

COMMERCIAL FISHING VESSEL SAFETY AND
INSURANCE IN HAWAII: AN ECONOMIC PERSPECTIVE

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TABLE OF CONTENTS

INTRODUCTION	1
COMMERCIAL FISHING VESSEL ACCIDENTS AND LOSSES	2
FISHERMEN'S ATTITUDES TOWARD VESSEL SAFETY AND INSURANCE	8
FISHING VESSEL INSURANCE IN HAWAII	15
OPPORTUNITIES FOR INSURANCE COST REDUCTIONS	18
Group Insurance	18
Insurance Pools or Mutual Associations	19
Vessel Safety and Insurance Programs	20
Shopping for the Best Insurance Deal	21
CONCLUDING REMARKS	24
REFERENCES CITED	24
APPENDIX	25

LIST OF TABLES

Table

1	Losses Suffered by the Commercial and Charter Fishing Fleet in Hawaii, 1974 Through 1979	3
2	Types of Vessels Involved in Marine Accidents, 1974 Through 1979	4
3	Sizes of Vessels Involved in Marine Accidents, 1974 Through 1979	4
4	Types of Material Used in Constructing Hulls of Vessels Involved in Marine Accidents, 1974 Through 1979	5
5	Ages of Vessels Involved in Marine Accidents, 1974 Through 1979	5
6	Time of Marine Accident, 1974 Through 1979	6
7	Weather Condition at Time of Marine Accident, 1974 Through 1979	6
8	Sea Condition at Time of Marine Accident, 1974 Through 1979	7
9	Person in Charge of Vessel Involved in Marine Accident, 1974 Through 1979	7

10	Types of Fishing Engaged in by Fishermen	8
11	Employment in Fishing Industry	9
12	Lengths of Vessels Used by Fishermen	9
13	Ages of Vessels Used by Fishermen	10
14	Normal Fishing Distance from Port	10
15	Years of Experience in Operating a Fishing Vessel	11
16	Fishermen Licensed by U.S. Coast Guard to Operate Vessel	11
17	Types of Vessel Insurance Coverage	12
18	Fishermen's Reasons for Not Carrying Insurance	12
19	Major Vessel Safety Problems in Hawaii	13
20	Fishermen's Interest in Joining a Voluntary Vessel Safety Inspection Program if Insurance Rates Might be Somewhat Reduced	14
21	Types of Additional Information Needed on Vessel Safety and/or Marine Insurance	14
22	U.S. Coast Guard Safety Requirements for Commercial and Charter Fishing Vessels	22
23	U.S. Coast Guard License and Inspection Requirements	23

INTRODUCTION

Commercial fishing has long been regarded as a particularly hazardous occupation. Heavy casualties of fishermen and vessels attest to the arduous nature of the business. One response by fishermen to the risk involved in their operations is to arrange for marine insurance coverage. For a premium, insurance companies are willing to assume a portion of the fishermen's financial risks. The amount charged for the premium is closely tied to the amount of risk assumed by the insurer. Herein lies the fundamental relationship between vessel safety and insurance costs.

In Hawaii, this relationship has become a matter of concern for both commercial fishermen and marine insurance providers. On one hand, there is concern about the safety record of Hawaii's commercial and charter fishing fleet. Over the six-year period from 1974 through 1979, the lives of three fishermen and three charter patrons were lost at sea. In addition to loss of life, property damages totaling over \$1.6 million were reported to the U.S. Coast Guard. Beyond these documented losses, numerous unreported accidents also occurred, each of which probably resulted in further personal injuries and destruction of property. The deluge of accidental losses has in turn generated an awareness of and concern for the steady escalation in insurance costs incurred by Hawaii-based commercial fishermen. In recent years, marine insurance premiums have become so high that many vessels operate without any coverage.

This report documents the current status of commercial fishing vessel safety and insurance in Hawaii. The study was undertaken to provide baseline data which could be used in formulating sound and popular programs aimed at reducing commercial fishing vessel losses and insurance rates. Specifically, the objectives of the study were: (1) to determine the nature and extent of fishing vessel accidents and losses occurring in Hawaiian waters during the recent past; (2) to determine the commercial fishermen's perceptions of safety problems and to assess their interest in vessel safety and insurance programs; (3) to identify active participants in the marine insurance industry; and (4) to identify alternative ways to reduce fishermen's insurance costs.

This report is organized into five sections. In the first section, available data on fishing vessel losses are presented and discussed. Next, responses to a mail survey of small-boat fishermen's attitudes toward vessel safety and insurance are summarized. Third, results of 20 interviews with Hawaii-based insurance representatives are discussed. The fourth section contains a description of alternative ways in which fishermen may be able to reduce their insurance costs. Some concluding remarks are given in the fifth section.

COMMERCIAL FISHING VESSEL ACCIDENTS AND LOSSES

All major accidents and losses involving commercial fishing vessels are supposedly reported to local U.S. Coast Guard (USCG) authorities. It is unknown what percentage of accidents go unreported but it is probably quite high. However, for those accidents for which a USCG report is filed, considerable specific data about the nature, causes, and circumstances surrounding the loss are available. Information about commercial fishing accidents which go unreported to the USCG are available from insurance companies and marine surveyors. Again, the amount of information available on particular losses is considerable.

The commercial and charter fishing vessel loss statistics summarized below for 1974 through 1979 were derived from two sources: 48 cases from computerized USCG data records and 45 cases from records kept by a Hawaii-based marine surveyor. Statistical tests were conducted to verify whether the two data sets represented the same overall population. Test results indicated that there was no reason to reject this hypothesis; hence, the data sets were merged.

The types of losses suffered by Hawaii's commercial and charter (hereinafter simply referred to as "commercial") fishing fleet are given in Table 1. Twenty-nine percent of the losses involved collision with either another vessel or some fixed object. This compares favorably with vessel losses reported nationwide to the USCG where about 46 percent of the accidents involved collisions (U.S. Department of Transportation, 1979). On the other hand, a relatively larger percentage of the accidents in Hawaii involved groundings, founderingings, and capsizings -- about 31 percent for Hawaii as compared with about 14 percent nationwide. The large percentage of groundings may be attributed in part to the presence of reefs in Hawaiian waters, whereas unpredictable weather may contribute to the large share of founderingings and capsizings.

Statistics in Table 2 show that commercial fishing vessels were involved in slightly more accidents than commercial charter fishing vessels. The statistics in Table 3 show that the largest percentage of accidents was experienced by vessels in the 25 to 65-foot class. This is not surprising given the fact that vessels of this size comprised the bulk of Hawaii's fishing fleet. However, it is interesting to note that given the relatively few large boats in the fleet, 15 percent of the accidents involved vessels over 65 feet in length.

Types of material used for hull construction and age of vessels involved in accidents are given in Tables 4 and 5, respectively. The data indicate that wood and fiberglass-hulled boats were involved in 83 percent of the accidents. While this may once again reflect the overall constituency of Hawaii's fishing fleet, it is important to note that 31 percent of the accidents involved vessels over 20 years old. Thus, it appears that

older, wooden vessels are involved in a significant number of accidents.

TABLE 1. LOSSES SUFFERED BY THE COMMERCIAL AND CHARTER FISHING FLEET IN HAWAII, 1974 THROUGH 1979

Type	Number of Cases	Frequency (%)
Collision with vessel -- underway	12	13
Collision with vessel -- docking	5	5
Collision with object in water	8	9
Collision with aid to navigation	2	2
Explosion (fire or fuel)	3	3
Fire (damage to vessel structure)	4	4
Fire (damage to vessel equipment)	1	1
Groundings (with damage)	18	19
Groundings (no damage)	1	1
Foundering	7	8
Capsizing	3	3
Flooding/swamping without sinking	7	8
Material failure -- vessel structure	4	4
Material failure -- machinery or engineering equipment	9	10
Material failure -- cargo gear, propeller shaft, etc.	1	1
Theft	8	9
TOTAL	93	100

TABLE 2. TYPES OF VESSELS INVOLVED IN MARINE ACCIDENTS, 1974 THROUGH 1979

Type	Number of Cases	Frequency (%)
Commercial fishing (non-sport)	53	57
Commercial charter fishing	40	43
TOTAL	93	100

TABLE 3. SIZES OF VESSELS INVOLVED IN MARINE ACCIDENTS, 1974 THROUGH 1979

Length (feet)	Number of Cases	Frequency (%)
Less than 25	6	6
25 to 40	35	38
40 to 65	38	40
Over 65	14	15
TOTAL	93	99*

*Deviation from 100% due to use of round numbers

TABLE 4. TYPES OF MATERIAL USED IN CONSTRUCTING
HULLS OF VESSELS INVOLVED IN MARINE
ACCIDENTS, 1974 THROUGH 1979

Material	Number of Cases	Frequency (%)
Steel	5	5
Wood	50	54
Fiberglass	27	29
Aluminum	4	4
Other or unknown	7	8
TOTAL	93	100

TABLE 5. AGES OF VESSELS INVOLVED IN MARINE
ACCIDENTS, 1974 THROUGH 1979

Age (years)	Number of Cases	Frequency (%)
Less than 5	19	20
5 to 10	18	19
11 to 15	14	15
16 to 20	13	14
21 to 30	9	10
Over 30	20	21
TOTAL	93	100

Information about the circumstances surrounding vessel losses is given in Tables 6, 7, 8, and 9. As shown in Table 6, almost as many accidents occur during the day as at night. Similarly, weather conditions do not seem to affect frequency of accidents; of those accidents where weather condition at the time of loss was recorded, over 50 percent occurred during clear weather (Table 7). Table 8 shows that 66 percent of vessel losses

TABLE 6. TIME OF MARINE ACCIDENT, 1974 THROUGH 1979

Time	Number of Cases	Frequency (%)
Day	40	43
Night	41	44
Twilight	7	7
Unknown	5	6
TOTAL	93	100

TABLE 7. WEATHER CONDITION AT TIME OF MARINE ACCIDENT, 1974 THROUGH 1979

Condition	Number of Cases	Frequency (%)
Clear	30	32
Partly cloudy	13	14
Reduced visibility	14	15
Unknown	36	39
TOTAL	93	100

TABLE 8. SEA CONDITION AT TIME OF MARINE ACCIDENT,
1974 THROUGH 1979

Condition	Number of Cases	Frequency (%)
Calm	43	46
Average (swells 5 to 15 feet)	19	20
Extreme (swells 15 to 40 feet)	11	12
Unknown	20	22
TOTAL	93	100

TABLE 9. PERSON IN CHARGE OF VESSEL INVOLVED IN
MARINE ACCIDENT, 1974 THROUGH 1979

Skipper	Number of Cases	Frequency (%)
Licensed operator	50	54
Unlicensed operator	39	42
Unmanned or unknown	4	4
TOTAL	93	100

occurred when seas were either calm or average. One final interesting point regarding vessel losses is that in 54 percent of the cases a licensed skipper was in command at the time of the accident (Table 9).

FISHERMEN'S ATTITUDES TOWARD VESSEL SAFETY AND INSURANCE

In order to determine commercial fishermen's opinions about current vessel safety and insurance conditions in Hawaii, a mail survey was conducted during September and October of 1980. Questionnaires were sent to 250 commercial fishing and charter boat operators throughout Hawaii. Stratified sampling techniques were used to insure correct proportionality among fishermen from different islands. One follow-up letter was mailed. Data from the 122 returned questionnaires were used in a descriptive statistical analysis, the results of which are presented below.

Basic descriptive information about the sample group is presented in Tables 10 through 16. The large majority of fishermen who responded to the survey are part-timers engaged in bottom-fishing, trolling, or net fishing (Tables 10 and 11). Of those responding to a question on vessel size, over 90 percent use boats ranging from 16 to 40 feet in length (Table 12). The ages of the vessels used are fairly uniformly distributed (Table 13). Over 60 percent of the respondents normally fish within 20 miles from port (Table 14). Taken together, these results indicate that the sample group is fairly representative of the commercial fishing population in Hawaii.

TABLE 10. TYPES OF FISHING ENGAGED IN BY FISHERMEN

Type	Number of Fishermen
Bottomfishing	87
Trolling	57
Netting	29
Longlining	6
Diving	2
Trapping	13
Other	10
TOTAL	204

TABLE 11. EMPLOYMENT IN FISHING INDUSTRY

Time Devoted to Fishing	Number of Fishermen
Full time	29
Part time	78
No response	15
TOTAL	122

TABLE 12. LENGTHS OF VESSELS USED BY FISHERMEN

Length (feet)	Number of Fishermen
Less than 25	63
25 to 40	43
41 to 65	10
Over 65	0
No response	6
TOTAL	122

TABLE 13. AGES OF VESSELS USED BY FISHERMEN

Age (years)	Number of Fishermen
Less than 6	19
6 to 10	32
11 to 15	16
16 to 20	6
21 to 30	11
Over 30	23
No response	15
TOTAL	122

TABLE 14. NORMAL FISHING DISTANCE FROM PORT

Distance from Port (miles)	Number of Fishermen
Less than 2	18
2 to 5	19
6 to 10	16
11 to 15	24
16 to 20	0
21 to 30	19
31 to 40	6
Over 40	6
No response	14
TOTAL	122

TABLE 15. YEARS OF EXPERIENCE IN OPERATING
A FISHING VESSEL

Number of Years	Number of Fishermen
0 to 5	20
6 to 10	21
11 to 15	18
16 to 25	24
26 to 35	18
36 to 45	18
Over 45	3
TOTAL	122

TABLE 16. FISHERMEN LICENSED BY U.S. COAST
GUARD TO OPERATE VESSEL

Licensed	Number of Fishermen
Yes	16
No	91
No response	15
TOTAL	122

Some interesting findings relating to years of experience as a skipper are presented in Table 15. Nearly 80 percent of the respondents claim to have over 5 years of experience in operating a fishing vessel. However, regardless of experience, 87 percent of the fishermen responding to a question on licensing reported they were not licensed by the USCG at the time of the survey (Table 16).

Less than 50 percent of the survey respondents had vessel insurance coverage. By far, the majority of the sampled group who did insure their vessels had both hull and liability insurance (Table 17). Of the fishermen who did not insure their boats, 77 percent claimed that insurance is prohibitively expensive, and 8 percent felt that it was not necessary in the first place (Table 18).

TABLE 17. TYPES OF VESSEL INSURANCE COVERAGE

Type	Number of Fishermen
Hull insurance	24
Liability insurance	23
Homeowner's insurance	5
No insurance	70

TABLE 18. FISHERMEN'S REASONS FOR NOT CARRYING INSURANCE

Reason	Number of Fishermen
Too expensive	54
Don't like insurance companies	1
Don't understand insurance	3
Was rejected as a bad risk	4
Don't think I need it	8

Fishermen were also asked what they perceive to be the major vessel safety problems in Hawaii (Table 19). Although overall response to this question was low, some of the problems mentioned most frequently were: (1) general lack of respect for local weather conditions and navigational requirements (especially among newcomers); (2) failure to observe the rules of the road; and (3) careless maintenance of engines and equipment. When asked about their interest in a voluntary vessel safety program (specifics not given) which might reduce insurance premiums, 61 percent of the group indicated a positive interest (Table 20). Fishermen also indicated an interest in receiving more information about vessel safety and marine insurance (Table 21).

TABLE 19. MAJOR VESSEL SAFETY PROBLEMS IN HAWAII

Source of Problem	Number of Fishermen
Lack of respect for and understanding of local waters and weather conditions	23
Rules of the road violations	15
Careless vessel maintenance	11
Inadequate safety structures (buoys, lighthouses, harbors)	11
Lack of enforcement of safety rules	7
Failure to buy necessary safety equipment (EPIRB, radios)	7
Lack of affordable insurance	5
USCG rescue too slow or ineffective	3

TABLE 20. FISHERMEN'S INTEREST IN JOINING A VOLUNTARY VESSEL SAFETY INSPECTION PROGRAM IF INSURANCE RATES MIGHT BE SOMEWHAT REDUCED

Response	Number of Fishermen
Yes, definitely	52
Maybe, it all depends	22
No, definitely	12
No response	36
TOTAL	122

TABLE 21. TYPES OF ADDITIONAL INFORMATION NEEDED ON VESSEL SAFETY AND/OR MARINE INSURANCE

Type	Number of Fishermen
Boating safety	39
Marine insurance	50
None	33
TOTAL	122

FISHING VESSEL INSURANCE IN HAWAII

The fishing vessel insurance market in Hawaii is very similar to those serving commercial fishing fleets across the United States. Valuable background information useful for understanding Hawaii's marine insurance industry can therefore be obtained from studies conducted in other states (Brown, 1972; Redfield, 1971; Hopkins, 1976; Storch, 1979; U.S. Department of Commerce, 1973). A comprehensive description of the marine insurance business in the United States is also provided by Winter (1952).

Information on Hawaii's insurance situation was also obtained from two principal sources. Financial data on the industry were collected from the Insurance Division of the Hawaii Department of Regulatory Agencies. Detailed information about day-to-day practices was collected through a series of 20 personal interviews with insurance representatives.

Marine insurance is a specialized form which includes coverage for all types of waterborne vessels and their cargoes and crews. In Hawaii, the marine insurance industry is comprised of 90 to 100 companies and agencies representing local, mainland, and international underwriters. The industry seems to be fairly concentrated in the sense that four or five companies are responsible for writing 50 to 60 percent of the total annual marine insurance premiums. The degree of market concentration has steadily increased since 1975 as certain agencies and underwriters have stopped issuing marine insurance policies after finding this line of business unprofitable. For those firms still in the business, marine insurance generally represents a small fraction (about 1 percent) of their total premium volume.

Typically, insurance contracts for fishing vessels in Hawaii include two types of coverage: hull insurance and protection and indemnity insurance (often simply called P&I). Hull insurance provides protection against damage to the fishing vessel and the onboard equipment. It also normally provides liability protection against damages to other vessels resulting from collision. Most hull insurance contracts are written on a "named-perils" basis, meaning coverage extends over only those items specified in the contract. The standard losses covered are those from fire, theft, and a catch-all category called "perils of the sea" which includes heavy seas, high wind, flooding -- in fact any accidental damage caused by wind and wave action. Also usually covered are damages due to stranding, collision with another vessel, striking of a submerged object, and sinking (if caused by one of the named perils). Losses due to negligence or unseaworthiness of the vessel are not covered.

Obtaining protection and indemnity insurance safeguards a fishing vessel against liability claims. It normally includes third party liability coverage for bodily injury and property damage, longshoremen and harbor workers' compensation, and medical payments for passenger injuries.

Fishermen who desire to insure their boats against accidental damage or personal liability have numerous insurance options. If the fisherman's vessel is relatively small, suitable coverage may be obtained through a homeowner's insurance policy. On the other hand, if a fisherman's operation is large and homeowner's insurance coverage is not deemed adequate, coverage must be purchased through the marine insurance market.

The price charged for fishing vessel insurance coverage is determined in a complex manner. In the case of hull insurance, the annual cost which a fisherman is required to pay is based on a combination of two factors: the insured value of the vessel in question and the insurance premium rate (usually expressed as a percentage). For instance, the cost to insure a \$100,000 vessel at a premium rate of 3 percent would equal \$3,000 per year. Anything that alters a vessel's insured value, premium rate, or both, will in turn result in a change in the annual insurance cost.

The insured value of a vessel is important in determining its premium. Small, inexpensive skiffs cost less to insure than an ocean-going longliner. This is because the maximum amount that an underwriter must pay out for the total loss of a longliner is far greater than for a skiff. Usually a vessel's insured value is closely tied to its actual market value. For this reason, the insured value can change over time as a vessel ages or as new equipment is installed. Sometimes a vessel's insured value will increase due to a rise in price of new and used vessels and vessel replacement parts. If so, a fisherman's annual insurance cost could also shift upward due to uncontrollable market factors.

In addition to understanding insured value, it is also important to know how premium rates are set. In Hawaii, as in other parts of the United States, hull insurance rating is something of an art. It is totally different from life, auto, or fire insurance rating which is based purely on statistical data. Instead, fishing vessels are rated on a case by case basis. This is because, in almost all instances, each vessel presents a unique set of risks. In determining the rate which a vessel owner will pay, the following factors are usually taken into consideration:

Vessel characteristics: age, type, materials used in construction, shipyard, mortgage owed, replacement costs, time spent at sea, weather and sea conditions in area of operation, safety equipment

Equipment characteristics: age, type, replacement costs, owned or leased, time in operation, weather and sea conditions in area of operation, safety guard installation

Crew characteristics: number, experience, time at sea, reputation, type of work, hazards to which exposed

Management characteristics: experience, reputation, references, safety record

The normal practice of insurance firms in Hawaii is to collect facts on the prospective client from various sources including marine surveyors, USCG records, other fishermen, and application forms. Attention is given to the fishing vessel's age, construction, reputation, upkeep, and scope of activities, as well as the reputation of the crew and skipper and their experience and safety records. A sample application form used to collect these data is given in the appendix section. Based on the data collected, a rate is set for each vessel individually. The person responsible for setting the rate is either a broker who acts as an adviser to a distant underwriter or a local underwriter familiar with the local fishing fleet. Sometimes rates are mutually agreed upon by a broker and underwriter working in concert.

This type of rating policy, called "judgmental rating," tends to be favorable for fishermen with new boats, clean safety records, and solid reputations. By the same token, it tends to work against fishermen who are inexperienced or careless, or who operate older vessels.

The fact that commercial fishing vessels are subject to judgmental rating accounts for the insurance industry's lack of strong interest in a vessel safety-insurance program in Hawaii. During the course of interviewing insurance representatives it became evident that the success of any program in terms of reduced losses would depend heavily on the specifics of the program and the degree of participation by fishermen. Furthermore, the key elements of a successful vessel safety program as perceived by marine insurance industry representatives would include:

1. Regular inspections for maintenance and safety (it was suggested that these inspections should be conducted by marine surveyors along with experience fishermen)
2. Workshops and educational programs covering mechanical and operational topics, as well as navigation in Hawaiian waters
3. Required licensing of commercial and charter fishing vessel skippers (this could be conducted by the USCG)

Interviewed representatives reported that in many organizations, the decision to enter into a program would have to be made by underwriters and parent company executives who are not based in Hawaii. It was also pointed out that due to prevailing inflationary pressures, vessel insurance rates would tend to increase even if a successful safety program is initiated. Hence, the net effects of the program may not be to actually reduce rates but to keep rates from rising quite so fast.

OPPORTUNITIES FOR INSURANCE COST REDUCTIONS

Hawaii-based commercial fishermen may be able to reduce their insurance cost burden in a number of ways, some of which involve a collective effort whereas others can be done on an individual basis. Each has its own set of advantages and disadvantages.

Group Insurance

One way to reduce individual premiums for vessel insurance is to purchase it as a group. Sometimes referred to as fleet insurance, group insurance is an arrangement whereby a commercial underwriter insures a group of individuals under one contract. Because the insurance is purchased in a bloc, each individual's share of the total premium is smaller than it would be if the individuals purchased separate contracts.

Most underwriters make strict requirements which members must satisfy before a group vessel insurance plan is offered. Normally the requirements are instituted to guarantee a minimal level of conformity within the group. This in turn helps stabilize risks. A sample list of possible requirements follows:

1. Individuals be members of a cooperative, trade association, or some previously existing organization before they are eligible for coverage under the group plan
2. Vessels be owner-operated
3. Skippers hold a valid USCG license
4. Vessels be documented
5. Vessels fish or operate out of the same port
6. Vessels be homogeneous in size and type and use the same kind of gear
7. Vessels be exposed to similar risks and have similar loss records

In general, a group plan will tend to benefit owners of marginal vessels who could previously obtain insurance coverage only at a high cost. Owners of vessels with clean records, sound management, efficient crews, and good equipment will already have relatively low insurance premiums. A group plan that combines these fishermen with others who are poor insurance risks will probably not result in any reduction in premium costs. Higher risk vessel owners, on the other hand, will benefit significantly from the plan but will probably also tend to drive the entire group's premiums up as accidents and losses are experienced.

It is also important to realize that there are distinct out-of-pocket costs associated with group membership. Each vessel will have to be surveyed and all underwriter requirements will have to be met. Furthermore, underwriter's requirements will have to be maintained in order for the group policy to be renewed.

Insurance Pools or Mutual Associations

In an insurance pool, or mutual insurance association as it is often called, vessel owners collectively pool their financial resources for purposes of self-insurance. Rather than purchase insurance through a commercial underwriter, vessel owners create their own insurance "company" which provides low-cost protection. Coverage can be provided at reduced costs since the association operates without a profit, has low overhead, accepts better than average risks, and enjoys certain tax advantages as a non-profit organization.

The important distinction between a group insurance arrangement and an insurance pool is that in the latter type fishermen act as their own insurers. Each member contributes to a common reserve fund out of which claims are paid. Similarly, each member shares any returns made on invested reserve funds. In this way, gains and losses accrue to each member regardless of individual safety performance.

The successful organization and operation of a mutual association depends on a variety of contributing factors. Based on the experiences of existing fishing vessel insurance pools (U.S. Department of Commerce, 1977), consideration should be given to the following guidelines:

1. There is no room in a pool for unsafe, ill-equipped, and poorly maintained vessels.
2. The best-constructed vessel is only as good a risk as the skipper and crew who operate it. Only fishermen with experience, navigation skills, and sound character should be permitted to join.
3. Owner-operated vessels are generally better risks because the owner has direct supervision and control of the vessel.
4. An experienced and stable crew is essential.
5. It is helpful if member vessels conduct similar types of fishing operations from the same port.
6. It is beneficial if a member already belongs to a trade association or cooperative and has had experience in working toward common goals.

The advantages of belonging to a mutual insurance association are numerous. One immediate advantage that contributes to insurance cost reductions is that there are no broker or agent fees to pay when acquiring coverage. Costly inspections and surveys can be eliminated by having these tasks conducted by a committee of vessel owners. Also, since each person has a stake in the business, it is expected that members will work together to maintain lower than average risks. This in turn will lower everyone's premium.

An economic advantage relating to investment of surplus reserves also exists with mutual insurance associations. As with any other insurance company, a pool must charge premiums larger than expected losses and expenses in order to build up financial reserves which are used to pay claims. When accumulated reserves build up in excess of desired or required levels, some of the money is returned to the members in the form of dividends. This reduces the actual cost of their insurance coverage somewhat.

Looking at the disadvantages of insurance pools, several problems can be identified. In Hawaii, pools are legal but must meet strict reserve requirements. Once established, a pool must be well managed to keep risks low and return on reserve investment high. This requires high-priced management expertise. Also, certain risks are associated with having all vessels in a mutual association operate in a small geographical area such as Hawaii. A severe storm could conceivably bankrupt the pool if enough vessels were lost. Aside from the geographical factor, a more practical problem is getting a large low-risk membership. Another problem is that mutual associations normally cannot offer their members full insurance protection. Such protection would require reserves well beyond the financial resources of most mutual associations.

Vessel Safety and Insurance Programs

Fishermen can provide justification for premium reductions by limiting the number of claims made to insurance companies. The driving force behind claim reduction would presumably be an increased awareness of vessel safety and accident prevention among fishermen.

At the present time, the organization with the most visible vessel safety program in Hawaii is the U.S. Coast Guard. Its program consists of (1) both required and voluntary vessel inspections, (2) testing and licensing skippers, and (3) free public classes on basic seamanship, rules of the road, general navigation, and emergency first aid. The first two activities are discussed below.

Vessel inspections

Periodic USCG inspection may be required depending on the type of fishing vessel and its service activities. If the vessel happens to be a charter boat carrying more than six passengers for hire, or greater than 65 feet in length carrying one or more passengers for hire, then regular inspections are required. Specifications for hull condition, electrical design and maintenance, machinery, fuel and engine arrangement, and ventilation must comply with USCG minimal safety requirements. Beyond maintaining general seaworthiness, a vessel in this category must also meet specific safety requirements (Table 22).

Charter boats less than 65 feet long carrying fewer than six passengers for hire are not required to undergo the inspection process. Similarly, all non-charter commercial fishing vessels are exempt from inspection and safety certification requirements. Nevertheless, these vessels are required to comply with minimal safety requirements.

Licensing

To become a licensed operator, a fisherman must meet specified USCG requirements pertaining to age, citizenship, and experience. In addition, written and physical examinations must be passed. Three types of licenses are offered. A motorboat operator's license entitles the skipper to operate vessels which weigh less than 15 gross tons and which carry fewer than six passengers. The ocean operator's license must be obtained by operators of charter boats longer than 65 feet which carry more than six persons for hire. The master uninspected vessel license is required of skippers operating commercial fishing vessels weighing greater than 200 gross tons.

Inspection and licensing requirements for commercial fishing vessels are shown in Table 23. It is noteworthy that for the bulk of Hawaii's fishing fleet these requirements are quite lax, suggesting that there may be room for some type of vessel safety program in the state.

Shopping for the Best Insurance Deal

Fishermen may find that shopping around for the best insurance deal can result in lower cost. Although the number of individuals involved with insuring Hawaii's fishing fleet is relatively small, a fair degree of price competition exists on the basis of coverages offered and quality of service.

TABLE 22. U.S. COAST GUARD SAFETY REQUIREMENTS FOR COMMERCIAL AND CHARTER FISHING VESSELS

Requirements	Commercial		Charter	
	(<16 feet)	(>16 feet)	(<6 people)	(6 to 149 people)
Life preservers (one for each person)	X	X	X	X
Buoyant apparatus (e.g., life raft)				X
Nightlight for buoyant apparatus				X
Ring buoys			X	X (Lights on ring buoy)
Fire extinguishers*	X	X	X	X
Bilge pumps				X
Proper ventilation*	X	X	X	X
Running lights	X	X	X	X
Bells		X	X	X
Flame arrestors* (gas engines)	X	X	X	X
Flares	X	X	X	X
Horns		X	X	X
42-inch height rails				X
VHF radio				X
Beep signal (EPIRB)				X (Those operating farther than 20 miles from shore)
270-foot anchorline				X
Oily discharge containers	X	X	X	X
Marine sanitation device	X	X	X	X

*Requirement does not apply to vessels with outboard motors

TABLE 23. U.S. COAST GUARD LICENSE AND INSPECTION REQUIREMENTS

Type of Operation	Licensed Operator Required	Vessel Inspection Required	Frequency of Inspection
Commercial fishing (less than 200 gross tons)	No	No	--
Commercial fishing (greater than 200 gross tons)	Yes	No	--
Charter fishing (less than 65 feet and less than 6 passengers)	Yes	No	--
Charter fishing (greater than 65 feet or more than 6 passengers)	Yes	Yes	Every 3 years

In an attempt to get the best possible coverage and service for the lowest price, the following questions should be kept in mind while shopping around:

1. What is the reputation of the broker, agent, or underwriter?
2. What is the record of the underwriter with regard to prompt, fair settlement of claims?
3. Where are the claims processed?
4. What is the frequency of required vessel surveys?
5. What losses are covered under the policy?
6. How are premiums affected by deductibles, safety equipment installation, skipper licensing or training, periodic boat repair, "lay-up" time, and insuring onboard equipment separately?

CONCLUDING REMARKS

The issue of vessel safety and insurance in Hawaii has surfaced with some degree of regularity over the past decade. Concern over high losses of lives and vessels, coupled with consternation about escalating insurance costs, has prompted debates on alternative relief measures and has even led to the establishment of the Hawaii Fishing Vessel Safety Advisory Council. As yet, these activities have yielded few tangible results in terms of either lower loss rates or lower insurance costs. This, however, is not especially surprising given the complex nature of the relationship between vessel safety and insurance, along with the large number of participants who would be affected by a full-scale program. Clearly, the issue of safety and insurance is not amenable to simple solutions. It appears that a well-conceived, adequately funded, and popular-based program is the most effective way to alter the course of safety and insurance trends in Hawaii.

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APPENDIX

Please complete all questions to the best of your knowledge and sign where indicated.

Name _____ Occupation _____
Telephone no. _____ Full time Part time
No. years employed _____

Will you operate the vessel yourself _____
Total years operating experience _____
Total years operating in local Hawaiian waters _____
Type of vessels owned _____
Type of vessels operated _____
List all vessel and auto losses for last 5 years _____
List all safety and/or navigation courses completed _____

Vessel to be used for: Pleasure Commercial
If commercial, type of operation _____
If pleasure, will fish be sold at any time _____

Is there a paid skipper _____	Any other operators _____
Name _____	Name _____
Operating experience Hawaiian waters _____	Operating experience Hawaiian waters _____
Total operating experience _____	Total operating experience _____
Type vessels operated _____	Type vessels operated _____

If vessel is pleasure are there any paid crew members Yes No
Name(s) _____

Previous insurer _____
Have you ever been cancelled or denied coverage _____

Vessel equipment includes:

<input type="checkbox"/> Two way radio	<input type="checkbox"/> Fire extinguishers No. _____
<input type="checkbox"/> EPIRB	<input type="checkbox"/> Life jackets No. _____
<input type="checkbox"/> Depth finder	<input type="checkbox"/> Life raft
<input type="checkbox"/> Bilge pumps	<input type="checkbox"/> Outboard motor _____ HP
Type _____	<input type="checkbox"/> Fishing gear _____ value
<input type="checkbox"/> Radio direction finder	<input type="checkbox"/> Stove fuel _____
<input type="checkbox"/> Other _____	

To the best of my knowledge and belief, the information set forth above is correct and a true basis on which insurance may be granted.

Date Owner's Signature

