

**THE IMPACT OF OCCUPATIONAL SAFETY AND
HEALTH ON THE MANAGEMENT OF WESTERN
AUSTRALIAN FISHERIES**

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FISHERIES MANAGEMENT REPORT NO. 1

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DISCLAIMER

The views and opinions expressed in this Fisheries Management Report are those of the consultant and are not necessarily those of Fisheries Western Australia (“**Fisheries Department**”). Neither should any views and opinions expressed in the consultant’s report be seen as coinciding with any official policy of the Fisheries Department. Similarly, the consultant’s views and opinions are not to be taken as being the future official policy of the Fisheries Department or otherwise limiting or restraining future official policy.

Any opinions which are contrary to Fisheries Department policy are published in the interests of critical debate.

Further, the Fisheries Department and the Minister for Fisheries expressly deny any liability under, or application of, the *Occupational Safety and Health Act 1984* in relation to, amongst other things, the making of subsidiary legislation and the consideration of applications concerning authorisations made under the *Fish Resources Management Act 1994*.

PUBLICATION NOTE

Fisheries Western Australia (“**Fisheries Department**”) has obtained independent legal advice as to the extent (if any) of its obligations under the *Occupational Safety and Health Act 1994* concerning the making of management plans and other legislation.

That legal advice was to the effect that the *Occupational Safety and Health Act 1994* does not apply to the Minister for Fisheries or the Fisheries Department in the making of management plans, regulations or issuing licences.

Notwithstanding this, the Fisheries Department has taken every care in the past and will continue to take care in the future that as far as practically possible, important and relevant occupational health and safety concerns are considered prior to the making of or amending legislation, and management plans in particular.

While the Fisheries Department will be taking these steps, employers and those persons to whom the *Occupational Health and Safety Act* applies, should ensure that there is compliance with that Act in respect of occupational health and safety obligations.”

EXECUTIVE SUMMARY

The WorkSafe Western Australia ("**WorkSafe**") investigation and report into the capsizing of the *Saint Maddalena* in 1992 was the first time, at least formally, that the management practices of Fisheries Western Australia ("**Fisheries Department**") in regulating the fishing industry were called into question from a safety and health perspective.

The WorkSafe investigation and report into the Cyclone Bobby tragedy in 1995, reconfirmed WorkSafe's concerns. In particular, WorkSafe called into question the propriety of regulatory arrangements that effectively constrained trawler size and engine power for the purpose of controlling the exploitation of fish stocks. Subsequent to the Bobby Report, these concerns lead to a threat of prosecution by WorkSafe on the basis that the Fisheries Department breached its duty of care as a controller of a workplace pursuant to section 22 of the *Occupational Safety and Health Act 1984* ('*OSH Act*').

Both at common law and pursuant to the *OSH Act* an employer has a primary responsibility to take reasonable care to avoid exposing his or her employees to unnecessary risks of injury. Applying this 'duty of care' to a fishing vessel, the owner/operator is expected, among other things, to ensure the vessel is seaworthy and able to safely operate in all conditions the vessel could be reasonably expected to be exposed to, ensure the crew have been instructed in the hazards of the job, provide supervision of the crew to ensure they are working safely and to provide a skipper that is competent to operate the vessel.

However, the standard of care expected of the employer will be adjusted to take into account legislative constraints on his or her ability to provide a safe work environment. For example, where the Fisheries Department prohibits mechanical net hauling devices it would be understood that it would not be reasonable to provide such a device, notwithstanding it would reduce the risk of manual handling injuries to his or her employees. Therefore, legislative constraints imposed by the Fisheries Department alter the standard of care expected of the reasonable fishing vessel owner/operator.

WorkSafe's concern in such a situation is that the Fisheries Department, through the imposition of specific rules regulating the manner in which fishing can be conducted, is potentially helping to create a work environment that is not as safe as it could be. In these types of situations it can be argued that section 22 of the *OSH Act* is relevant as the Fisheries Department has control over the workplace; in this case a fishing vessel. My view is that section 22 of the *OSH Act* does apply, however, the possibility of successful action being taken against the Fisheries Department is remote.

Notwithstanding the arguments concerning the application of section 22, there are a number of issues surrounding the application of the Fisheries Department's management strategies aimed at controlling the exploitation of fish resources that should be reconsidered, at least from a policy perspective.

The main areas of concern relate to limits on vessel size and engine power for trawlers through the application of the 375 boat unit rules, the restriction on vessel size by way of the application of the 7 and 10 rule in the Western Rock Lobster fishery, limits on boat length in relation to smaller vessels in a number of managed fisheries and restrictions imposed on the use of mechanical net hauling devices. All are aimed at controlling the exploitation of fish

stocks but, in doing so, also have a potentially negative impact on an owner/operator's ability to provide the safest workplace possible.

While the most prudent course of action would be to remove these controls, the reality is that there are a number of issues that make this difficult. However, this avenue must continue to be considered by the Fisheries Department in the long term.

The most contentious of these controls is the 375 boat unit rules that apply to the trawl fisheries. The rules provide parameters within which a replacement vessel can be built. However, at the same time the rules put a ceiling on the size and engine power of the replacement vessel.

To those advocating removal of this constraint the argument is relatively straight forward. The owner/operator has a duty to provide as safe a vessel as possible. All things being equal the larger and more powerful a vessel, the safer it is. Therefore, the rules should be removed because it acts to constrain the owner/operator from complying with his or her duty to provide as safe a workplace as possible.

By contrast, those in favour of retaining the rules argue that it only sets the parameters within which the vessel is operated. The responsibility for safe operation within those parameters ultimately rests with the owner/operator.

However, these opposing views are not mutually exclusive. A vessel built within the parameters of the rules will in most cases be a perfectly suitable vessel for Western Australian conditions. This is certainly the view of the majority of the industry.

Complicating matters is the fact that the 375 boat unit rules, as well as other restrictions imposed on boat length, are supported by the majority of the fishing industry on the basis that it is an essential mechanism for maintaining equity and efficiency among industry participants.

While there are a number of anomalies in the application of the 375 boat unit rules, including the inflexibility of the rules, vessel designers' ability to stretch the rules to gain an advantage and lack of compliance with engine power restrictions, the removal of the rules is not at present warranted.

While lifting the rules should be encouraged, this needs to be balanced against the fact that it may lead to increases in the exploitation of fish stocks, equity between industry participants will be adversely affected and by maintaining the rules the Fisheries Department assumes little risk of future litigation.

In regard to the likelihood of successful legal action being taken, there would be a number of difficult hurdles for a claimant to overcome before an argument could be maintained that would link the Fisheries Department to any particular set of circumstances. First and foremost, the actions of the vessel owner/operator and the skipper would be examined. Following on from this, attention would turn to compliance with survey requirements and, more generally, the condition of the vessel. Finally, the way in which the 375 boat unit rules were complied with by the vessel builder would be questioned.

Admittedly, I have greater concerns with the engine power restrictions than vessel size and it would be preferable to see engine power restrictions removed. Ultimately, it will be up to the Fisheries Department to show that the 375 boat unit rules are important enough to the management of the trawl fisheries to warrant it assuming the risk of future legal action, albeit that the risk is remote.

The same issues raised in relation to the limits imposed by the 375 boat unit rules apply to length restrictions on small vessels. Again it would be preferable to lift these restrictions but on balance it is not currently justifiable. While this may be so, there is still a need for ongoing review by both the Fisheries Department and industry members.

By contrast, it is feasible to lift the 7 and 10 rule in the Western Rock Lobster fishery and this should be done sooner rather than later. This would not adversely impact equity and would result only in a minimal increase in fishing pressure.

In terms of accepted safety and health standards it is the imposition of restrictions on the use of mechanical net hauling devices which is of the greatest concern. Although this restriction is considered to be a necessary tool in the management of some fisheries, this rationale does not justify denying fishers a practical and well accepted risk management measure.

Such a restriction is contrary to the principals of WorkSafe's Manual Handling Code of Practice and the *OSH Act* and Regulations more generally. The use of mechanical devices to reduce the risk of manual handling injuries is accepted across a wide variety of industries as being fundamental in providing a safer work environment.

The risk of a connection being made between the net haul restriction and a manual handling injury is much greater than with the other legislative constraints. There are no intervening events like survey and less conjecture as to the outcomes of leaving the restrictions in place.

In essence, the most prudent course of action would be to remove all of the Fisheries Department's regulatory constraints on an owner/operators ability to provide the safest possible workplace. However, in the case of each constraint this needs to be balanced against the risk of legal action, the importance of the imposition in terms of controlling exploitation of fish stocks, the maintenance of equity, the impact of other controls and any anomalies in the application of the constraint in question.

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1.0 TERMS OF REFERENCE

This report has been produced at the request of Fisheries Western Australia ("**Fisheries Department**") as a result of a fixed term consultancy by Pacific Management Systems Pty Ltd ("**Pacific**").

The consultancy's Terms of Reference were as follows:

- i) To investigate whether or not the provisions of fisheries management plans, licence conditions, Orders and Regulations impinge upon, or have the potential to impinge upon, the occupational safety and health of members of the Western Australian fishing industry; and in the event that these provisions do impinge on occupational safety and health;
 - a) to provide comment on the seriousness of the conflict between those provisions and the *Occupational Safety and Health Act 1984*.
- ii) To examine in particular whether boat replacement policies administered by the Fisheries Department impinge upon the occupational safety and health of members of the Western Australian fishing industry.
- iii) To examine and review all fisheries management plans, licence conditions, Orders and Regulations.
- iv) To provide a detailed written report of the findings.

In essence, the Terms of Reference require consideration of the interaction and possible conflict between the principal piece of legislation governing safety and health of employees in Western Australian workplaces, the *Occupational Safety and Health Act 1984* ('*OSH Act*'), and the *Fish Resources Management Act 1994* ('*FRM Act*') being the principal source of legislation in respect of the management of Western Australia's fish resources.

The Terms of Reference acknowledge, in particular, the Fisheries Department's concern with regard to the application of its boat replacement policies. While being highlighted as a source of potential conflict, there is the additional need to consider all of the management mechanisms available to the Fisheries Department under the *FRM Act*. The most influential of these are the various legislated management plans, however, licence conditions, Orders and the Fish Resources Management Regulations 1995 ('*Regulations*') also play a major role in the management of the State's fish resources.

2.0 METHODOLOGY

In order to produce this report interviews were conducted over a number of months with officers at all levels of the Fisheries Department, members of the Western Australian fishing industry, boat builders, designers and naval architects, the Western Australian Fishing Industry Council ("**WAFIC**"), the Western Australian Department of Transport ("**Department of Transport**") and officers of WorkSafe Western Australia ("**WorkSafe**").

A total of 37 persons were interviewed concerning particular issues that arose from the Terms of Reference. A list of all parties interviewed is attached to this report as **Annexure A**.

In addition, the following legislation and applicable subsidiary legislation was reviewed for the purpose of compiling this report:

Fish Resources Management Act 1994

- Fish Resources Management Regulations 1995

Fisheries Adjustment Scheme Act 1987

Occupational Safety and Health Act 1984

- Occupational Safety and Health Regulations 1996

Western Australian Marine Act 1982

- WA Marine (Surveys and Certificates of Survey) Regulations 1983
- WA Marine (Construction, Stability and Engineering) Regulations 1983
- WA Marine (Certificates of Competency and Safety Manning) Regulations 1983
- WA Marine (Life Saving Appliances, Fire Appliances and Miscellaneous Equipment) Regulations 1983
- Uniform Shipping Laws Code

Interpretation Act 1984

Case law covering areas including the application of the *OSH Act*, negligence, contract of employment and occupiers' liability was also considered as well as legal opinion, safety and health research papers, fisheries management research papers and Fisheries Department policy statements.

The information gained from the above sources was applied to the wide range of fisheries in Western Australia. Particular attention was given to the State's numerous managed fisheries and, more generally, the impact of applicable licence conditions, Orders and Regulations in force was considered.

3.0 BACKGROUND

Concerns with regard to the possible conflict between the *OSH Act* and the *FRM Act* appear to have been first raised, at least formally, in the WorkSafe investigation and report into the capsizing of the *Saint Maddalena* in 1992 ("**Saint Maddalena Report**").

Prior to the Saint Maddalena Report, it seems to have been universally accepted that the responsibility for providing a safe fishing vessel and associated operations rested exclusively with the owners and operators of those vessels. The impact of acts or omissions by statutory authorities such as the Department of Transport or the Fisheries Department was not considered to be an issue.

3.1 Saint Maddalena Investigation

The capsizing of the *Saint Maddalena*, 13 nautical miles south-west of Carnarvon on 6 June 1992, resulted in the deaths of the Skipper of the vessel and four crew members.

Initially, the Department of Transport (Marine and Harbours) investigated the incident. However, at the request of the Department of Transport, WorkSafe was brought in to consider a number of safety and health issues. The resulting report, which was compiled by WorkSafe's Chief Inspector, Robert Elkington, focused on the safe work practices and conditions on the *Saint Maddalena*, in particular, as well as the Shark Bay trawling fleet more generally.

The report did not provide detailed consideration of the events that lead to the capsizing of the *Saint Maddalena*. However, it is understood that the capsizing was caused by a combination of factors including a failure to position the vessel so to ensure maximum stability and the overloading of the vessel with scallops, which contributed to stability problems.

The major issues covered in the Saint Maddalena Report related to concerns over the suitability of accommodation, hours of work, training of crew, use and abuse of drugs and alcohol, all well documented problems in the commercial fishing industry. In addition, the Saint Maddalena Report raised a number of concerns over the impact of the *Fisheries Act 1905*, the legislation that preceded the *FRM Act*.

There is no suggestion in the main body of the Report that the Fisheries Department was in any way connected with the capsizing of the vessel. However, in the conclusion to the Report a connection was made between safety and health in the fishing industry and the Fisheries Department.

The Saint Maddalena Report concluded by stating the following:

"The inquiry revealed that the accommodation, washing facilities, hours of work, training and use/abuse of drugs and alcohol are either substandard or inadequate for an industry that operates in a planned and controlled manner for fishing. The controls placed on the fleet have a very big influence on the health and safety of everyone involved."

With regard to the possible impact of the Fisheries Department's regulatory regime the Saint Maddalena Report raised specific concerns over the Shark Bay Scallop Limited Entry Fishery Notice 1990, which was the primary management mechanism under the former *Fisheries Act 1905*. The Notice, which is effectively the current Shark Bay Scallop Management Plan under the *FRM Act*, drew the following comment:

"The Notice covers a number of very important issues, however because there is a method of calculating vessel size by the use of a system called Hull Unit Entitlements there is unnecessary ruling on vessel safety. This comes about because with the methodology used plus the sections on Boat Replacement, Boat Modification and Engine Seals the owners consider that they have to compromise safety for boat size. The owners have stated that if they could have bigger vessels they could dedicate more space to crew quarters and better designed working areas."

It is important that discussions are held between the Fisheries Department, Department of Transport and WorkSafe Western Australia to ensure a simplified managed legislative enforcement policy is put in place for the Fishing Industry.

Currently it could be said that crews' welfare is being compromised through outmoded pieces of legislation."

In the conclusion to the Saint Maddalena Report the issue was taken further:

"The rules governing the Scallop fleet are also, to a degree, causing concerns in some quarters, in relation to the limitations placed upon the vessels themselves. If rules are going to govern a particular industry or part thereof, then the implications on personal safety and welfare must be taken into account."

The following recommendations set out in the Saint Maddalena Report further highlighted these concerns:

- i) The appropriate authorities review legislative requirements to ensure the health and safety of trawler crews are not adversely affected by the regulatory requirements.*

The Shark Bay Scallop Limited Entry Fishery Notice 1990, under the Fisheries Act 1905, has highlighted the involvement of regulatory authorities having rules that affect personal health and safety.

- ii) *The regulatory authority review current requirements to ensure that a minimum standard is provided for all vessels, where people are expected to spend lengthy periods of time at sea.*

The accommodation and welfare facilities aboard trawlers left a lot to be desired. The facilities that are provided create stresses that are unacceptable in today's expectations in relation to productivity and efficiency.

The report by WorkSafe into the capsizing of the *Saint Maddalena* appears to be the first time that a connection had been made between the management of a fishery through a Limited Entry Fishery Notice and occupational health and safety of members in the fishing industry.

3.2 Cyclone Bobby Investigation

On 24 February 1995, the fishing vessels *Harmony* and *Lady Pamela* sank during Tropical Cyclone Bobby. The loss of the vessels resulted in the deaths of seven crew members and led to further scrutiny of the possible conflict between the management of fisheries by the Fisheries Department and the occupational safety and health of members of the fishing industry.

As with the capsizing of the *Saint Maddalena*, WorkSafe investigated and reported on the events and loss of life during Tropical Cyclone Bobby ("**Bobby Report**").

The Bobby Report, which was also compiled by WorkSafe's Chief Inspector, Robert Elkington, outlined and discussed issues relating directly to the vessels *Lady Pamela* and *Harmony* as well as to two other vessels, the *Lisa D*, which rode out the cyclone, and the *Advancer* which ran aground on the rock groyne at Onslow. The Bobby Report considered the failure of these four vessels to reach the safe anchorage of Beadon Creek and whether or not they had adequately planned for a cyclone situation. It should be noted that the rest of the fleet operating in the area was able to reach a safe anchorage or harbour.

In addition, the Bobby Report also considered related matters including meteorology reports and methods, management of Beadon Creek, safe anchorages, safety management, competencies of crew and importantly for the purposes to this report, methods used to 'handicap' fishing vessels.

In comparison to the *Saint Maddalena* Report, the Bobby Report provides a less detailed view of the standard of safety practices and fishing vessel

conditions across the industry. The Bobby Report was confined to the standard of safety management practices in a cyclone situation and the control, operation and maintenance of the Beadon Creek anchorage.

In focusing on those areas both the Department of Transport and the Fisheries Department were criticised. In the conclusion to the Bobby Report, legislative constraints imposed by the Fisheries Department were again discussed:

"Although not discussed elsewhere, if "fishing effort" is to be managed effectively by the Fisheries Department then vessel integrity should not be effected to the point where the safety of crews is compromised. An example of this is where vessel length and engine horsepower form part of the equation for handicapping "effort" when issuing certain licences.

I was informed, not only on this occasion but during previous inquiries, that engine horsepower reduction was a system of handicapping that is used Australia wide. I believe that just because a system is used across the country does not necessarily make it right in Western Australia. I am sure with the foresight and consultation, the Western Australian fishing industry can and will achieve world best practice for safety."

The above comment relates directly to the limitations placed on vessels in a number of fisheries through the application of the Fisheries Department's boat replacement policy. The boat replacement policy and other more specific rules constraining boat size and engine power throughout the Western Australian fisheries are the major source of conflict with accepted occupational safety and health principles. This issue is investigated in greater detail in 7.0.

One of the recommendations of the Bobby Report was that the Fisheries Department:

"... review Orders and Legislative requirements to ensure safety and health of trawler crews are not adversely affected by the regulatory requirements."

It was acknowledged that the same recommendation was made in the Saint Maddalena Report. Again the issues of boat size restrictions, crew size and alcohol on vessels were noted and new issues relating to the carting of catch, compliance to survey requirements and the reduction of crew size to allow land based operations were flagged as important areas to be addressed by both the Fisheries Department and the Department of Transport.

Subsequent to the Bobby Report, WorkSafe threatened to prosecute both the Department of Transport and the Fisheries Department. While no action has been taken, specific consideration is given to the basis of the threatened prosecution at 4.4.

The Bobby Report put the Fisheries Department on notice that it was not immune (at least in WorkSafe's opinion) from prosecution under the OSH Act.

The Bobby Report and the general concerns of WorkSafe, have also provided some members of the fishing industry with the ammunition to attack a number of the Fisheries Department's fisheries management practices. The politicising of these issues has tended to complicate matters and has led to a perception on the part of both the Fisheries Department and the majority of the commercial fishing industry that safety is being used merely as an excuse to push agendas relating to efficiency and equity in the industry.

No doubt a number of parties who have played the 'safety card' are not genuinely concerned about improving safety in the commercial fishing industry. Notwithstanding that view, it is clear that a number of specific issues raised by both WorkSafe and members of the fishing industry, as they relate to the Fisheries Department's role in the regulation and management of the State's fish resources, do have the potential to adversely affect the safety and health of a significant number of members of the industry.

Before looking at some of the more particular areas of concern, I will address the *OSH Act* and its application to both the Fisheries Department and the commercial fishing industry generally.

4.0 OCCUPATIONAL SAFETY AND HEALTH ACT 1984

With the exception of the mining industry and Commonwealth workplaces, safety and health in Western Australian workplaces is regulated by the *Occupational Safety and Health Act 1984*.

The objects of the *OSH Act*, which are set out in section 5, are:

- to promote and secure the safety and health of persons at work;
- to protect persons at work against hazards;
- to assist in securing safe and hygienic work environments;
- to reduce, eliminate and control the hazards to which persons are exposed at work;
- to foster co-operation and consultation between, and to provide for the participation of, employers and employees and associations representing employers and employees in the formulation and implementation of safety and health standards to current levels of technical knowledge and development;
- to provide for formulation of policies and for the coordination of the administration of laws relating to occupational safety and health; and
- to promote education and community awareness on matters relating to occupational safety and health.

The scope of the *OSH Act* is very wide. The *OSH Act* binds the Crown in right of the State and, therefore, applies to the Fisheries Department (section 4). Particular sections extend coverage to parties outside the contractual relationship of employer and employee. Those other parties include:

- self-employed persons;
- persons in control of workplaces;
- suppliers, manufacturers and importers of plant and substances; and
- persons who design and construct buildings and/or structures.

The 'workplace' is also broadly defined to mean:

"a place, whether or not in an aircraft, ship, vehicle, building, or other structure, where employees or self-employed persons work or are likely to be in the course of their work."

Therefore, fishing vessels operating out of Western Australian ports are covered by the operation of the *OSH Act*.

In terms of defining responsibilities under the *OSH Act*, the duties of care of the employer and employees, as well as a number of other parties, are critical. The notion of a 'duty of care' as it relates to the contract of employment between the employer and employee, is derived from the common law of employment.

4.1 Common Law of Employment

At common law, employers have considerable responsibilities for the safety of their employees. These responsibilities stem from the circumstances of the employment relationship in that the employer provides the premises, plant and equipment, the employee is bound by the directions the employer gives and the risk of injury or harm to the employee can be determined by the employer through the way in which the work is organised. The employers' responsibilities are all the heavier because of the degree of control the employer has over the employee.

The duty of the employer in the broadest respect was stated by Dixon CJ and Kitto J in *Hamilton v. Nuroof (WA) Pty Ltd (1956) CLR 18* at p 25. In that case the duty of care owed by an employer to his or her employee was summarised as that:

"of a reasonably prudent employer to take reasonable care to avoid exposing the employees to unnecessary risks of injury."

Where a particular work situation holds more dangers than others, a higher standard of care is required. This is the case in the fishing industry because of the hazardous nature of the work performed.

Identifying the elements of the duty of care will in each case be a matter of evaluating the circumstances. Those factors to be considered include the skills, expertise and disabilities of the employee, tasks performed and the nature of the employment.

Although there is one general duty owed by the employer, the duty is often separated into a threefold division:

1. duty to provide safe premises;
2. duty to provide safe plant and equipment; and
3. duty to provide safe systems of work.

In the context of a commercial fishing vessel it is the duty of the owner/operator to ensure the vessel is seaworthy, all plant and equipment is

safe when used and the catching and processing of the fish is arranged in such a way that employees are not unnecessarily exposed to hazards.

In order to determine whether the duty has been breached, the courts look to what the objective 'reasonable employer' would have done in the circumstances. This necessitates the court determining what standard of care a reasonable employer would adopt in the circumstances.

The standard of care expected of the reasonable fishing vessel owner/operator reflects community standards. In terms of many of the issues investigated in this report the expected standard of care is important and is addressed in further detail at 6.0.

4.2 Duties of Care - Employer

The common law duties of care were directly incorporated into the *OSH Act* when it was introduced in 1984. In terms of defining responsibilities, it is the duties of the employer that are the most crucial. Section 19(1) of the *OSH Act* provides:

19 Duties of employers

- (1) *An employer shall, so far as is practicable, provide and maintain a working environment in which his employees are not exposed to hazards and in particular, but without limiting the generality of the foregoing, an employer shall-*
 - (a) *provide and maintain workplaces, plant, and systems of work such that, so far as is practicable, his employees are not exposed to hazards;*
 - (b) *provide such information, instruction, and training to, and supervision of, his employees as is necessary to enable them to perform their work in such a manner that they are not exposed to hazards;*
 - (c) *consult and cooperate with safety and health representatives, if any, and other employees at his workplace, regarding occupational safety and health at the workplace;*
 - (d) *where it is not practicable to avoid the presence of hazards at the workplace, provide his employees with, or otherwise provide for his employees to have, such adequate personal protective clothing and equipment as is practicable to protect them against those hazards, without any cost to the employees; and*

- (e) *make arrangements for ensuring, so far as is practicable, that*
-
(i) the use, cleaning, maintenance, transportation and disposal of plant; and
(ii) the use, handling, processing, storage, transportation and disposal of substances,
at the workplace is carried out in a manner such that his employees are not exposed to hazards.

As stated earlier, the general duty that rests with the employer to provide a working environment in which employees are not exposed to hazards is a legislative re-statement of the employer's duty of care at common law. The specific duties set out in section 19(1)(a)-(e) provide specific duties and clarify the generality of the obligation to provide an environment in which employees are not exposed to hazards.

Applying section 19 of the *OSH Act* to, for example, an owner/fisher with one employee operating in a managed fishery, the following would be expected:

- the vessel is seaworthy, fitted with all necessary safety equipment and is able to operate safely in all conditions that the vessel could be reasonably expected to be exposed to;
- the number of crew and/or persons on board do not exceed the safe capacity of the vessel;
- the vessel's engines and other necessary equipment are regularly maintained to ensure they are in good working order;
- the winch is guarded and there is, as a minimum, an agreed procedure for its safe operation;
- the employee has been instructed in the hazards of the operation and has received training to ensure he can safely carry out the tasks involved;
- if the employee is exposed to the sun in the course of fishing, sunscreen and a hat, for example, is made available and directions given in regard to sun protection and the hazards of UV exposure;
- the manner in which the nets are pulled and the processing of the catch does not unnecessarily expose the employee to hazards (eg. occupational over-use syndrome);
- the owner/fisher is competent to safely handle the vessel in all conditions that the vessel could be reasonably expected to be exposed to; and
- where the owner/fisher becomes aware that conditions the vessel is exposed to are beyond the safe operation of the vessel, fishing is

stopped and all reasonable efforts are made to move the vessel to safe anchorage or port.

The broadly stated duties in section 19 are limited, however, to the extent of what is 'practicable' in the circumstances. The term 'practicable' is defined in section 3(1) to mean:

reasonably practicable having regard, where the context permits to -

- a) *the severity of any potential injury or harm to health that may be involved, and the degree of risk of it occurring; and*
- b) *the state of knowledge about -*
 - i) *the injury or harm to health referred to in paragraph a);*
 - ii) *the risk of that injury or harm to health occurring; and*
 - iii) *means of removing or mitigating the potential injury or harm to health; and*
- c) *the availability, suitability, and cost of the means referred to in paragraph b) iii).*

The 'practicability' test is critical because it is used to establish the standard of care required by an employer in any given situation. At common law, the factors that determine the standard of care are sometimes referred to as the negligence calculus. Factors like the seriousness of risk and practicability of precautions, help define what steps were necessary to be taken by the objective 'reasonable employer' to eliminate reasonably foreseeable and significant risks of injury or harm to the health of his or her employees.

4.3 Duties of Care - Employees

In order for the employer to comply with the duties of care set out in the OSH Act, it is essential that the duties of the employee are also defined. This makes sense as the contract of employment relies on acts by both parties to make the relationship function effectively.

The employee's duties are set out in section 20 of the OSH Act and provide as follows:

20 Duties of employees

- (1) *An employee shall take reasonable care -*
 - (a) *to ensure his own safety and health at work; and*

- (b) *to avoid adversely affecting the safety or health of any other person through any act or omission at work.*
- (2) *Without limiting the generality of subsection (1), an employee contravenes that subsection if he -*
 - (a) *fails to comply, so far as he is reasonably able, with instructions given by his employer for his own safety or health or for the safety or health of other persons;*
 - (b) *fails to use such protective clothing and equipment as is provided, or provided for, by his employer as mentioned in section 19 (1) (d) in a manner in which he has been properly instructed to use it;*
 - (c) *misuses or damages any equipment provided in the interests of safety or health ; or*
 - (d) *fails to report forthwith to his employer -*
 - i) *any situation at the workplace that he has reason to believe could constitute a hazard to any person and he cannot himself correct; or*
 - ii) *any injury or harm to health of which he is aware that arises in the course of, or in connection with, his work.*
- (3) *An employee shall cooperate with his employer in the carrying out by his employer of the obligations imposed on him under this Act.*

The duties of the employee complement those of the employer in that the employee is required to care for his or her own safety and health as well as the safety and health of fellow employees. The requirement to comply with instructions regarding safety and health, use personal protective equipment after proper instruction has been given by the employer and not to misuse safety equipment are all terms that would, in any event, be implied into the contract of employment. The duty to report hazards and injuries and to cooperate generally with the employer in respect to the *OSH Act*, are all necessary elements to ensure the employer is able to comply with its duties of care as set out in section 19.

Other parties also have specific duties set out in the *OSH Act*. These parties include self-employed persons (section 21), designers, manufacturers, importers or suppliers of plant (section 23(1)), persons who install or erect plant (section 23(2)), persons who manufacture, import or supply substances (section 23(3)) and persons who control workplaces (section 22).

The duties of self-employed persons have an impact on the commercial fishing industry and warrant brief comment. Section 21

provides self-employed persons are not only responsible for ensuring their own safety and health but their responsibilities extend, so far as practicable, to ensuring they do not adversely affect the safety and health of persons with whom they may be working.

Section 21 extends the coverage of the *OSH Act* even to those fishers that may work alone. It also covers those situations where owner/operators engage crew on a joint venture or similar arrangement which ties income to a portion of the vessels catch. Even where the crew member is considered to be a contractor the *OSH Act* deems the principal will be responsible for the safety and health of the contractor in relation to matters over which the principal has control (Section 19(4)). Where the principal controls the contractor, the principal has the same obligations as if the principal was the employer and the contractor the employee.

The extended coverage of the *OSH Act* is based on the common law. Notwithstanding contractor, partnership and joint venture arrangements, the courts will often look behind the apparent arrangement and deem the crew member to be an employee. In *Switalski v. Sarunic Bros Pty Ltd* (1984) Aust. Torts Reports 80-525, a joint-venture arrangement between a vessel operator and a crew member was held to be a contract of employment despite the joint-venture agreement because of the extent of day-to-day control the vessel operator had over the crew members work.

However, in terms of the issues outlined in the Terms of Reference, it is the duty of those who control workplaces that has caused concern for the Fisheries Department as it is that section of the *OSH Act* that has been used as the basis of threatened prosecution by WorkSafe. With the importance of section 22 in mind, that provision will now be examined in some detail.

4.4 Duties of Persons Who Control Workplaces - A Basis for Prosecution?

Section 22 (1) of the *OSH Act* provides:

- (1) *A person who has, to any extent, control of*
 - (a) *a workplace where persons who are not employees of that person work or are likely to be in the course of their work; or*
 - (b) *the means of access to and egress from a workplace,*

shall take such measures as are practicable to ensure that the workplace or the means of access to or egress from the workplace, as the case may be, are such that persons who are at the workplace or

use the means of access to and egress from the workplace are not exposed to hazards.

The scope of section 22(1) is extended by section 22(2) to cover a person who by virtue of a contractual or lease arrangement has an obligation of any extent in relation to the maintenance or repair of a workplace or the means of access to and egress from the workplace.

On the face of it section 22 has very wide coverage. The interpretation of the section is made more difficult by the fact that it has not yet been subject of detailed interpretation by the courts.

The application of the section is also subject to different opinions at WorkSafe. In discussions with a number of WorkSafe officers, different views emerged as to what constituted control over a workplace for the purpose of the section.

The most liberal interpretation of section 22 was that of Chief Inspector, Robert Elkington, the WorkSafe Inspector who had compiled the Saint Maddalena and Bobby Reports and, subsequent to the Bobby Report, threatened to prosecute both the Department of Transport and the Fisheries Department on the basis of a breach of section 22.

As I understand it, Mr Elkington is of the view that the 'workplace' for the purposes of section 22 is not limited to a fishing vessel but extends to the geographical locations in which the vessel may operate. Where a third party controls some part of the geographical location, liability pursuant to the section attaches.

Applying that view to the Fisheries Department and its control of the States fisheries, Mr Elkington's argument is as follows:

1. Primary responsibility for the provision of a safe work environment on a fishing vessel rests with the owner/operator of the vessel as set out in the employer's duties of care (section 19 of the *OSH Act*).
2. However, the Fisheries Department by establishing managed fisheries (through a management plan), sets parameters in which the employer (owner/operator) must operate the vessel.
3. By setting those parameters by way of a managed fishery, the Fisheries Department creates a workplace in which the vessel operates.
4. Where the Fisheries Department uses controls (like the restrictions on the size of vessels operating in a fishery) that have a potentially negative impact on the provision of a safe working environment, the imposition of those controls brings the Department within the scope of section 22.

In Mr Elkington's view, any measure taken by the Fisheries Department that adversely affects the vessel owner/operators' ability to comply with its duty to provide a safe work environment will attract liability under section 22 of the OSH Act. Where a situation arises that leads to an employee being injured or harmed and it can be demonstrated that the risk of that injury or harm may have been reduced in the absence of controls imposed by the Fisheries Department on the fishery in question then the Fisheries Department would have breached its duty as a controller of a workplace.

An alternative view expressed by some WorkSafe Inspectors is that the 'workplace' is limited to the fishing vessel and that the control required to trigger obligations under section 22 must be control over the physical environment of the fishing vessel.

The notion of 'control' in section 22 finds its legal basis in the law of occupier's liability. Control becomes important in occupier's liability because it helps define whether or not a person is in occupation of premises. It has been said that the test of control in occupier's liability is whether a person has some control, any control, over premises such that he can prevent injury to visitors. However, control in that context is not restricted to physical control and may apply even though the person does not have physical control over the premises.

In occupier's liability the notion of control extends only so far as the premises. Applying this view to section 22 of the *OSH Act* would equate the premises with a 'workplace' but would not extend the definition of 'workplace' to cover the likes of the managed fishery. As a consequence, the degree of control exercised by the Fisheries Department would need to extend to actual control of fishing boats rather than the management of a fishery through the application of a management plan. However, management plans can and are used to control the physical environment of a fishing vessel.

It is my view that the definition of workplace does not extend to the managed fishery. However, the workplace for the purpose of section 22 is the fishing vessel and the Fisheries Department does have the ability to control the physical environment of the fishing vessel through the application of its various management mechanisms.

Whether the workplace is defined as the managed fishery or the fishing vessel there is a real chance that direct or indirect impositions on vessel owner/operators by the Fisheries Department through the likes of management plans will attract liability under section 22 of the *OSH Act*.

5.0 FISH RESOURCES MANAGEMENT ACT 1994 AND SUBSIDIARY LEGISLATION

5.1 Regulatory Regime

The *FRM Act* is the principal piece of legislation controlling fish resources in Western Australia.

The primary object of the *FRM Act* is to conserve, develop and share the fish resources of Western Australia for the benefit of present and future generations (section 3). The objects of the *FRM Act* are further particularised in section 3(2) and include the following:

- to conserve fish and protect their environment;
- to ensure the exploitation of fish resources is carried out in a sustainable manner;
- to enable the management of fishing, aquaculture and associated industries and eco-tourism;
- to foster the development of commercial and recreational fishing and aquaculture;
- to achieve the optimum economic, social and other benefits from the use of fish resources;
- to enable the allocation of fish resources between users of those resources;
- to provide for the control of foreign interests in fishing, aquaculture and associated industries; and
- to enable the management of fish habitat protection areas and the Abrolhos Islands reserve.

The *FRM Act* has very broad coverage. It extends from the management of commercial and recreational fishing, fish processing and aquaculture to the protection of fish habitat areas and enforcement.

Notwithstanding the *FRM Act's* wide coverage, there are no provisions specifically addressing safety and health. To date the safety and health of those persons participating in the industry has only arisen as a secondary issue associated with the exercise of power in accordance with the *FRM Act's* primary objects.

While the preservation of fish stocks is, and continues to be, the Fisheries Department's primary concern, safety and health issues have certainly been considered in the past.

The primary management mechanisms used under the *FRM Act* are the various management plans established by Part 6. There are currently 29 management plans ranging from the South Coast to the Kimberley and covering species as diverse as abalone and barramundi.

Prior to the introduction of the *FRM Act* in 1994, these managed areas were controlled by way of Limited Entry Fishery Notices. Upon transition from the *Fisheries Act 1905*, all limited entry fisheries became managed fisheries by way of management plans.

Through the legislative mechanisms of the management plan the Fisheries Department can control the exploitation of fish stocks by, for example, specifying the quantity of fish taken, quantity of fishing gear to be used, number of boats in the managed fishery, the number of operators, fishing times and the parameters within which replacement vessels must be built.

Further control is gained through managed fishery licences which are, as a general rule, renewable on an annual basis. These licences can be related directly to the parameters set by the particular management plan. A person's entitlement under the licence can be limited by reference to all or any of the following:

- quantity of fish taken;
- quantity of fishing gear that may be used or carried;
- a boat, vehicle or aircraft, or a number of boats, vehicles or aircraft, or a class or length of boat, vehicle or aircraft that may be used;
- a number of persons that may operate;
- an area of lands or waters;
- a period of time; and
- any other factors.

Special conditions can also be imposed on the licence either by way of the applicable management plan or at the direction of the Executive Director of the Fisheries Department.

Apart from the managed fishery regime, fishing operations are controlled through licences under the Regulations. These licences, which include fishing boat licences and commercial fishing licences, do not allow a person to operate in a managed fishery.

Pursuant to Part II of the Regulations, all boats used in connection with commercial fishing must be licensed with the Fisheries Department. Before the licence is granted, the Executive director must be satisfied that, among other things, a Certificate of Survey has been issued in accordance with the WA Marine (Surveys and Certificates of Survey) Regulations 1983.

In addition to the boat, a person who engages in commercial fishing must hold a commercial fishing licence (regulation 121).

The Fisheries Department can gain further control over operators by the imposition of conditions on the types of licences described above. The power to grant conditions is not limited to specified issues and is only constrained through the proper exercise of power under the Act. Conditions imposed *ultra vires* would have no effect.

Although all of the licences under the Regulations are renewable annually there is a continuing expectation that they will be renewed as of right.

In summary, through the *FRM Act* the Fisheries Department has the ability to regulate commercial fishing operations. The forms of regulation are varied but can be through management plans or by way of the imposition of conditions on boat licences and commercial fishing licences.

5.2 Controls on Exploitation

The various regulatory mechanisms described above are used by the Fisheries Department to manage the exploitation rate of fish stocks. The specific types of controls are classified as input (effort control) and output (quota) control.

Input control is the most widely used form of control and includes such things as limits on vessel numbers, fishing seasons, gear specifications and use, vessel size and capacity. These are effectively administrative impositions on the fisher's ability to exploit the fish stocks through the control of fishing effort.

Output controls, as the name suggests, relate to how much of the resource can be taken. The common form of output control is the individual quota (as used in the commercial abalone industry). However, a total allowable catch can also be used which allows competition by fishers within a total set limit.

The use of both input and output controls is necessary for the effective management of the States fish resources. By using such controls the Fisheries Department is carrying out its role in accordance with the objectives of the *FRM Act*.

Especially in the case of input controls the Fisheries Department has, over a number of years, developed what it considers to be a suitable mix for the requirements of each particular fishery.

The scallop fishery, for example, uses a mix of input controls to ensure sustainability of the resource. These controls include gear restrictions,

defined limits on fishing time, limits on boat size and installed engine power and crew number limits.

While arguments may prevail over the suitable mix of input controls or whether output controls should be used more widely, the implications of those controls on the safety and health of industry participants must still be considered.

Depending on the circumstances, a control measure may have what can be considered either a negative or, alternatively, a positive impact on safety. For example, setting a maximum limit on the amount of net a trawler may use is primarily aimed at reducing fishing effort. At the same time such a restriction places a limit in terms of the safe operation of the vessel. This positive administrative imposition (in safety terms) on net size ensures that a trawler will not overload itself with nets and still allows the skipper of the vessel to determine what he considers to be a safe size net, albeit to a maximum allowable level. Any forced reductions in net size only act to make those vessels safer.

It would be a negative safety imposition if the Fisheries Department deemed through its management plans a minimum net size where that minimum limit may affect the safe operation of vessels. For example, deeming all vessels in a fishing fleet can only use a net of 'X' size or greater when the use of that size net may not be safe for the fleet's smaller vessels. The operators of the smaller vessels would have to decide whether to compromise the safety of the crew or purchase a larger boat to tow the larger net. The risk is that the later option may not be economically viable and operators may choose to compromise safety in breach of their duties of care to their employees.

The difference between the two scenarios is that the positive administrative impositions promote safety while negative administrative impositions have the potential to impede an operator's ability to provide a safe work environment.

The input control that has by far and away the greatest safety implications are the limits on boat size and in the trawl fisheries, boat size and installed engine power. That control finds its form in the various manifestations of the boat replacement policy. It is a negative control in terms of safety because it sets limits on vessel size and configuration. The setting of minimum vessel size based on safe operation of a fishery would almost without exception be a positive safety imposition.

Before looking at each of the Fisheries Department administrative controls that have a potential impact on safety, the legal concept of the standard of care will be explored in terms of negative constraints.

6.0 STANDARD OF CARE - IMPACT OF FISHERIES CONTROLS

As detailed earlier when examining the duty of a vessel operator/owner at both common law and under section 19 of the *OSH Act* to provide a safe work environment, the standard of care expected is an important consideration when deciding if there has been a breach of the duty. In both cases the standard of care expected is that of the objective "reasonable employer."

In the case of section 19 of the *OSH Act* the general duty to provide a safe workplace is limited by what is 'practicable' for the employer to do in the circumstances. The definition of practicable as set out in section 3 of the *OSH Act* (see 4.2) restates the factors that are considered at common law when determining what standard of care is to be applied in the relevant circumstances.

When considering what is practicable for the purpose of the *OSH Act* (or the standard of care) there are a number of factors to consider. Firstly, practicability is considered in an objective way in that the standard is what is 'reasonably practicable.' Following on from that, the following should be considered in deciding what is reasonably practicable:

- the severity of any potential injury or harm that may be involved;
- the degree of risk (probability) of the injury or harm occurring;
- the objective employer's state of knowledge about any possible injury or harm, and the degree of risk (probability) of injury or harm to health occurring;
- the availability, suitability and cost of removing or mitigating the potential injury or harm to health; and
- the objective employer's knowledge about the available means of removing or mitigating the potential injury or harm.

The same factors are considered at common law. Simply stated, the question to be asked in light of any injury would be whether the reasonable employer would have taken steps to remove or eliminate the risk. That will depend on how serious the risk is, how likely it is that the risk may lead to an injury and what the state of knowledge is at the time about the risk, the likelihood injury will occur and the available measures to remove or reduce the risk to an acceptable level.

The expected standard of care changes over time as community expectations develop as to what is reasonable and as the state of knowledge increases about the nature of the hazard and the means of controlling the risks associated with the hazard.

For example, prior to the capsizing of the *Saint Maddalena* in 1992, the acceptable accommodation conditions of scallop vessels, were, by current standards, fairly primitive. The practice of "hot bunking" was widespread. These same conditions

would not now be acceptable and a vessel operating in the same manner as the *Saint Maddalena* would not be complying with the current standard of care in regard to working conditions. The change to the standard of care occurred because of changes in both community standards and the general state of knowledge about the potential risk.

The knowledge gained from the *Saint Maddalena* incident led to a re-assessment of what were considered to be acceptable working conditions. This in turn led to changes to Department of Transport's standards including the banning of hot bunking, the limiting of crew numbers and the imposition of minimum specifications for bunks, toilets and communal areas.

Constraints imposed by the Fisheries Department on owner/operators in the commercial fishing industry with a potentially negative impact on safety are a legislative impediment to the employers ability to keep up with the ever changing standard of care.

When considering whether the actions of an employer were in breach of the duty of care, consideration would be given to the limitations placed on him by the Fisheries Department through its various legislative mechanisms. The objective standard of care would be similarly adjusted as it would be unreasonable to expect a fishing operator to ignore the legal requirements of the *FRM Act*. For example, the use of a mechanical net hauling device may reduce the risk of occupational over-use syndrome but in many fisheries the use of such a device would be in breach of a the applicable management plan. The expected standard of care would be adjusted accordingly to account for this legislative constraint on the employer's ability to reduce the risk of injury to his or her employees.

Therefore, the *FRM Act* helps define the objective standard of care and sets the parameters in which the fishing operator acts as an employer.

Where a situation arose where a fishing operator's employee sustained an injury and it could be shown that the injury was connected to one of the Fisheries Department's negative safety constraints, the fishing operator would more than likely be able to demonstrate he was complying with the expected standard of care and had satisfied the test of practicability for the purposes of section 19 of the *OSH Act*.

While in many cases what is practicable will be determined with reference to Fisheries Department legislative constraints, as a matter of policy all legislative constraints with a potentially negative impact on the fishing operator's ability to provide the safest possible workplace should be re-considered by the Fisheries Department and, where possible, they should be removed.

It is accepted that the removal of these input controls is not without difficulty in terms of the Fisheries Department's resource management strategies. In each case the Fisheries Department will need to consider how highly it values the control measure and balance that against the potential impact on safety and health of the members of the industry.

There will also be some risk, however remote, that if input controls that have a potentially negative impact on safety are not removed, the Fisheries Department could attract liability under section 22 of the *OSH Act*.

With that limitation in mind, I will now turn to each of the input controls administered by the Fisheries Department that have a potentially negative impact on safety. The most important of these is the boat replacement policy but other less critical controls including net hauling restrictions, land-based shucking and diving times in the abalone fishery have also be considered.

7.0 VESSEL SIZE AND INSTALLED ENGINE POWER RESTRICTIONS

7.1 Introduction

The limitations on vessel size and installed engine power are the most contentious input control in terms of the perceived negative impact on safety and health in the commercial fishing industry. However, the arguments both for and against vessel size and engine restrictions are relatively straightforward.

Those who advocate such restrictions, most notably the Fisheries Department and WAFIC, focus on the protection of fish stocks and the maintenance of equity within the industry; restrictions on vessel size and engine power being a necessary element in the maintenance of both. The restrictions, it is argued, merely set the parameters in which the licensed fisher operates the vessel. As pointed out earlier, at law these restrictions certainly change the standard of care expected by the operator of the vessel.

The opposing view, which finds favour with WorkSafe and with some members of the fishing industry, is that the operator of a fishing vessel has an ongoing duty to provide, where practicable, the safest vessel possible. As a larger vessel is safer than a smaller vessel where the surrounding circumstances are the same (eg. experience of operator, design of vessel) an operator should be able to build as large a boat as he deems appropriate to comply with his or her duty to provide the safest workplace possible.

It is not surprising that the former view is held by the Fisheries Department as the *FRM Act* compels it to consider, first and foremost, the preservation of fish stocks. Likewise it is to be expected that WorkSafe would advocate the latter view as the primary focus of the *OSH Act* is providing safe workplaces - a bigger vessel equating with a safer workplace.

However, neither of these views are necessarily mutually exclusive. Simply because a fishing vessel is restricted in some manner it does not mean that the vessel is not as safe as it needs to be in the prevailing circumstances. Shark Bay trawlers built within the rules of the applicable management plan are in most cases adequate both in terms of size and engine power for the waters in which they operate. However, vessel size would be an issue if, for example, the size of the vessel was reduced by 50 per cent.

7.2 Background to Vessel Restrictions and the Replacement Policy

Since the early 1960's, input controls relating to boat size and numbers have been an important part of the management of the State's fish resources. The

need to rely on these mechanisms has been necessitated by the changing face of particular fisheries.

As technology improved so did the fisher's ability to catch a greater amount of a limited resource. When improved technology was coupled with larger boats, problems of over exploitation began to emerge. One of the ways in which the Fisheries Department responded to the increased fishing effort of the industry was to introduce limits on vessel size. The need to introduce limits became even more important where a fishery was at its limits in terms of exploitation.

In general terms, larger vessels allow the operator to 'fish harder'. This ability to increase fishing effort through having larger vessels leads to a higher exploitation rate on fish stocks. A large vessel allows the operator to:

- operate in rougher weather which means the vessel can be at sea and fish for longer periods;
- carry a larger amount of produce which reduces the amount of time associated with the vessel going to and from port;
- where stock tends to concentrate in particular areas, move gear into those areas more rapidly;
- operate more gear more effectively especially in adverse weather conditions; and
- allow operators to stay out for longer and, therefore, search for longer periods.

However, how the factors relate to increased exploitation will depend on each particular fishery.

In the past a number of methods have been used to reduce fishing effort by reducing fishing vessels from the fleet. These methods have included buy back schemes and the use of the *Fisheries Adjustment Scheme Act 1987*.

As well as the reduction of vessel numbers, methods were introduced to limit the size of vessels. In terms of managing fishing effort, one of the basic problems is that existing operators in a fishery have a proprietary interest in the fishery by virtue of the fact that they have been allowed to operate there in the past. Where an operator expends time, effort and money in building a livelihood, an expectation is created that his or her involvement in the fishery should continue as of right.

One of the first initiatives to limit increases in vessel size was in the Western Rock Lobster fishery. In 1963, pot entitlement was tied to pot length (three (3) pots per foot of boat length). Two years later, the Fisheries Department introduced a policy which required that where an operator authorised to operate in the fishery wanted to replace his boat the replacement boat had to

be the same length so that number of pots did not increase. This effectively meant that the sizes of boats in the fleet were contained at the 1963 level.

The same principles of vessel size constraints were introduced in other fisheries at different times. A common approach was, however, to use the replacement as a point of limitation, thereby, not forcing the operator to give up any accrued benefit.

The most advanced form of the boat replacement policy finds its form in the 375 boat unit rules. Dinghy size in estuarine and embayment fisheries are also controlled although this is done by way of general policy as opposed to the legislative approach taken in the case of the 375 boat unit rules. Special rules also operate in the Western Rock Lobster fishery.

8.0 375 BOAT UNIT RULES

The rules are applied by way of management plans in the following managed fisheries:

- Exmouth Gulf Prawn;
- Shark Bay Prawn;
- Nickol Bay Prawn;
- Onslow Prawn;
- Abrolhos Islands and Mid West Trawl;
- South West Trawl;
- Shark Bay Scallop;
- Kimberley Prawn;
- Broome Prawn (interim); and
- Pilbara Fish Trawl.

8.1 Calculation of 375 Boat Units

The Shark Bay Scallop Management Plan provides a good example of how the rules operate.

When an operator in the fishery decides to replace his or her current vessel, clause 18 of the management plan requires, firstly, that the Director of Fisheries approve in writing the replacement of the authorised boat. The second proviso under clause 18 is that the replacement boat not exceed 375 boat units. The formula for calculating boat units is set out as follow:

$$\frac{\text{measured length} \times \text{breadth} \times \text{depth} \times 0.6}{2.83} + \text{installed engine power}$$

The measured length, breadth and depth are all determined as defined in the Uniform Shipping Laws Code. This is effectively a volumetric calculation of the underdeck. The installed engine power is determined by the kilowatts of the boats engine as certified by the supplier of the engine. The measure of installed engine power accounts for overall engine power but does not take into account the uses of that power. Power from the engine may be used to drive hydraulics, alternators and freezers, for example, as well as the propeller. The amount of auxiliary equipment driven, as well the gearing of the gear box and the design of the propeller, all influence the actual bollard pull of the vessel.

The limitation on replacement boats is given further support in the Shark Bay Management Plan by the imposition of restrictions on boat modification and interference with engine seals.

Clause 19 provides:

The owner of a boat licensed to operate in the Fishery shall not, without the prior written approval of the Director, re-power the boat by-

- (a) changing the configuration of the existing engine, gearbox, propeller shaft or other components; or*
- (b) installing a new engine.*

This means approved vessels built up to the limits of the 375 boat unit formula are prohibited from increasing engine power.

The Fisheries Department can also direct the installation of lead seals on a boat's engine built to the 375 rules. By way of example, clause 20 of the Shark Bay Scallop Management Plan provides:

- (1) The owner of a boat licensed to operate in the Fishery shall-*
 - (a) on the written instruction of the Director cause the suppliers of an engine for the boat to install a lead seal on the fuel pump of such engine; and*
 - (b) authorise the Director to install, or permit the installation of, any such further lead seals as the Director may require.*
- (2) The owner of the boat the engine of which has installed a seal in accordance with paragraph 1) a) or b)-*
 - (a) shall not permit the removal or allow any interference to such seal without the prior written approval of the Director; and*
 - (b) shall immediately report to the Director any interference to such seal caused by accident or mechanical requirements and as soon as practical thereafter arrange for re-certification of the installed engine power by the supplier and the installation of a new seal.*

Officers of the Fisheries Department are empowered to inspect engine configuration and installed seals, if any, to ensure the rules are being complied with. However, as there is no common standard for seals it is almost impossible for the Fisheries Department to determine whether an installed seal is the original seal applied at the time when the engine was certified.

8.2 Equity and Efficiency

Almost without exception, members of the fishing industry operating under the 375 boat unit rules that were interviewed when compiling this report, supported retention of the boat size restrictions. However, support tended to be related more to issues of equity within particular managed fisheries.

More than any other issue, the maintenance of equity among those operators authorised to fish in a managed fishery was the key consideration relating to the application of the 375 boat unit rules. Individual positions in favour of the rules on equity grounds were backed by WAFIC in its capacity as the representative of commercial fishers.

Since its introduction, the 375 boat unit rules have come to be accepted as an essential mechanism for maintaining equity. Operators feel safe in the knowledge that no single operator in a managed fishery can gain a competitive edge through introducing bigger, more efficient vessels. The ceiling placed on fishing effort through the application of the 375 boat unit rules also helps to keep over-capitalisation in check.

Another advantage to the industry is that because the 375 boat unit rules applies across all of the State's important trawl fisheries, owner/operators are able to gain multiple authorisations without needing to purchase extra vessels with different configurations. For example, a vessel may be authorised to operate in Shark Bay, Nickol Bay and in the Pilbara Fish Trawl. This has clear advantages in the promotion of efficiency within the industry.

While equity and efficiency are important to the industry as a whole, safety issues should not be ignored at their expense.

From a safety perspective, one of the major concerns with the 375 boat unit rules formula is that it effectively sets a limit on vessel length and size. All factors being equal a larger vessel is safer than a smaller one and any constraint on an operator in terms of providing a larger vessel has a potentially negative impact in terms of safety.

8.3 Anomalies in the Application of the Formula

Complicating matters is the fact that the boat unit calculation also accounts for installed engine power. The formula sets design parameters within which, theoretically, a safe vessel can be constructed. When building a vessel to fit within the parameters of the 375 boat unit rules, the designer is able to set the right balance of vessel configuration and engine size. The resulting

vessel is, give or take some sacrifice in terms of length, a safe vessel for most conditions within which the vessel would normally operate.

However, problems arise where an operator decides to replace his or her vessel with an existing vessel that, for example, may have been previously operating in a fishery outside Western Australia.

Where the proposed replacement vessel is over the limits set by the 375 boat unit calculation the owner/operator is faced with two options: make substantial structural changes to the vessel (usually length) or de-rate engine power. Of these options, de-rating engine power is the most common course of action although in some instances a combination of structural modifications and de-rating is used.

As stated earlier, the use of installed engine power as a measure affecting fishing effort does not necessarily account for the different types of power set ups on vessels. Some vessels power auxiliary equipment such as winches and refrigeration units directly from the main engines via power take-offs while other vessels use power generated from auxiliary engines, thus leaving all the main engine power available for trawling.

In these circumstances, the inflexibility of the 375 boat unit calculation can be to the detriment of the operator seeking to fit out a replacement vessel that powers its various items of auxiliary equipment via the main engines. However, this is balanced to an extent by the fact that in some cases it may be possible to add auxiliary engines to provide power for hydraulics, alternators, freezers and the like.

Where a replacement vessel is being constructed, as opposed to being modified, engine power set up is not an issue as the designer can ensure all available engine power is dedicated to trawling.

Another major anomaly relates to the designer's ability to stretch the boundaries set by the 375 boat unit formula. All of the navel architects, boat designers and builders that were interviewed for this report agreed that it was not difficult to increase boat length by distorting hull form. Methods used to stretch the rules as far as possible include, for example, raked transoms and bulbous forefoots. The end result is a vessel that is designed and built to comply with the 375 boat unit rules in terms of a strict application of the formula but does not comply with the spirit of the rules.

It would be naive to expect that designers will not attempt to stretch the rules as far as they can. At the same time, one designer who has recently designed a number of trawlers currently under construction stated that if all impositions on design were removed and he had a chance to redesign those trawlers the only change he would make to the design of the boat would be to increase the overall length by about one metre.

The third anomaly with the application of the 375 boat unit formula is that where a replacement vessel has been de-rated to fit within the limits of the

formula there is currently no effective way to ensure engine power is not simply increased after the vessel has left port, particularly given the Fisheries Department's limited ability to determine whether such an increase in power has been made.

While the various management plans prohibit changing engine configuration and have mechanisms for the forced installations of lead seals on fuel pumps (see 8.1), there is a general view in the industry that boosting engine performance occurs regularly.

Whether an engine can be re-rated to an optimum level will very much depend on the type and design of the engine installed in the vessel. Some engines in order to be de-rated may have needed cylinders relined. In that case, re-rating them to increase power will not be accomplished without major mechanical work which could not be carried out at sea. Other de-ratings have been done by way of a governor which, subject to there being a seal in place, can be tampered with by fishers.

Without some form of field assessment no firm conclusions can be drawn as to the effectiveness and reliability of engine power restrictions. Estimates of the number of vessels that boost engine performance vary from 10 to 50 per cent of the trawl fleet. It is certainly accepted that the practice is occurring but the extent to which performance is being enhanced in contravention of the rules remains a matter of conjecture. However, the general view across industry that the rules are not being complied with should be a concern for the Fisheries Department.

8.4 Impact of Other Input Controls

The use of other input controls is an important factor when considering the validity of the limits imposed through the application of the 375 boat unit rules. As opposed to a number of other managed fisheries, those fisheries where the 375 boat unit rules apply have a number of other input controls aimed at controlling effort. This is the case because the 375 boat unit rules apply to trawl fisheries and there are a number of ways to control effort in a trawl operation.

In the trawl fisheries where the 375 boat unit rules apply the following input controls are used:

- numbers of trawl nets and trynets;
- set up of the trawl net including headrope length, dimensions of the otter board and use of ground chains;
- limits on trawl season and hours of operation during the season; and

- where applicable, limits on areas fished within the managed fishery.

A number of the advocates of the removal of the 375 boat unit rules argue that the use of the input controls described above should make restrictions on boat size and engine power redundant.

When the 375 boat unit rules were first introduced into trawl fisheries other input controls were already in place, including season restrictions and limits on net and otter board configuration. The Fisheries Department perceived the introduction of a control over boat size and speed as a way to complement the controls existing at the time and, therefore, provide even more precision when controlling exploitation of the stocks.

The introduction of the 375 boat unit rules was also motivated by the availability of the Commonwealth bounty for vessels built over 21 metres. As the standard boat built within the confines of the rules was between 21 and 22 metres the bounty would be available to builders and the industry would have a standard type vessel, thus providing further balance to the overall input control mix.

From the Fisheries Department's perspective a perfectly safe vessel could be designed within the parameters of the rules. If an operator was forced to de-rate engine size to an unsafe limit because the purchased vessel was over 22 metres that was their decision and they should suffer the consequences.

Notwithstanding the importance of the 375 boat unit rules in terms of the control of Western Australian fisheries, the rules, and in particular the restrictions on engine power, appear to be more difficult to justify in light of the availability of other effective control measures.

In general terms the speed of a trawler will vary between 2-4 knots depending on what is being caught. Scallop vessels are at the bottom end of the range of trawling speeds as the catch decreases as the speed of the vessel exceeds approximately 2.5 knots because the gear passes over the scallops before they can react. As a consequence, the restrictions on engine power would appear to be administrative overkill.

The situation on prawn vessels, however, is less clear cut. As opposed to the scallop vessels they are not limited to an optimum trawl speed. The current speed of prawn trawlers operating under the rules is approximately 3.5 knots. If engine power limits were removed an extra 0.5 knots could be gained in many cases. This could lead to increases of up to 15 per cent in swept area and, potentially, an equivalent increase in catch.

A balancing factor is that one of the benefits of having standard rules applying to vessels in trawl fisheries is that vessels can be licensed to operate in a number of trawl fisheries without having to make major changes to vessel configuration. The removal of engine restrictions for scallop vessels would undermine what the industry generally perceives to be an important

factor in maintaining a 'level playing field' between prawn and scallop fishers.

8.5 Safety Considerations

It appears to be almost universally accepted that a vessel built within the limits of the 375 boat unit rules, in normal operating conditions, will not be unduly constrained from operating safely. However, problems may arise where a vessel is purchased as a replacement vessel and then forced to fit within the parameters of the rules by structural modification or the de-rating of the engine.

In terms of vessel size, in particular, the majority of operators interviewed were of the opinion that a vessel of around 21-22 metres was satisfactory and that if there were not limits in place they would not build a bigger vessel. A minority confirmed they would build a bigger vessel but would only add a metre or two to the overall length while one fisher confirmed he preferred a smaller vessel (18 metres) as it was the most efficient unit for his particular circumstances.

In rough conditions it is vessel design and not size that is the major determinant of vessel safety. A well-designed vessel will have optimum stability through design. No matter how large a vessel is, if it is unstable in rough conditions it will be a safety risk. As a consequence, the Department of Transport now requires all vessels surveyed to be stability tested. However, where vessels are designed to the same standards, operated by competent skippers in the same conditions, a larger vessel will be a safer prospect.

While it is at least the informal view of the Department of Transport that a larger vessel is safer (all things being equal) and that fishing vessel operators should not be constrained from building larger vessels, the general proposition that a vessel of around 21-22 metres is adequate for operating in the Western Australian fisheries is accepted almost universally. However, the constraints on engine power are a different matter.

The main issue in terms of engine power is with vessels which have restricted power in an emergency situation. For example, a vessel in a cyclone could be a days steaming or more from safe anchorage and all available power will be needed if the skipper decides to seek the safety of port. Where a vessel is fighting tides and headwinds all available power is needed.

Other emergency situations where power restrictions may increase the risk to vessel safety include:

- where a vessel is close to shore in rough or extreme conditions and control must be maintained to avoid running aground;

- where a vessel is required to use its engines to maintain its station and heading at anchor in rough or extreme conditions; and
- where nets become fouled on the seabed and the vessel requires extra power to break the nets free although ultimately the net can be cut off to free the vessel.

Where a vessel was lost and that loss could, in part, be attributed to the underpowering of the engines as a result of adherence to the 375 boat unit rules, the Fisheries Department would be quite rightly criticised for the role it played. The engine power restrictions in the 375 boat unit formula would be that more difficult to defend in light of apparent anomalies in the application of the rules and the effectiveness of other input controls.

However, the position of the Fisheries Department would be balanced by actions taken by the vessel owner in addressing the parameters of the 375 boat unit rules. As the 375 boat unit rules are framed in such a way as to give the owner/operator replacing a vessel the choice as to whether to trade off engine power for underdeck volume and *visa versa*, the owner/operator primarily will carry responsibility for any decision that leads to the vessel being under powered so as to compromise safety.

Whether or not the Fisheries Department could or would face legal action would very much depend on all of the surrounding circumstances including the actions of the skipper and the seaworthiness of the vessel as well as the applicability of section 22 of the *OSH Act*.

8.6 Survey of Vessels

Any analysis of the 375 boat unit rules would be incomplete without reference to the survey requirements of the Department of Transport.

All new vessels greater than 8 metres in length that intend to operate within Western Australian waters are required to complete an initial examination performed by a surveyor (**'survey'**) to ensure they comply with the Uniform Shipping Laws Code (see generally Part II of the *Western Australian Marine Act 1982*).

After initial survey, vessels operating under the 375 boat unit rules are required to complete annual survey of, among other things, equipment, trial of main engine, main and emergency steering, pressure vessels, trawl gear, escapes from engine room and accommodation spaces, hatchways, companion ways and rails. Bi-annual surveys include inspection of the hull, propellers and rudders. The four-yearly, eight-yearly and twelve-yearly surveys extend the coverage even further. (See Schedule 2 of the WA Marine (Surveys and Certificates of Survey) Regulations 1983.)

The initial survey requires drawings of the vessel to be supplied for the purpose of the survey. Depending on the size of the vessel the following items are checked during the plan approval process:

- structure;
- mechanical/electrical systems;
- pumping/piping systems;
- stability;
- constructional safety;
- fire equipment;
- passenger requirements;
- safety equipment; and
- lifting appliances.

The vessel is inspected during the construction process and prior to completion tests on stability, radio, fire fighting and pressure equipment are conducted. Once trials are successfully completed a Certificate of Survey is issued.

Notwithstanding restrictions imposed upon a vessel by the Fisheries Department's application of the 375 boat unit replacement rules, a vessel must have a Certificate of Survey. The Certificate of Survey is, in effect, evidence that the vessel has complied with minimum acceptable standards in terms of safety. Survey is an example of a legislative imposition that has a positive affect on vessel safety. Survey sets minimum acceptable standards that must be complied with by all vessels built within the 375 boat unit rules. As far as the Department of Transport is concerned a vessel can be as large as the boat builder wants to make it as long as the vessel complies with survey (eg. it passes stability tests, is structurally sound and has the required safety equipment).

A Certificate of Survey does not warrant that a vessel is safe to operate in all conditions. It simply provides the starting point in terms of vessel safety. Decisions outside of the imposed minimum standards are left to the owner and skipper of vessel. Those decisions would include what conditions the vessel is safe to operate in and how much should be carried.

The Department of Transport sees the restrictions imposed by the 375 boat unit rules in the same way. The size of the vessel is irrelevant to survey. As long as all survey requirements are met it makes no difference whether the vessel is 8 metres or 80 metres in length. However, all things being equal an 80 metre vessel would be safer and, as far as the Department of Transport is concerned, it is a safer prospect. It is for this reason that, at least informally,

the Department of Transport would prefer to see no restrictions on vessel size.

Engine power is slightly different. There will be a point at which an engine will not be powerful enough for the vessel to pass survey. As yet this has not happened with any vessel built within the 375 boat unit rules.

Survey requirements would make it more difficult to lay blame upon the Fisheries Department in connection with the application of the 375 boat unit rules even if it could somehow be demonstrated that the application of those rules contributed in some way to the loss of a vessel. The fact that a vessel is certified as complying with minimum safety standards makes it all the more difficult to link the Fisheries Department with legal liability under section 22 of the *OSH Act* or otherwise.

8.7 Policy Considerations

Even in the event that section 22 of the *OSH Act* applies to the Fisheries Department I believe that there is only a remote possibility that legal action could be successfully brought against the Fisheries Department in its capacity as a controller of workplaces.

The primary responsibility for providing a safe environment under the *OSH Act* rests with the employer. In any given situation it would need to be shown that the employer had done all that was reasonable in the circumstances to provide a safe work environment, and that there was a clear link between the 375 boat unit rules and the injury or harm suffered by the employee in question. In any case that would be a difficult hurdle to overcome.

Establishing that link would be made all the more difficult because of the intervening requirements of survey. In a case where a vessel was lost, for example, the stability and general seaworthiness of the vessel would be called into question. As both areas are regulated by the survey requirements of the Department of Transport, first and foremost it would be survey requirements that would be examined. Vessel length and engine power restrictions would be considered in light of survey requirements.

Notwithstanding that the possibility of successful legal action being taken against the Fisheries Department would be remote, there are still good reasons from a policy perspective to remove the constraints on the safe operation of vessels to which the 375 boat unit rules apply.

Clearly the Fisheries Department and the majority of industry are satisfied with the 375 boat unit rules. However, the rules should be considered in light of the fact that the rules are a negative legislative constraint on an owner/operators ability to provide as safe a workplace as possible. Ideally,

the fact that the Fisheries Department is imposing a ceiling on safety should in itself be justification enough for the removal of the 375 boat unit rules. However, in reality this needs to be weighed up with the adverse impact that the removal of the rules would undoubtedly have on fisheries management.

With all that has been discussed in mind, it is recommended that as a minimum the restriction on installed engine power be reconsidered and, where possible, removed from all applicable management plans where the 375 boat unit rules apply. Whether or not removal is warranted will depend on how important the engine restrictions are to the Fisheries Department in terms of its management of the trawl fisheries and whether it is willing to accept the remote chance of future litigation if the restrictions are retained.

While it would be preferable to remove boat length constraints I believe it is not currently warranted. No conclusive evidence was put forward to demonstrate that a vessel of between 20 to 22 metres was unsafe to operate in any of the trawl fisheries where the 375 boat unit rules apply.

In addition, it is recommended that upon each review of management plans where the 375 boat unit rules apply, boat length and engine power restrictions as they relate to safety must be considered by the Fisheries Department and those fishers authorised to operate in the fishery with the aim of removing them in the long term.

Further, where the issue cannot be resolved it should be directed to an independent third party for determination based solely on vessel safety.

9.0 SMALL BOAT SIZE RESTRICTIONS

Outside the trawl fisheries to which the 375 boat unit rules apply, there are a number of fisheries in which vessel size has been limited through boat replacement rules.

9.1 Background

The background and application of vessel size constraints through the Fisheries Department's boat replacement policies is well documented in a Fisheries Department Paper entitled '*Fishing Vessel Replacement Policy in Western Australian Fisheries.*' The following summarises the background to the current position as set out in the above mentioned paper:

- In 1983 a freeze on the issue of further fishing licences was implemented. It was Fisheries Department policy that only those vessels that were greater than 6.5 metres in length and surveyed to operate more than 20 nautical miles offshore had a right to operate in the fishing industry in the long term.
- The policy effectively separated inshore fisheries (eg. embayment and estuarine) from deep water fisheries.
- The vessels used in inshore fisheries were/are, almost without exception, dinghies (ie, less than 6.5m in length).
- Following the 1983 freeze on the issue of licences to new entrants to the fishing industry there was a move by the industry to upgrade dinghy licences.
- The pressure to upgrade was aimed at circumventing the freeze so as to gain the advantages of a general wet fish licence but without the costs associated with gaining that type of licence.
- To counter this move the Fisheries Department introduced a specific vessel replacement policy for dinghies.

The policy provides a two tier set of restrictions:

- Vessels less than 5.5 metres can only be replaced by vessels less than 5.5 metres in length.
- Vessels between 5.5 metres and 6.5 metres could only be replaced by a vessel less than 6.5 metres.

Outside the dinghy replacement policy there are a number of particular fisheries that have vessel size constrained through the applicable management plan.

For example, the following managed fisheries have set replacement vessel size:

- Shark Bay Beach Seine and Mesh Net (12 metre for primary boat and 6.45 for net dinghy);
- West Coast Purse Seine (16 metres);
- South Coast Purse Seine (20 metres);
- West Coast (Beach Bait Fish Net) (6.5 metres or equal size if >6.5 m)*;
- Cockburn Sound (Line and Pot) (6.5 metres or equal size if >6.5 m)*;
- Cockburn Sound (Fish Net) (6.5 metres or equal size if >6.5 m)*;
- Cockburn Sound (Crab) (6.5 metres or equal size if >6.5 m)*;
- Cockburn Sound (Mussel) (6.5 metres or equal size if >6.5 m)*;
- Specimen Shell (8 metres);
- Warnbro Sound (Crab) (5.5 metres or equal size if >5.5 metres); and
- Marine Aquarium Fish (8 metres).

* First replacement of a vessel >6.5 metres may be up to 0.5 metres larger than the original vessel. Thereafter all replacements must be less than or equal to the replaced vessel.

In the case of licensees holding only authorisations for West Coast Beach Bait Fish Net or Cockburn Sound Fish Net, Crab or Mussel, the Management Plan enshrines the 5.5 metre tier, but Ministerial policy has allowed for replacements to be up to be up to 6.5 metres or of equal size if they are currently greater than 6.5 metres (with a 0.5 metre increase possible at the first replacement). Where licensees hold other authorisations, the replacement vessel may be of equal size.

9.2 Legal Liability - General Safety Considerations

The issues of vessel size restrictions are nowhere near as complicated in the case of smaller vessels as opposed to trawlers operating under the 375 boat unit rules. However, there are also many similarities both in terms of potential legal liability and safety considerations more generally.

As with the trawlers, the imposition of limits on boat size by way of the boat replacement policy is a negative safety constraint on the various authorised operators. The imposition has the effect of adjusting the standard of care expected of the owner/operator in any given situation as it would be both

unreasonable and impracticable to expect a vessel owner to defy the Fisheries Department's directions regarding vessel size.

The imposition of size constraints is also considered to be an important tool with which fishing effort can be controlled and equity maintained. A number of officers of the Fisheries Department who were interviewed were concerned that the relaxation of vessel size could have a serious impact on the fisheries they managed.

While engine power is not regulated there are a number of other controls, both input and output, that are used in conjunction with the vessel restrictions in the fisheries covered by the general boat replacement policies. Net size, pot dimensions and numbers, daily and seasonal restrictions, prohibition of mechanical net haul devices and quotas are all examples of the available controls that are used.

Except for the Cockburn Sound Crab, the Specimen Shell and Marine Aquarium Fish managed fisheries, boat size restrictions as applied by way of the general policy on boat replacement did not appear to be an issue. However, the restrictions were backed on the basis that it was an effective means to ensure equity among operators. In most cases safety was considered to be a secondary issue.

9.3 Cockburn Sound

The Cockburn Sound Crab fishery provides a good example of some of the issues as they relate to an embayment fishery.

Under the Cockburn Sound (Crab) Management Plan, boat sizes are effectively limited to 6.49 metres through the application of the boat replacement policy. Three vessels are over this limit because they have yet to be replaced and were over the 6.5 metre threshold when the policy was introduced.

In addition to boat size constraints the fishery is managed through the application of seasonal limits, pot and gear restrictions, pot pulling restrictions and size restrictions on the crabs taken.

The Cockburn Sound Professional Fisher's Association argues that the input controls set out above are all that is necessary to control the exploitation of the fishery and that the limitations on boat size have only a minor role to play. Further, they argue that a boat built to the 6.5 metre limit is not large enough from a safety perspective. This view is based on the fact that they are less stable in strong winds and can overturn when the line is being pulled and, secondly, there is an undue restriction on room for safe operation around the boat.

The Association argued that a boat of 8 metres would be suitable in the circumstances.

The Fisheries Department rejects this and stands firm in its view that a vessel of 6.5 metres is more than adequate. Further, there is a need in the fishery to account for the needs of recreational fishers. The presence of larger boats lifts the profile of commercial fishers in the fishery and will, it is argued, put further pressure on an already uneasy relationship between recreational and professional fishers in the fishery.

9.4 Specimen Shell and Marine Aquarium Managed Fisheries

Specific concerns over boat size in these fisheries relate almost solely to the maintenance of equity.

The management plans for both fisheries contain a boat length limit of 8 metres. Other than the general restriction on the number of participants in the fishery the boat size restriction is the only form of input control.

At the Specimen Shell Fishery Management Meeting in March 1996, boat length criteria were considered at length. Maintenance of the 8 metre limit met with almost unanimous support. Majority view is, however, based on maintaining equity within the fishery.

The one dissenting licensee, Mr Peter Hudson, has for some time been seeking the lifting of the limit. His reasons focus mainly around the fact that he had a dive vessel operating out of Esperance that he wanted to use in the fishery. However, the vessel is almost 16 metres long and, therefore, outside the limit set by the management plan.

Mr Hudson argues that it makes little sense for this dive vessel not be used simply on the basis of a limit that has been introduced to maintain the status quo in the fishery. He is seeking to operate up to 120 kilometres from his base at Esperance and up to 40 km from shore.

In those circumstances a bigger boat would clearly be an advantage in terms of the safety of the operators. However, the real issue in Mr Hudson's dispute with the Fisheries Department and the industry is based on economics.

Despite that view, where a fishery has no specific geographical limitations it is a concern, at least from a policy perspective, that boats are being constrained. This is a good example of the problems faced with balancing equity and safety.

9.5 Policy Considerations

As with the 375 boat unit limitations in the trawl fisheries, there is only a remote possibility that the Fisheries Department would be vulnerable if action was brought on the basis of its perceived responsibilities as a controller of workplaces.

Legal concerns would be almost non-existent if section 22 of the *OSH Act* does not apply.

However, from a policy perspective it would be the most prudent course of action to remove the boat replacement restrictions on the basis that they are potentially a negative impact on safety and health of Western Australian fishers.

While removing the restrictions may be the easiest course of action, in most cases to do so would be contrary to the wishes of industry and is difficult to justify in light of the primary responsibilities of the vessel owner/operators and the adverse impact on fisheries management.

As a minimum, it is recommended that when reviewing management plans where vessel size is constrained the Fisheries Department and those fishers authorised to operate in the fishery should review boat length as it relates to safety with the aim of removing the limitation in the long term.

Further, where the issue cannot be resolved it should be directed to an independent third party for determination based solely on vessel safety.

10.0 WEST COAST ROCK LOBSTER - VESSEL SIZE RESTRICTIONS

The West Coast Rock Lobster fishery has special rules the application of which act to constrain vessel size in the fishery. The other rock lobster fisheries, Esperance and Windy Harbour/Augusta, have no legislated restrictions on the size of vessel that can be used.

10.1 7 and 10 Rule

The rule which constrains vessel size in the West Coast Rock Lobster fishery is referred to as the 7 and 10 rule.

The rule centres around the number of pots endorsed on the operator's licence. Pursuant to clause 14 of the West Coast Rock Lobster the normal pot entitlement of a licensed boat is determined by multiplying the lengths of the boat by 10. Any surplus may be transferred.

Where a vessel is to be replaced under the Management plan clause 16 applies as follows:

- (1) *A person who holds a licence may apply to the Director to replace the boat to which the licence applies ("the licensed boat") with another boat ("the replacement boat").*
- (2) *If the Director considers that it is appropriate to do so, the Director may approve the replacement of the boat.*
- (3) *Subject to subclause (4), the replacement boat shall not have a length that is -*
 - (a) *greater than "P" divided by 7 (to the nearest one-tenth of a metre); or*
 - (b) *less than "P" divided by 10.*
- (4) *Despite the result of the division referred to in subclause (3) (a) being less than 10, the replacement boat may have a maximum length of 10 metres.*

The rule sets an upper and lower limit on replacement vessels. The maximum size shall be no greater than the total pot entitlement divided by 7 (eg. 140 pots divided by 7 would mean a maximum length of 20 metres). The minimum size shall be not less than the total pot entitlement divided by 10 (eg. 140 pots divided by 10 would mean a minimum length of 14 metres).

The application of the rule does provide a degree of latitude and as such is a mixture of a positive and a negative safety constraint.

In addition, there are limitations in terms of maximum pot numbers (150) and above and beyond these limitations, the ability to transfer pot entitlements and, therefore, the ability to build up an entitlement to a larger vessel by way of replacement.

Concerns expressed by WorkSafe have been mainly in regard to vessels being overloaded with pots which in some cases can lead to stability problems. WorkSafe argue that the way in which the rules are formed acts to encourage operators to overload.

The decision to overload a vessel with pots in order to gain a competitive advantage rests solely with the skipper of the vessel. In the circumstances, it would be very difficult to establish any blame on the part of the Fisheries Department where a vessel capsized due to it being overloaded.

In conversations with officers of the Fisheries Department and industry it became clear that there is a strong possibility that the 7 and 10 rule will be phased out shortly. While it does not have the same negative impact in terms of safety in comparison with the boat unit rules, an authorised operator is considered to be constrained from providing the safest vessel possible.

It is estimated that the removal of the 7 and 10 vessel replacement rule would lead to an increase in efficiency of between 2-3 per cent. This slight increase would also be limited in terms of its impact as it would take a number of years for the fleet to be replaced.

As with the restrictions in trawl and small vessel fisheries it would be difficult to establish a link between the Fisheries Department and liability under the OSH Act. The fact that primary responsibility rests with the employer in any given situation and that survey requirements intervene to establish a basic level of safety would also apply in the Western Rock Lobster fishery. However, as stated earlier, there are good reasons from a policy perspective to remove boat size constraints.

Taking the limited impact of removing the 7 and 10 replacement rule into account, it is recommended that the Fisheries Department encourage the removal of the rule as it relates to constraining vessel size.

In addition, the recommendation made for both the trawl and small vessel fisheries that a safety review be conducted at all formal reviews of management plans should apply equally to the Western Rock Lobster Management Plan.

11.0 RESTRICTIONS ON THE USE OF MECHANICAL NET HAUL DEVICES

One area of clear conflict with specific provisions of the *OSH Act* is in relation to the restrictions on the use of mechanical net haul devices.

Managed fisheries where mechanical net hauling restrictions are in place are as follows:

- West Coast Purse Seine
- West Coast (Beach Bait Fish Net)
- The Kimberley Demersal Line Interim

The coverage of net hauling restrictions is further widened by the Net Hauling Restrictions Notice 1991. The Notice prohibits the use of, by licensed professional fishers using a licensed fishing boat, net haul devices in all waters of the Indian Ocean, the Southern Ocean and the Timor Sea when taking fish if their licences are not to permit this gear. Holders of supplementary access in the Joint Authority Southern Demersal Gillnet and Longline Managed Fishery are restricted to hand hauling by this notice.

As explained earlier, section 19 of the *OSH Act* provides that an employer shall, where practicable, provide his employees with a safe work environment.

The hauling of a net by hand is a hazardous manual handling task. The imposition of a restriction in the use of mechanical net hauling devices by the Fisheries Department will change the standard of care required from the employer in this situation. It is not 'practicable' to provide a mechanical net hauling device to reduce the risk of manual handling injuries because to do so would mean breaching the *FRM Act*.

The same considerations in relation to the standard of care apply to the *OSH Regulations*. Regulation 3.4 specifically covers manual handling and provides as follows:

- (1) *In this regulation-*
'manual handling' means any activity requiring the use of force exerted by a person to lift, lower, push, pull, carry or otherwise move, hold or restrain a person, animal or thing.
- (2) *Without limiting regulation 3.1, a person who, at a workplace, is an employer, the main contractor or a self-employed person must, as far as practicable-*
 - (a) *identify each hazard that is likely to arise from manual handling at the workplace;*
 - (b) *assess the risk of injury or harm to a person resulting from each hazard, if any, identified under paragraph (a); and*
 - (c) *consider the means by which the risk may be reduced.*

The regulation requires the employer to consider the control methods used. In the case of a commercial fisher, one of the primary measures to reduce the risk of injury would be to introduce mechanical means to haul a net. However, this is clearly not an option because of the Fisheries Department's legislative constraint of mechanical net haul devices.

Approximately 30 per cent of injuries to workers in Western Australian are as a result of manual handling. Because the issue is considered to be so important, some years ago WorkSafe introduced the Manual Handling Code of Practice. The purpose of the Code is to provide information to employers so they can reduce the incidence of manual handling injuries in the workplace.

Where there are no legislative impositions on the employer it is expected that he or she would continue to seek new ways to reduce the risk of manual handling injuries. The use of mechanical devices to remove the risk of manual handling injury is well accepted across a variety of industries as being a critical risk management measure.

In this day and age it is difficult to find any justification for having restrictions imposed on the use of equipment that would undoubtedly assist in the reduction of manual handling injuries in the fishing industry. The restriction goes against both the principles of the Manual Handling Code of Practice and basic principles of safety and health management.

If section 22 of the *OSH Act* is applicable to the Fisheries Department this would be a clear example of an area of potential liability. Where an employee or a self employed person suffers a manual handling injury through net hauling and it can be shown that the injury would not have occurred if a manual handling device could have been used to eliminate the risk of net haul injury, the Fisheries Department would find it difficult to argue it was not to an extent responsible for the injury.

Even if section 22 of the *OSH Act* does not apply to the Fisheries Department, there is a strong case to be made from a policy perspective for the elimination of net hauling restrictions.

As opposed to the boat replacement, the issues in this area are much clearer. There are no intervening events like survey and less conjecture as to the outcomes of leaving the restrictions in place.

In safety and health terms, the imposition of this restriction is primitive. It is all the worse when the body imposing the restriction is a government department.

It is recommended that all restrictions imposed by the Fisheries Department on the use of net haul devices be removed as a matter of urgency.

12.0 ABALONE FISHERY

In discussions with WorkSafe, concerns were expressed about the imposition of seasonal diving restrictions in the Abalone Management Plan. It was argued that the restrictions meant that divers were being forced, through the agency of the Abalone Management Plan, to dive at times when the risk of shark attack was greatest.

The Abalone Management Plan that governs the operation of the industry divides the fishery into three zones. Zone 1 extends along the southern coast from the WA-SA boarder to Shoal Cape. Zone 2 covers Shoal Cape to Busselton Jetty and Zone 3 overlaps Zone 2 slightly, covering the area between Cape Leeuwin and the WA-NT border.

Exploitation of the abalone resource by licensed divers is controlled by output controls (quotas). The setting of the quota depends on the Zone and the species of abalone taken in the Zone.

The Abalone Management Plan does not limit the licensed diver to taking their quota to a particular time period. WorkSafe have either misinterpreted the Abalone Management Plan or have received some incorrect information when making their inquiries.

Abalone divers interviewed for the purposes of compiling this report were satisfied that the Abalone Management Plan and the approach taken by the Fisheries Department did not impact on the provision of a safe work environment.

13.0 HANDLING AND PROCESSING OF SCALLOPS

Through the course of researching this report, a number of issues arose with regard to the handling and processing of scallops. While the issues do not currently pose a problem they may need to be addressed in the future.

13.1 Handling Restrictions

In the past there have been problems with regard to the setting of bag sizes for whole scallops being processed on shore. The current bag size has been reduced to a point where WorkSafe, the Fisheries Department and industry members agree it is satisfactory.

The way in which the issues were raised and then resolved through the application of the management plan process is to be commended. Through consultation between WorkSafe, the Fisheries Department and industry members the problems were addressed and resolved to all parties satisfaction.

13.2 Processing of Scallops

Although there are no current restrictions on the use of shucking machines the whole issue remains contentious.

From a safety and health perspective the use of a mechanical device that would eliminate the need for hand shucking should be encouraged. Even with proper management of hand shucking through the use of rest breaks and training, the risk of occupational overuse syndrome will be substantial. Eliminating this risk through using mechanical devices is a fundamental control strategy both in terms of the Manual Handling Code of Practice and risk management more generally.

In addition, the use of shucking machines either on board the vessel or in a land based processing situation has the potential to reduce crew numbers on scallop trawlers. The reduction of crews on scallop vessels would mean more room for crew and improved living conditions, as well as providing less crew being exposed to a hazardous work environment.

The issue is made more difficult because the introduction of shucking machines has the potential to disrupt equity within the industry.

The Fisheries Department's guarded approach to the introduction of the machines is the right approach to take. While there are clear benefits in terms of reducing the risk of occupational overuse syndrome and having

fewer crew on board vessels, the Fisheries Department must be satisfied that the introduction of the machines does not introduce new safety and health problems and that the technology is advanced enough to ensure size of the scallops being shucked is controlled. In this regard the current trialing arrangements are a step in the right direction.

In general terms, although maintaining equity within the scallop industry is important, the possibility of creating a safer industry through the use of shucking machines should be given precedence. To hold back technology which is likely to improve safety and health in the industry because it affects the equity arrangements of participants cannot be justified in the long term.

The possible banning of the use of shucking machines in the scallop fisheries through the applicable management plans should only be considered as a last resort and certainly not as a long-term cure to the problem.

SUMMARY OF RECOMMENDATIONS

1. Although there is only a remote chance that the Fisheries Department would face future litigation because of the imposition of legislative constraints on a fishing operators ability to provide the safest possible workplace, as a matter of policy those constraints should be reconsidered and, if possible, removed.
2. When considering the propriety of each legislative constraint on safety, a number of issues will need to be considered, including the following:
 - the likelihood of future legal action both in terms of the *OSH Act* and at common law and whether the Fisheries Department is prepared to accommodate the risk of future litigation;
 - the possible adverse impact on equity and efficiency in the fishery in question;
 - anomalies in the application of any given legislative constraint that has a negative impact on safety;
 - the extent to which other available fisheries management controls, be they input or output controls, make redundant the particular legislative constraint on safety; and
 - the particular negative constraint on safety as it stands in relation to accepted safety principles and safety management practices.
3. With regard to specific legislative constraints on safety considered in this report the following recommendations apply:
 - a) With regard to the 375 boat unit rules, it is not currently warranted to remove the limit on vessel length. However, the restrictions on installed engine power should be reconsidered and, where possible, removed from all applicable management plans where the 375 boat unit rules apply.
 - b) Boat size restrictions for smaller vessels as applied by way of the general policy on boat replacement and through the various management plans should be maintained.
 - c) The 7 and 10 rule in the Western Rock Lobster fishery as it relates to constraining vessel size should be removed.
 - d) All restrictions imposed on the use of mechanical net haul devices should be removed as a matter of urgency.

- e) The possible banning of the use of shucking machines in the scallop fisheries through the applicable management plans should only be considered as a last resort and certainly not as a long term solution.

- 4. When reviewing management plans where any form of legislative constraint is imposed that has a potential impact on safety, both the Fisheries Department and the authorised fishers should review the legislative constraint as it relates to safety with the aim of removing that constraint in the long term.

- 5. Where any safety related issue cannot be resolved it should be directed to an independent third party for determination based solely on vessel safety.

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PARTIES INTERVIEWED

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