;
- examine the possibilities of increasing profits and margins through innovations in products and services that reduce the costs of management, administration and general delivery of the services to the sector;
- make efforts to address the insurance needs of the small-scale sector in terms of simplifying policy write-ups, taking into consideration the capacity of the applicants and the conditions they work under, and facilitating flexible premium payment and claims handling procedures;
- investigate and initiate pilot group insurance programmes in the fisheries sector, which will make use of existing fisherfolk organizations and their capacity to deliver services to their members at low costs;
- where appropriate, team-up with microfinance and credit institutions that deliver services to the small-scale producers, in order to increase the access to and availability of insurance services for these groups, using the existing infrastructures, systems and offices. This will also enable microfinance and credit institutions to increase their portfolio of services and make their presence known in the sometimes distant areas, more profitable and sustainable;
- maintain separate records on fisheries related insurance (fishing vessel hull, gears, P&I, etc.) in order to make it possible to distinguish the policies and underwriting experiences from other marine insurance services, and provide with better information to the fisheries sector about insurance services.

Fishers and vessel owners should:

- adopt and apply safety-at-sea measures, establish new and improved existing vessel maintenance programmes, increase risk awareness of the crew and adopt and apply better fisheries management practices;
- organize themselves in associations, self-help groups, or cooperatives to facilitate the exchange of information and make it easier for government agencies and insurers to establish relationships with them, and work towards the sustainable development of the sector, as well as provide them the necessary advice and services;
- participate in vocational training programmes that include sessions on the benefits and positive contributions that insurance can provide to their incomes, in terms of stability and the improvement of their livelihoods.

Development agencies and NGOs active in fisheries and insurance should:

- conduct and disseminate studies, lessons learned and best practices in fisheries insurance, in order to increase the availability of insurance services to those that have currently no access to these services, such as most of the small-scale and impoverished fishers in coastal areas as well as many fishers in inland areas;
- support the organization of regional and global events at which fisheries insurance stakeholders can meet, exchange experiences, learn from each other, and discuss together possible ways to make fisheries insurance services more widely available to the sector, particularly to the small-scale fishers and impoverished fisherfolk communities;
- encourage and assist governments to establish the legal, policy and institutional frameworks necessary for including a fisheries insurance component in national fisheries and aquaculture development, as well as in management programmes;
- advise governments and insurance agencies on the design and implementation of guidelines, improved strategies and policies, as well as incentives for the development of fisheries insurance in support of the sustainable development of the sector.