

## SPC tested this new beacon from Argos, the MAR GE/T

nother year has gone by since the last *Sea Safety Bulletin* was distributed. Readers may remember in the last issue that we borrowed a few things from friends around the Pacific. In this issue we also depend heavily on the inspiration and guidance of others. In other words, we have once again borrowed relevant and timely material on sea safety from our friends and neighbors – from as far away as Italy and Alaska to our closest neighbors, Australia and New Zealand. Thank you to all who provided materials to us.

The first Safety Feature in this issue, which discusses the risks of fishing boats colliding with large trading ships, comes from the Australian Transport Safety Bureau, and although it is aimed at Australian fishermen, the information and guidelines are relevant to anyone who goes to sea, whether in a fishing boat or a pleasure boat. The risk of being run down by a tanker or container ship is real, especially for small boats that operate in shipping lanes during times of reduced visibility.

The second Safety Feature introduces our Alaskan friends at AMSEA, or Alaska Marine Safety Education Association, who have kindly allowed us to reproduce their Risk Assessment for Commercial Fishing Trips checklist. This checklist gives fishermen an easy way to assess the risks of going to sea BEFORE the boat leaves the dock. If the risk number from the assessment is too high (a score of 24-35) then things have to be fixed or the boat doesn't go to sea.

Under Technology and Safety we offer something new – the ArgoNet small boat monitoring system that tracks small-scale fishing boats and can give out a request for assistance signal; something improved – the ACR iPro EPIRB that has a digital display so users are reassured of their GPS position; and something that been around for a long time but could always be refreshed – Liferafts and their release mechanisms (from Maritime New Zealand and Royal National Lifeboat Institution).

# SPC · CPS

SECRETARIAT OF THE PACIFIC COMMUNITY Prepared by the Fisheries Information Section of the Marine Resources Division and printed with financial assistance from France

#### Number 5 - May 2009

In th<u>is issue</u>

•	Fisherman and safety awareness at seap.3
,	The deadliest catch and sea safety
	education in Alaskap.7
•	SPC's Nearshore Fisheries Development &
	beacon for small fishing boats
•	Transmitter MAR-GE/Tp.9
•	Tales inspire EPIRBp.11
•	Liferafts and their release
	mechanisms
•	The FAO Expert Consultation on best practices for safety at seap.14
,	Fishing safelyp.
•	Safety for Fishermen web
	communityp.19
,	When great isn't good enoughp.21
•	Fishermen in miracle rescue namedp.22
,	Noted fishermen lost as 80-foot trawler sinksp.23
,	Rescue at seap.25
,	New regulations and public awareness campaign in New Caledoniap.26

THINK

The United Nations Food and Agricultural Organization (FAO) held an expert consultation on best practices for sea safety in 2008, which we report on under Resource Materials- New International Instruments on the Horizon. Included in this section are discussions on an International Plan of Action (IPOA) for sea safety, and a new website called Safety for Fishermen, that has been launched by FAO in April 2009.

Despite everyone's best efforts Accidents and Incidents, sadly, continue to happen. We have included a small number of these just as food for thought. Hopefully, lessons can be learned from the mishaps of others.

Finally, in News from the Region, we share what has been taking place in New Caledonia to make boating and fishing safer for everyone. New regulations have been implemented by the Maritime Affairs Department and surprise inspections have been carried out in the lagoon surrounding New Caledonia to make sure that boaters, including fishermen, are complying.

I'll sign off by saying thanks once again to all who shared their valuable sea safety information and stories.

Steve Beverly (steveb@spc.int)





#### Fisherman and safety awareness at sea

With permission from Australian Transport Safety Bureau



When fishing in waters off the Australian coast, fishermen will encounter large trading ships. These ships take a wide variety of cargoes to and from Australian ports, and they play a critical role in the economy of the country. Unfortunately, sometimes ships and fishing vessels collide.

The Australian Transport Safety Bureau (ATSB) has investigated 21 of these collisions since 1990 to see why they occurred, and what can be done to reduce the likelihood of a collision happening in the future. In two collisions investigated by the ATSB, the skippers of the fishing vessels were trapped in their wheelhouses and drowned when the vessels sank. The investigations have revealed that in almost all the collisions, there were similar factors present which contributed to the accident and precautions had not been taken that may have saved a life or, at least aided the search for survivors.

While the investigations have shown that the ships did not always do the right thing in the period of time leading up to the collision, on several occasions, the fishing vessels" crews also contributed to the collision by not fulfilling their obligations.

As far as fishing vessels are concerned, the recurring factors present in almost every collision include:

- 1. An adequate lookout was not maintained;
- 2. The watchkeepers all had a poor knowledge of the international collision regulations (COLREGS), and what to do to avoid a collision;
- 3. The crew didn"t understand that, under the COLREGS, a fishing vessel is only a fishing vessel when it is actually engaged in fishing;
- 4. The watchkeepers misinterpreted the information presented on the radar and didn"t understand the limitations of radar;
- 5. The fishing vessel did not have a radar reflector, which made it hard for the ship"s radar to detect it;
- 6. The skipper, frequently the only certified person on board, was fatigued;
- 7. There were problems with the stowage of and access to emergency beacons, lifejackets and distress signals; and
- 8. The fishing vessel crew didn"t appreciate the ways that large ships operate; such as size limitations,

ability to turn, limitations of the equipment and the number of people on the navigation bridge.

The first three factors above are covered in the International Regulations for Preventing Collisions at Sea, 1972 (as amended), more commonly known as the COLREGS. The COLREGS apply to all vessels when they are underway. Importantly, that means that fishing vessels have to follow the COLREGS when they are actually engaged in fishing and might have their attention somewhere else. At sea, whether on the biggest ship, or a boat fishing three miles off the coast, everyone must follow the "rules of the road".

This safety bulletin is going to briefly look at some of the recurring factors that contributed to the collisions in the hope that fishermen will become aware of the problems and take some action to reduce the ikelihood of a collision.

#### **Inadequate lookout**

A lookout should be kept by visual and aural means, and by radar. The fact that a collision occurred indicates that the lookout on the ship or the fishing vessel, or both, was, for whatever reason, ineffective. In a few cases, it is probable that no lookout was being kept at all.

The COLREGS are quite clear when it comes to keeping a proper lookout. The obligation to keep a good lookout when at sea is covered by Rule 5 and states:

Every vessel shall at all times maintain a proper lookout by sight and hearing as well as by all available means appropriate in the prevailing circumstances and conditions so as to make a full appraisal of the situation and of the risk of collision.

The key words in this rule are "every vessel" and "at all times".

The number of crew typically employed on fishing vessels is between two and five, which means it can be difficult to fish and maintain a proper lookout as required by the COLREGS. If this is the case, then the way things are done on board should be revised to make sure that a proper lookout is maintained at all times.

When fishing, always be aware that a ship might be approaching your position. Take the time to stop what you"re doing every ten minutes or so, and physically look around the vessel. A large ship, which may be traveling at up to 20 knots (>600 metres/minute), will travel over three miles in that ten minutes, which is about the distance to the visible horizon at sea level. The earlier a ship is seen, the more time there is to take action to make sure a collision doesn"t occur.

Ensure that the VHF radio is monitoring Channel 16, and have the volume turned up so you can hear it inside and outside the wheelhouse. If a ship is going to call you, they will use Channel 16. However, remember that some foreign crews may not call or answer a VHF call at all. If they do use the VHF, you may experience language problems which could lead to misunderstandings with dire consequences.

Everyone on the fishing vessel must do all they can to ensure that a proper lookout is being kept on board. This applies when the vessel is enroute to and from the fishing grounds, working in the fishing grounds and while at anchor.

#### Know the "rules of the road"

The skipper of a fishing vessel is often the only person on board who has training in, and knowledge of, the COLREGS. There are times when someone else on the vessel has to keep a navigational watch, and this person needs to know some of the more important rules that are contained in the COLREGS.

Unfortunately, sometimes a ship may not take the action it is required to take under the COLREGS. A fishing vessel, being smaller than a ship, will almost always come off worse after a collision. Therefore, the crew of a fishing vessel alone must be prepared to take action to prevent a collision.

If you don"t know what the COLREGS are, or what they contain, ask the skipper if he has a copy of them for you to look at. If there isn"t a copy on board, then your state marine authority will be able to provide you with a copy, or you can download a copy of Marine Orders Part 30, Prevention of Collisions, (which contains the entire COLREGS) from the Australian Maritime Safety Authority"s (AMSA) web site – (www.amsa.gov.au/ shipping\_safety/Marine\_Orders/Documents/ MO30. pdf). The Marine Order can also be purchased from Canprint Info Services, tel: 1300 889 873.

If a watchkeeper on a fishing vessel has any doubt about what actions to take if a ship is near by, he or she should call the skipper. The skipper should take the time to assess the situation and then take early and substantial action (like a large alteration of course and/or speed) to avoid any possible collision, or a close passing of the two vessels.

#### When is a fishing vessel not a fishing vessel

The COLREGS do not refer to fishing vessels as such, nor do they define what a fishing vessel is. The

COLREGS refer to a "vessel engaged in fishing". A "vessel engaged in fishing" is defined in Rule 3 as:

any vessel fishing with nets, lines, trawls or other fishing apparatus which restrict manoeuvrability, but does not include a vessel fishing with trolling lines or other fishing apparatus which do not restrict maonoeuvrability.

Therefore, a fishing vessel operating off the Australian coast is only "a vessel engaged in fishing" under the "rules of the road" when its fishing gear restricts its ability to manoeuvre out of the path of another vessel. Only then can it show the navigation lights and shapes for a vessel engaged in fishing.

Under the COLREGS, power driven vessels and sailing vessels must keep out of the way of vessels "engaged in fishing", however, fishing vessels must, so far as possible, keep out of the way of a vessel not under command or a vessel restricted in its ability to manoeuvre. The definitions of these terms are in the rules.

A common problem with fishing vessels is that their crews tend to switch on their navigation and fishing lights, and exhibit the associated shapes, when they leave port and don"t turn them off until they return. Under the COLREGS, fishing vessels are not entitled to do this, and should have only their navigation lights on, unless actually "engaged in fishing".

Deck working lights are also a problem. These bright floodlights prevent a ship from being able to see what navigation lights a fishing vessel is exhibiting (red, green etc) and what action, if any, the fishing vessel is taking. While the flood lights increase the distance at which a fishing vessel can be seen, they make it more difficult for the ship, or any other vessel, to be sure about your heading. These lights can be misinterpreted when left on when they are not needed.

#### Radar

All too often, people on fishing vessels and ships place too much reliance on the radar and forget that it is only an aid to navigation. The information it presents to us should not be relied on too much.

#### Good use of the radar

Do not rely on scanty information. A quick look at the display and some assumptions about what you are seeing on the radar can lead to an incorrect feeling of security.

Be aware of the capabilities and limitations of your equipment. Use functions like guard zones and watch alarms to their full effect to complement your VISUAL lookout. Use long range scanning and change the range of the radar regularly, so you get an early warning of approaching ships and then continue to monitor ships until past and clear.

The radar"s bearing marker (if fitted) can give you an early idea about possible risk of collision. If there is no change in the bearing of a radar target, then the vessels are in danger of having a collision, and action to avoid a collision needs to be considered immediately.

#### Ships radar

Some fishermen have heard about the ARPA (Automatic Radar Plotting Aid) computers that are fitted to the radars on large ships. One of the unfortunate side effects of this increase in information and accuracy on large ships is that the officers on watch may be lulled into a false sense of security and may feel safer going closer to other vessels because they feel that the computer has calculated that it is safe to do so.

#### The limitation of radar

Radar technology has developed to the extent where radars are reliable aids for both navigation and collision avoidance. Remember that radar does have limitations and it is important to understand what these limitations are. Radars are not "all seeing eyes".

The display of an echo is dependent on the following four factors:

- 1. The correct setting up of the radar display.
- 2. The siting of the vessel"s radar antenna.
- 3. The target. The echo response received from a target depends upon the following four factors:

*Size* – Targets presenting a large surface area to the radar signal will be detected more easily and at a longer range. Small targets of limited surface area, which are not very high, may not be detected, if at all, until much closer to the source radar.

*Shape* – A smooth shaped object, like the hull of a fishing vessel, gives a poor radar detection response as compared to a rough shaped object, eg a rocky coastal outcrop.

*Composition* – Metal objects give a better radar response than wood. Fibreglass objects (GRP) do not reflect the radar waves and will not be displayed on a radar screen. Small vessels, particularly those made of wood or other nonmetallic materials, can have a large number of separate reflectors (metal masts, booms, engine and other metallic reflectors). None of these are large enough to provide a constant echo. The close proximity of masts, rigging, engine etc, acting as reflectors, can also make the vessel a "multiple" reflector target.

*Aspect* – A target beam-on to the radar transmission is more likely to give a radar return than a target lying at an angle of 45 degrees, or head-on, to the transmission.

4. The weather conditions at the time of using the radar.

Wind waves form targets, which reflect the radar waves and form "sea clutter". This clutter varies widely with the sea state. Return echoes from rain showers (rain clutter) can have the same effect. Small vessels are more likely to be consistently lost in clutter than are large vessels.

Rain, fog, high humidity and an air temperature lower than the sea temperature will reduce the radar detection range.

Remember that radar is only useful if you assess the information it presents correctly – a fact that is sometimes forgotten on large ships as well as fishing vessels. Watchkeepers should look at the radar frequently and systematically, to make sure they are aware of the latest information being presented to them.

#### **Radar reflectors**

These inexpensive pieces of equipment can make a large difference to the type of radar trace a ship sees on its radar screens. When the ship can see a strong radar return of on object, the officer on watch can make effective use of the ship"s ARPA. The ARPA will "lock" onto the return and give the officer on watch an indication of the other vessel"s course, speed and how close it will approach to the ship (on its present course and speed). However, the accuracy of the heading information decreases with the speed of the target.

To improve the radar detection of small vessels, it is a good idea to fit as high as possible above the water line, as a minimum:

- A metal corner radar reflector mounted "in the catch water position"; or
- An octahedral cluster of corner reflectors.

#### **Radar transponders**

Radar transponders are devices that, when activated by another vessel"s radar, produce a highly visible trace on that vessel"s radar screen. These devices are becoming more readily available and owners and skippers of fishing vessels should consider their use.

## Safety Feature

#### Fatigue

Fatigue may be described as a reduction in physical and/or mental capability as a result of physical or emotional exertion. This may impair nearly all physical abilities including strength, speed, reaction time, coordination and decision-making.

You may have heard of someone suffering from either acute or chronic fatigue.

Acute fatigue occurs in a matter of hours and is a result of excessive mental or physical activity. This type of fatigue may be redressed by a period of rest or sleep.

Chronic fatigue, however, is experienced when your normal period of rest or sleep is insufficient to restore your working performance to its usual level. Chronic fatigue is deceptive and usually develops over a period of poor quality and/or insufficient sleep. It also takes a longer period of time to recover from.

Individuals suffering from chronic fatigue always perform below their personal best, but are often unaware that their performance has been significantly degraded. In the worst cases, chronic fatigue can cause an individual to spontaneously fall asleep while at work, often momentarily while sitting or standing in what is known as a "micro-sleep".

Fatigue has been a major factor in many marine accidents and has been present in many of the collisions between ships and fishing vessels. Sleep is a basic human need and lack of sleep leads to fatigue.

When at sea, fishermen work long hours and the work is usually hard physically. Opportunities for good quality sleep may be limited, particularly if the fishing vessel is away from port for an extended period of time.

Fatigue is not only a factor that is present in the collisions between ships and fishing vessels. Recent studies carried out by the International Labour Organization (ILO) indicate that fatigue is a major cause in many of the accidents that occur on board fishing vessels in the normal day-to-day operations. If fatigue can be reduced amongst fishing vessel crews, it will go a long way to make fishing vessels a safer place to work.

When on board a fishing vessel, take the time to look at how you are working and keep check on how tired you are. Keep an eye on the rest of the crew too. Any one of them could be suffering from fatigue and not realise it. Being aware of fatigue, and how to manage it, is very important for watchkeepers, no matter what size vessel they" re on.

If you feel tired, rest is the only way to beat fatigue. If you are standing a navigation watch and you"re feeling tired, inform the skipper so that he can put someone else on watch, or at least take some action to stop this from becoming a problem later. This is difficult when there is limited crew on board, but in all cases, those on the vessel must manage their fatigue.

#### Safety equipment

In recent years, several fishing vessels operating off the Australian coast have sunk, taking the safety gear on board with them. In some of these accidents, the crew survived and were rescued after an extensive search and rescue operation. In one of the accidents, the two crew were adrift in a liferaft for 14 days before they were rescued. This was because they did not have the time to get their EPIRB (Emergency Position Indicating Radio Beacon) from it's bracket inside the wheelhouse before the vessel sank. Unfortunately, in some other accidents, the crew did not survive, despite the search operations initiated by authorities. In an accident where three fishermen men died, the fishing vessel was salvaged and the two EPIRBs it had on board were still in their brackets, inside the wheelhouse. In several of the fatal accidents, the lifejackets were also found inside the wheelhouse, still stowed in their locker.

Consider stowing your lifejackets, distress signals, the EPIRB and maybe a portable VHF radio in a grab bag. By doing this, the bag can be put on or near the working deck when the crew are working there. That way, the safety gear is there on the deck with you if you need it in an emergency, and not inside the wheelhouse, where you may not be able to get to it. The grab bag also makes it easy to take all the gear home with you, or lock it safely in the wheelhouse, when you get back to your berth.

The owner or skipper of the fishing vessel might want to consider buying a 406 MHz EPIRB. These digital EPIRBs are float free and, provided their bracket/ cradle is mounted correctly and clear of obstructions, the EPIRB will self activate and float to the surface, if the fishing vessel sinks. These EPIRBs are one of the best search and rescue tools available today because they take the "search" out of "search and rescue".

You must always be thinking about what to do if the unthinkable happens to your vessel and it sinks. Having all this safety gear on a vessel is not much good if you need it and it has sunk with the fishing vessel, leaving you in the water fighting for your life.

#### What's happening on board the ship

The ships operating around the Australian coast are usually large and cumbersome. They have a large turning circle and require a considerable distance to stop. In many cases, the draught of the ship also makes it difficult for it to manoeuvre (particularly in the shipping routes in the Great Barrier Reef). In addition, the bridge of a ship is high above the water, and in certain weather and sea conditions, a small fishing vessel can be difficult to see. This applies both visually and by radar.

## Safety Feature

Usually, there is only one person on the navigating bridge during the day time, although there are usually two at night. The crews on fishing vessels should appreciate that although keeping a lookout is of paramount importance, sometimes they are distracted and don"t perform this duty as well as they should.

There are several times each day when the watch on the bridge of a ship will change. These times, around midnight and 4 o" clock in the morning, are when many collisions happen. If you are in close proximity to a ship at these times, be aware that there is more activity on the bridge of the ship and that activity might be distracting to the officers either on watch or taking over the watch.

Ships manoeuvring to pick up, or drop off, a harbour pilot may not take actions that a fishing vessel crew might expect. The same applies for ships entering or leaving an anchorage or port. Fishing vessel crews must be keeping a proper lookout when their vessel is near these areas and be prepared to take some action to avoid a collision, or a close quarters situation.

If you are in doubt as to some actions of the ship, use your VHF radio to make contact with the ship on Channel 16 and ask what their intentions are. It is always better to know what''s happening than to incorrectly guess what''s happening. Even if the ship doesn''t respond, the fact that the officer on watch has heard a VHF transmission might increase their level of awareness and lookout.

#### Conclusion

Most people believe accidents are things that happen to other people. However, experience suggests that accidents of all types can happen to anyone. The best people often have the worst accidents.

A few minutes failure to keep a proper lookout can result in the death of one of your friends or yourself, and tragedy for the family left behind.

Being a fisherman is dangerous. A worldwide comparison between fatality statistics in the fishing industry and other general occupations shows that fishing is one of the world"s most dangerous occupations. A sustained effort is needed by everyone in the industry to improve the safety and health of all fishermen.

Every fisherman has a responsibility to ensure that their working environment is safe. Ultimately, it is up to the men and women who work on fishing vessels to think about what they can do to ensure that they return home to their family and friends safely at the end of a fishing trip.

Taking notice of the points discussed in this safety bulletin will help fishermen go some way to making the fishing industry a safer place to work.

## The deadliest catch and sea safety education in Alaska

In 2006 the Bureau of Labor Statistics in the United States ranked commercial fishing as the occupation with the highest fatality rate with 141.7 per 100,000 losing their lives annually. This is almost 75% higher than the rate for pilots, flight engineers, and loggers, the next most hazardous occupations in America. Of all the places to fish in America the Bering Sea in Alaska is the most dangerous, and crab fishing is the most dangerous fishery there. Since 2005 the Discovery Channel has been broadcasting a cable TV series documenting the perils of this fishery. The series is called Deadliest Catch (http://dsc.discovery.com/ fansites/deadliestcatch/deadliestcatch.html), and follows eight to ten crab fishing boats and their crews throughout two of the most dangerous crab fishing seasons, the October king crab season and the January opilio crab season. The show, which emphasizes the danger of this fishery and the perils to the crew members, has been running for four seasons, and a 2009 season is in the works. Weather and the nature of the work probably account for much of the danger in the crab fishery, but cold plays a role as well. In the tropics and sub-tropics a fisherman can survive hours and even days if he falls overboard or if his boat sinks. In the Bering Sea this time is reduced to just minutes. One organization in Alaska is dedicated to training people to handle a variety of emergencies in ways that increase their chances of surviving Alaska's extreme environmental conditions. Much of what they have to offer, however, applies to conditions anywhere in the Pacific, even in warmer tropical waters.

AMSEA, or Alaska Marine Safety Education Association (http://amsea.org/), was founded in Alaska in 1985 with the goal of reducing injury and death in the marine and fresh water environment through education and training provided by a network of qualified instructors. Since its founding, AMSEA has trained more than 1190 instructors who train more than 10,000 people each year, including school children, commercial fishermen, recreational boaters, and agency personnel. To date AMSEA has trained over 110,000 people. Over time AMSEA has developed three areas of focus: train-the-trainer courses, training for professional mariners including commercial fishermen, and training for subsistence and recreational boaters. A visit to their

## Safety Feature

website reveals the extent of their commitment. They not only conduct courses, they have safety programs, safety displays on loan, an online store featuring safety books and DVDs, and educational materials that can be downloaded for free from their website. AMSEA has kindly allowed us to reproduce one of their documents, a Risk Assessment for Commercial Fishing Trips (http://amsea.org/documents/EmergInstr-DrillManual.pdf), which will be of use to fishermen no matter where they are working. Have a look at the risk assessment check list, make copies for your vessel or company, or make your own risk assessment check list based on the AMSEA model, and fill it out before each trip. We urge you to check out the AMSEA website for more valuable documents including the newly revised Commercial Fishing Safety Digest (http://amsea. org/pdf/CommFishSafetyDigest-2008.pdf) and the Emergency Instruction and Drill Manual (http://amsea. org/documents/EmergInstr-DrillManual.pdf).

## Risk assessment for commercial fishing trips

Before a commercial fishing trip, the owner or operator can complete this assessment, assigning each element a numerical value of 1-5, with 5 being the highest risk. The assessment is used to identify high-risk elements. Then, steps should be taken to reduce risk in those elements and for the trip overall.

ELEMENT	ASSESSMENT CRITERIA	RISK VALUE
TRAINING	Level of safety training of crew. Classroom vs. hands on training. Prior training from other sources. Monthly, thorough drills conducted.	
CREW EXPERIENCE	Amount of experience among individual crew. Do crew have substantial fishing/boat experience and skills? Age of crew and level of physical fitness. USCG License? Stability training? Drill conductor certified?	
OPERATOR EXPERIENCE	Does the captain/operator have a background and experience in this type of fishery and this type of vessel?	
LOCATION	How remote are the fishing grounds? How far is help if needed both from coast guard and other resources? What risks are presented by the locations (currents, windy passages, bar crossings, distance from shelter in case of rough weather)?	
WEATHER	How dangerous is the predicted weather or weather typical for this time of year? How will this impact the trip?	
EQUIPMENT	Do vessel and crew have proper safety equipment such as liferaft, immersion suits, EPIRB, dewatering pump, personal PFDs for deck work, bilge/fire alarms etc. and redundancy? Gear within certification? Dockside exam sticker within last year?	
COMPLEXITY	What is the overall complexity of the fishing operation? Length of trip, crew fatigue, crew size, complicating variables, size of operational area, economic limitations, competitiveness of fishery etc.	
HULL/GEAR	Hull integrity, recent survey/classification, general condition of hull, gear and machinery. Recent changes/weight affecting stability?	
	TOTAL:	

A score of 7-12 is low risk; 13-23 requires caution; 24-35 is high risk. Use similar score breakdowns if certain elements are given greater weight than others. Identify elements or areas that require special emphasis. To lower overall risk due to a high-risk category you do not have control over, look for ways to lower risks in another category that you do have control over.

The following situations override the above risk assessment and vessel SHOULD NOT LEAVE PORT:

- 1. Storm forecast
- 2. Hull integrity problems
- 3. Expired and or damaged or missing safety/survival equipment
- 4. Power plant(s) and machinery not fully operational
- 5. Insufficient fuel, food, or other necessary supplies.





## SPC's Nearshore Fisheries Development and Training Section (NFDTS) tests new Argos portable beacon for small fishing boats

CLS, or Collecte Localisation Satellites (http://www. cls.fr/welcome\_en.html), is a company located in Toulouse, France that operates and manages the global Argos tracking and data collection system. Since beginning in 1986, CLS has been active in monitoring drifting and anchored buoys, operating satellite-based vessel monitoring systems (VMS), satellite-based oceanography and modeling, marine wildlife tracking, and detection of illegal, unreported and unregulated (IUU) fishing vessels. More recently they have developed a portable and user rechargeable beacon specifically for small artisanal fishing vessels.

The portable and rechargeable Argos VMS beacon (as seen below) was designed specifically to track small fishing boats with no onboard power supply or inadequate power supply. The beacon is suitable for any type of vessel from an outrigger canoe to a small- to medium-scale longline boat. The beacon is fully programmable in terms of its GPS acquisition period (e.g. logging a position every 2 hours, every hour or every 30 minutes), and these GPS positions are then stored internally and transmitted to the Argos system. The transmission times to Argos (e.g. 4 hours on, 4 hours off) are also programmable and the end result can be 24 GPS positions per day if logging hourly, with an operational time of over 3 weeks before charging the battery is required.

The beacon is not only simple to install but also simple to operate as there are only two buttons and one light emitting diode (LED) to indicate the status of the beacon. Installation onboard a fishing boat does not require any tools and can be done in less than 10 minutes with the supplied bracket, which can be cable-tied to a suitable area on the fishing boat. This allows the beacon to be removed (unclipped from the bracket) from the fishing boat when the boat is in port.

## TRANSMITTER MAR-GE/T

#### MAR-GE/T beacon

The Argos-GPS MAR-GE/T transmitter is specially designed for monitoring small traditional fishing boats. It transmits position reports twice daily and integrates a GPS datalogger. It also provides a rescue-support capability which automatically transmits a regular position to your land-based station in case you have to request assistance. One of the best features of the beacon is the ability to transmit a 'request for assistance message' in addition to the normal VMS positions. When this request is activated the beacon transmits continuously to the Argos system and the GPS logging period is reduced to every 15 minutes irrespective of previous configuration. Request for assistance messages are directed to the fisheries office or fishing company in the country where the boat operates so that help can be dispatched quickly. The beacon is waterproof and buoyant, so it can be removed quickly and taken by the fishers if they abandon their vessel or it sinks.

In early 2008 CLS contacted SPC's Nearshore Fisheries Development and Training Section (NFDTS) to ask if we could assist in conducting field tests of this new device. We readily agreed and the tests began soon after we received two of the new Argos beacons. The first battery of tests was conducted at SPC headquarters. We tested the beacons' general and technical functions, such as ease of use, reporting frequency, and satellite processing time in nominal mode and in request for assistance mode — both onshore and in the field. Results of these tests were very impressive and NFDTS subsequently purchased two beacons that the section's Fisheries Development Officers (FDOs) plan to use during all future field work. One of the tests conducted in 2008 involved taking a beacon on a domestic longline boat fishing out of Rarotonga, Cook Islands. The chart generated by that test can be seen in Figure 1. Contact SPC's NFDTS if you would like a copy of the full report on the technical evaluation of the Argos beacon.

For more information contact Guan Oon, Managing Director, CLS Argos Aust-NZ-South Pacific Email: guan@clsargos.com.au or guanoon@pacific.net.au

The MAR-GE/T beacon is robust and its installation is very simple. It is an autonomous, rechargeable device with easy maintenance.

#### Performance

- Full global coverage
- Autonomous and rechargeable device: up to 30 days of operation between two battery charges in normal operation, up to 5 days in assistance mode
- Assistance button protected to prevent accidental operation

- LED for current mode visualization
- Positions accurate to within 100 meters using a builtin GPS receiver
- Backup positioning by the Argos satellite system
- Robust all-in-one design for marine environments
- Floatabl transmitter

#### **Technical characteristics\***

Size	Diameter = 134 mm, $Height = 280 mm$	
Weight	1 kg (TBC)	
Temperature	Operating temperature: -20°C to + 50°C Storage temperature: -25°C to + 70°C	
Waterproofness	IP67 (Floatability: submersible under 1 m water depth)	
Power	Rechargeable battery (up to 30 days of normal operation, 5 days in assistance mode)	
Output RF power	32 dBm (1.5 W)	
Output frequency	$401.650\ MHz\pm30\ kHz$	
Argos transmitter	CNES certified transmitter	
Argos message length	224 bits, standard 140 second interval	
GPS receiver	Fastrax iTrax03 12 channel	

\*Technical characteristics are subject to change without prior notice

#### Assistance feature

In case of emergency, the crew can send a request for assistance to the designated authority:

- Secured button to request assistance
- Light display (transmitter powered, transmission active, assistance request sent)
- 5 days of autonomy with a GPS location every 15 minutes
- Transmission in floatable position

#### Performance

interval.

- GPS position interval: configurable reporting rate from 1 position per day to 24 positions per day
- GPS speed and heading: transmission of the speed and heading for all locations
- Transmission of maintenance messages: battery level, indication of last triggered assistance, GPS constellation state

Datalogger: all transmitted GPS positions are saved for 6 months at 60 minute GPS acquisition





Figure 1. Argos track of F/V Gold Country 08/09/08

## **Tales inspire EPIRB (from National Fisherman)**

#### ACR's iPRo has a digital display and dual GPS technology

By Michael Crowley

If you listen to enough sea survival stories, people will tell you they worried because they didn't know the battery life of their EPIRB; they didn't know if the EPIRB was really working; or they were holding onto the EPIRB's antenna the entire time they were in the water. (And possibly from the latter that the Coast Guard had a hard time homing in on them.)

ACR Electronics has spent a fair amount of time listening to stories like these. "We've heard these gems of wisdom over and over and thought we could work a display into the EPIRB to allow the user to develop a comfort level with the beacon," says ACR's Chris Wahler.

The result is the GlobalFix iPro EPIRB with a digital display screen (Figure 1) Wahler says, "No other beacon has a display screen."

The iPro has a number of instructional messages; for instance, if you are in the water and holding onto the antenna, a message tells you: Do not hold by aerial.

If you are in a covered life raft and the GPS signal isn't getting out, the screen will display the message: GPS view is weak. Get clear view to sky.

It can display your latitude and longitude. Then if a handheld VHF radio is available and you're in contact with another boat, your can give your position.

Another first for the iPro, says Wahler is "dual GPS technology. There's an external and internal GPS. That's unique in the marketplace."

The benefit to this feature is when iPro is connected to an external GPS, the boat's position is already loaded in the beacon prior to its being activated. The position goes out with the first distress message. Otherwise, the beacon takes several minutes to acquire the boat's position with just an internal GPS.

Wahler says the dual technology means there is a "shorter notification period between when someone hears the distress message and knows where it is at. It also means a smaller initial search area."

Wahler reminds buyers of EPIRBs to register them properly. "If it is not registered, it will delay the start of the rescue," he says.

ACR Electronics' GlobalFix iPro has a suggested retail price of \$1,540 for the category 1 unit (with automatic hydrostatic release bracket) and \$1,300 for the category 2 model (manual release). Contact ACR Electronics, 5757 Ravenswood Road, Fort Lauderdale, FL 33312; tel. (800) 432-0227; www.acrelectronics.com.



Figure 1. The iPro EPIRB's screen shows its position and has instructional messages relating to the EPIRB's operation.

## Liferafts and their release mechanisms

#### **This Safety Bulletin is for:**

- safe ship management companies
- ship surveyors
- Maritime Safety Inspectors
- owners and operators
- skippers and crew
- liferaft servicing stations.

#### Will your liferaft save your life?

It is blowing 40 knots, raining, night-time; your vessel is sinking and you have to abandon ship. Your best chance of survival in the freezing sea is a liferaft.

If your vessel capsizes, can the liferaft escape? Make sure the:

- Hydrostatic release unit (HRU) is connected correctly
- Liferaft is not prevented from escaping by extra lashings or rigging on the vessel, or by a cover on the liferaft

#### **Common problems with** liferafts

Make sure the following happens on your vessel:

- the liferaft is NOT stowed in • an area where rigging will prevent the liferaft being able to leave the vessel
- the liferaft is NOT stowed • in a cradle that is too tight to release the liferaft in an emergency
- there is NO cover over the • liferaft that may stop it from inflating
- gear is NOT stowed around the liferaft, making manual operation difficult and reducing the liferaft's ability to deploy
- easy access IS provided to the liferaft when it is stored in a difficult location, e.g. the wheelhouse roof.

#### Manual release liferafts

The manual release on a liferaft is more likely to be used in an emergency than waiting for the hydrostatic release unit to deploy.

#### **Common problems**

Manual release is difficult to operate owing to lack of maintenance or seized parts.

#### Senhouse slip It is recommended that lashing Ensure strapping arrangements are is tight otherwise checked to ensure the chisel in HRU may manual quick release not cut rope. arrangement can be easily released. Weak link When immersed HRU chisel cuts rope and releases lashing. 0 Painter Strong point 1. If vessel sinks, Hydrostatic Release Unit activates, and liferaft attempts to float to surface 2. Tension on painter will cause liferaft to inflate Correct installation 3. Tension on weak link will of older version HRU cause it to break ensuring liferaft does not go down with the boat

Diagram provided by the UK's Royal National Lifeboat Institution (RNLI)

#### **Correct installation of Hydrostatic Release Unit (RHU)**

The liferaft is difficult to get over the side of the vessel because it is obstructed by guardrails or rigging.

#### Float-free liferafts and the hydrostatic release unit (HRU)

Float-free launching is the method of launching a liferaft whereby it is automatically released from a sinking ship and is ready for use. Float-free arrangements may either be an HRU or some other means. Whatever type it is, if your vessel capsizes too quickly for you to release the liferaft manually the float-free arrangement may be your only chance of survival.

#### **Common problems**

- The painter is connected to the ship and not the weak link, so the liferaft inflates but goes down with the ship.
- The disposable HRU is out-of-date and will not work.
- The serviceable HRU has not been serviced and will not work.
- The expiry date is not marked on the HRU when it is replaced so there is no record of when to replace it.

#### Incorrect installation of Hydrostatic Release Unit (RHU)



- - If liferaft is thrown overboard in an emergency (or comes adrift at sea) it may be lost

#### Conclusion

In the event of capsizing and/or sinking the liferaft is your best chance of survival.

It is important that:

- every crewmember is trained in how to maintain and deploy the liferaft
- the liferaft is easy to get to for manual release
- the liferaft is stowed in an area clear of rigging and in a cradle that will allow the liferaft to escape

• on float-free liferafts the HRU has up-to-date service and expiry dates.

#### **Recommendations/** actions

During maintenance checks • make sure your liferaft and its connections are in accordance with the advice in this safety bulletin.

The procedure for connecting each of your liferafts and how to care for them should be in your SSM manual.

For further information, please contact: Nautical Analyst, Maritime New Zealand Phone: (04) 494 1209 Fax: (04) 494 1263



SPC Sea Safety Special Interest Group Information Bulletin #5 – May 2009 1 3



- 2. Liferaft will float free and eventually inflate
- 3. Because the painter is secured directly to the strong point, the liferaft will NOT be released to the surface EVEN IF it is attached to the weak link as well.

Diagram provided by the UK's Royal National Lifeboat Institution (RNLI)



## The FAO expert consultation on best practices for safety at sea

The Food and Agriculture Organization of the United Nations (FAO) organised the Expert Consultation on Best Practices for Safety at Sea in the Fisheries Sector (10-13 November) as a response to a recommendation made at the twenty-seventh session of the FAO Committee on Fisheries (COFI) in March 2007. A large number of members expressed concern about the safety at sea of fishing vessels, especially small-scale fishing vessels. FAO was urged to continue collaboration with IMO and it was suggested that FAO should develop guidelines on best practices for safety at sea and that COFI should consider developing an International Plan of Action (IPOA) on the subject.

There were nine experts invited to the Consultation and four resource persons. The SPC Nearshore Fisheries Development and Training Adviser was part of the latest category with Dr Yugraj Yadava (Director, Bay Of Bengal Programme), Brandt Wagner (Senior Maritime Specialist, ILO) and Hiroyuki Yamada (Marine Technology Section, IMO). Experts participated in their personal capacity and were from a range of countries including Iceland, Japan, Oman, Philippines, South Africa, Sweden, Canada and Venezuela. Most had a professional background in maritime safety and few had fisheries-specific experience. The FAO Technical Secretary consisted of Jeremy Turner (Chief of FAO Fishing Technology Service) and Ari Gudmudsson (Fishery Industry Officer – Vessels, Fishing Technology Service).

The expected outcomes of the Expert Consultation were: (i) a report containing a draft outline for guidelines on best practices for safety at sea in the fisheries sector, together with recommendations regarding their scope, special needs of developing countries, any special considerations and goals; and (ii) that the report should also identify appropriate next steps that might be taken following the completion of the Expert Consultation.

Participants were informed that the draft outline resulting from the Consultation will be developed by FAO, with inputs from the participants to the Consultation, into the Guidelines on Best Practices for Safety at Sea in the Fisheries Sector. The Guidelines will be published under the series: FAO Technical Guidelines for Responsible Fisheries i.e. as a subset of the Code of Conduct for Responsible Fisheries.

The principle objective of the Guidelines should be the improved safety and health of those working in the fisheries sector through the development of **national strategies.** This objective should be achieved through

the use of a set of readily understood guidelines. It was emphasised that the guidelines should ensure a **holistic approach** to ensure that all factors having an influence on safety are comprehensively covered, and that **awareness-raising** of safety issues should be accorded a high priority.

The Consultation agreed on an outline for the development of Guidelines on Best Practices based on a series of **four interlinked "pillars"**. In each of these pillars, three layers of guidance would be provided: a first layer directed at the policy level supported by a second layer that would set out more detailed procedures and checklists, and a third layer that might provide detailed working instructions, case studies and reference material. During the four days of the meeting, Experts and resource persons, the four pillars were 'built' as follows:

Under the first pillar a baseline assessment of safety issues will be carried out through data collection and analysis of accidents within the fisheries sector in order to identify and provide the necessary information to permit an understanding of problems where they exist. In addition, the results of the analysis would provide benchmarks in support of monitoring and evaluation units.

The second pillar will consist of an inventory or baseline survey giving a comprehensive overview of all aspects of a national fisheries sector and in particular, the human resources engaged in the sector, as well as available aquatic resources, technology and supporting services. Such an inventory would be useful in drawing attention to the diversity of fisheries which range from subsistence fisheries to industrial fleets.

Within the third pillar, the information provided under pillars 1 and 2 will be analysed in detail in order to identify safety problems and their causes. This would then be used to develop corresponding solutions and measures for their mitigation and prevention strategy.

The fourth pillar will then concentrate on the implementation and promotion of the strategy. This would include how to advocate, manage and influence change and evaluate the progress.

It was stressed by the Expert Consultation that as guiding principles, the Guidelines should recognize the need to adopt a **participatory approach** through consultation with stakeholders and the creation of a broad-based empowerment structure to ensure ownership of the process by the ultimate beneficiaries:

## **Resource Materials**

the fishers and their families. It was further highlighted that the Guidelines should recognize the need for regional and sub regional cooperation in promoting safety at sea, especially of small-scale fisheries. It was also stressed that whereas the guidelines should have a global perspective, the intent is for action at national and local levels. A contributing factor identified by the Consultation was to ensure that all stakeholders hold a clear and shared vision of the objectives. It was further emphasized that to ensure a participatory approach the language used in the Guidelines should be as simple and non-bureaucratic as possible and that the document itself should be user friendly, taking into consideration the relatively wide target audience and application of the guidelines at the national and local levels. It was noted that the Guidelines would be of particular value to those individuals or groups who would champion the cause of improving safety in fisheries.

The review of the **legal framework** related to fishing vessels safety should be participatory (with a view to including all stakeholders - governmental and non-governmental – who have an interest or may be affected by decisions on the matter) and interdisciplinary (lawyers and technical experts should participate in the exercise building upon their different expertise). Recommendations on improving legislation on fishing vessels safety need to be flexible and to a certain degree general, so as to be useful to different countries with different legal frameworks and different legal traditions. Special attention should be given to the development and implementation of appropriate and enforceable legislation for small vessels, including the carriage of safety equipment and training requirements. A model law may, therefore, not be the ideal instrument; rather, elements of solid legislation on fishing vessels safety may be identified, and certain options for their inclusion in a specific legal framework may be formulated to provide some guidance to countries. Besides playing a "command and control" role, legislation may be a significant tool in providing incentives, addressing training and education issues, and creating the basis for permanent institutional cooperation.

Following the presentation to the Experts of a paper titled 'International Commercial Fishing Management Regime Safety Study: Synthesis of Case Reports', the Expert Consultation thoroughly discussed the relationship between fisheries management and safety at sea. The Synthesis document, which describes a global study recently undertaken by FAO and the US National Institute for Occupational Safety and Health (NIOSH), concludes that fisheries managers should acknowledge the indirect and direct effects of fisheries resource management measures on the safety of fishing operations and that they should consider safety as part of their goals. The Consultation reviewed the recommendations made in the Synthesis document and noted that it contained some very valuable observations. Based on the discussion, the recommendations for the Synthesis document will be modified to address the following issues:

- every fishery managers decision impacts on safety;
- the title of the chapter on recommendations will be changed to "Recommendations to move forward" since the chapter will now contain advice not only to fisheries managers, but also safety professionals and others;
- reference will be made to the relevance of the fishermen's safety within the Ecosystem Approach to Fisheries; and
- the report will recommend that fisheries managers and safety professionals should work together and engage on issues of mutual concern.

The Expert Consultation considered the possible needs of developing countries to implement guidelines on best practices in the fisheries sector. It recognized that many developing countries would have special needs that would extend beyond simply translating the best practices into national languages and that this would certainly be the case within the artisanal and small scale fisheries sectors. It was anticipated by the Consultation that assistance may be required to remove constraints to the development and implementation of a safety policy, and also to promote participation in regional and sub regional activities related to safety at sea. In addition, possible issues were identified that may include, inter alia, the need for technical and legal assistance, data collection and analysis, capacity building, scientific cooperation and the training of trainers and extension workers. Furthermore, it was noted that there would be a need to clarify how such assistance could be made available through, for example, technical cooperation programmes and regional cooperation. The Consultation considered that special attention should be given to the availability and affordability of safety equipment and servicing facilities, noting that such availability and affordability could influence promulgation of regulations.

The Expert Consultation concluded its work with the identification of a series of appropriate next steps in the development of the FAO Guidelines on Best Practices for Safety in the Fisheries Sector. Five recommendations were made to that effect:

1. The Expert Consultation, noting the recommendation contained in the Report of the Twenty-seventh session of the COFI that "...FAO should develop guidelines on best practices for safety at sea", recommended that the FAO secretariat should now

proceed with the development of the guidelines on the basis of the outline and general guidance developed by the Expert Consultation. The Experts expressed their willingness to be involved in the work, either in the development or review of draft texts. The Consultation noted the advantages of drawing on the expertise available within the ILO and IMO secretariats and recommended that FAO strive to ensure coherence with IMO and ILO instruments, codes and guidance (including joint FAO/ILO/IMO publications) and integration with ongoing and related work by IMO and ILO.

- 2. The Expert Consultation noted with interest the quality of the findings of recent FAO regional workshops on safety at sea and suggested that their outcome be reflected in the Guidelines.<sup>1</sup>
- 3. Following extensive discussion on the draft executive summary of the 'International Commercial Fishing Management Regime Safety Study: Synthesis of Case Reports', the Expert Consultation recommended that FAO should freely distribute the templates used in the development of the case studies to countries wishing to carry out a case study on their own fisheries. Agreeing with the

report's main finding that fisheries management has indirect and direct effects on fishing safety, the Consultation also recommended that FAO should undertake further research into impacts of fisheries management on safety, for the purpose of developing training materials that could lead to an improved and shared understanding between fisheries managers and safety professionals on issues of mutual concern.

- 4. Considering the socio-economical and environmental elements of safety at sea, the Consultation recommended that FAO and regional fisheries management organizations undertake to promote safety at sea as part of the Ecosystem Approach to Fisheries.
- 5. The Experts, aware that the guidelines constituted only voluntary guidance, considered and sought ways and means to ensure that they would lead to the development of national fisheries safety strategies. As a means of according additional authority to the guidelines, the Consultation strongly recommended the **development of an IPOA on safety in the fisheries sector**, of which the guidelines would be an integral component.

## Fishing Safely (from FAO Rome)

## An International Plan of Action (IPOA) on the safety of fishing vessels and fishermen could become a milestone

The Food and Agriculture Organization of the United Nations (FAO) has estimated that the global fishing fleet currently consists of about 1.3 million decked vessels and 2.7 million undecked vessels. About 86 per cent of the decked vessels are concentrated in Asia. There is little information available for the undecked/non-motorized vessels but it is estimated that Asia accounts for about 83 per cent of them. While virtually all decked vessels are mechanized, only about one-third of the undecked fishing boats are powered, generally with outboard motors. The remaining two-thirds are traditional craft of various types, operated by sail and oars.

Available statistics on fisheries employment are scarce, incomplete and of low quality. According to

FAO records, employment in the primary capture fisheries and aquaculture sectors in 2004 was estimated to have been about 41 million fish harvesters, including full-time, part-time and occasional workers. The great majority of these are in developing countries, principally in Asia. In 2004, the number of fishermen accounted for three-quarters of the total number of fish harvesters, that is, about 30 million, of which 16 million are working full-time in the marine sector. About 98 per cent of fishermen are working on board fishing vessels of less than 24 m in length, and about two-thirds, on vessels of less than 12 m in length, both decked and undecked.

Fishing at sea is probably the most dangerous occupation in the world. The International Labour

 BOBP/FAO Workshop in Chennai, India, October 2001; FAO TCP/RLA/0069 Regional Project in the Caribbean region, 2000-2001; FAO/SPC Regional Expert Consultation in Suva, Fiji, February 2004; FAO/SWIOFC Regional Workshop in the South West Indian Ocean, Moroni, Comoros, December 2006; FAO Regional Workshop in Latin America and the Caribbean in Paita, Peru, July 2007



Organization (ILO) estimates that 24,000 fatalities occur worldwide each year in capture fisheries. The consequences of loss of life fall heavily on the dependents of fishermen. In many developing countries, these consequences can be devastating: widows have often a low social standing; there is no welfare state to support the family; and, with lack of alternative sources of income, the widow and children may face destitution.

The safety of fishing vessels and fishermen involves several inter-related components such as design, construction and equipment of the vessels. However, social and economic pressures, as well as overcapacity and overfishing of coastal resources, are probably the major factors that have negated the results of efforts to improve safety at sea. Furthermore, issues of safety on fishing vessels are different from those on merchant vessels, where, for example, the majority of hazardous operations are carried out in the safety of the port, unlike on fishing vessels (particularly small fishing vessels), where crews have to work at sea, on deck, in all types of weather, frequently with the hatches open, locating and gathering their cargo from the sea.

#### Matter of concern

The safety of fishing vessels and fishermen has been a matter of concern for FAO since its inception in 1945, when the organization provided assistance in the establishment of fishery-training institutions in a number of countries. Hundreds of training institutions were established, many of which are still operating. Hundreds of fisheries projects related to training and safety, including courses, workshops and seminars, have been organized, in which many thousands of participants have taken part. FAO has carried out several regional projects on the safety of fishing vessels and fishermen. Currently, a number of projects devoted to safety are under implementation and others are under development.

Safety in the fishing industry cannot be divorced from fisheries management, and this fact is recognized in the provisions of the FAO Code of Conduct for Responsible Fisheries. The Code, which was unanimously adopted on 31 October 1995 by the FAO's governing Conference, provides a necessary framework for national and international efforts to ensure sustainable exploitation of aquatic living resources in harmony with the environment. The Code, which is voluntary, also addresses safety and health in the fishing sector.

There is a long-standing co-operation between FAO and its sister United Nations (UN) organizations, ILO and the International Maritime Organization (IMO), in developing guidelines and standards on the safety of fishing vessels and fishermen. The first attempt to address the safety of fishing vessels and fishermen at an international level took place in the early 1960s in the form of the following publications:

- FAO/ILO/IMO Code of Safety of Fishermen and Fishing Vessels, Parts A and B
- FAO/ILO/IMO Voluntary Guidelines for the Design, Construction and Equipment of Small Fishing Vessels
- FAO/ILO/IMO Document for Guidance on Training and Certification of Fishing Vessel Personnel

Currently, FAO is working with ILO and IMO in developing new safety standards for small fishing vessels that are not covered by the revised Code and Guidelines. The provisional title of these new standards is "Safety recommendations for decked fishing vessels of less than 12 m in length and undecked fishing vessels". The target completion date for this work, which also includes the development of guidelines for implementation of the Safety recommendations, is 2010. The website of the international correspondence group, which is developing the Safety recommendations and Guidelines, is http:// www.sigling.is/fvs-iscg

The main reason for accidents in the fishing industry is human error (estimated to be responsible for 80 per cent of accidents in the industry), rather than the design and construction of unsafe boats. Poor fishing practices and seamanship result, for example, in well-designed and constructed fishing vessels capsizing because of ignorance of operational factors that govern the stability of the vessel.

#### **External advice**

It is likely that many developing nations will seek external advice in planning the management of fisheries in their exclusive economic zones (EEZs). FAO is the UN agency with the mandate and competence to promote a holistic approach to fisheries management, including safety of fishing vessels and fishermen, in developing countries.

This is in full accordance with FAO's mandate to raise levels of nutrition and standards of living, and follows naturally from the organization's formulation of the Code of Conduct for Responsible Fisheries and its mandate to monitor the application and implementation of the Code and its effects on fisheries worldwide.

By making safety requirements pre-requisites to fisheries authorization, progress is guaranteed. To fish legally will be to fish safely. Such a step will require a change of attitude within the fisheries, and, consequently, a firm motivation on behalf of the legislators, but, given that fishing is one of the most dangerous occupations known on earth, this progress seems inevitable.

The main lesson learned from FAO's experiences in the implementation of its various safety activities is that recommendations, however sound, do not form an adequate basis for administrations to act or for industry to respond. Despite the development of instruments and guidelines related to the design, construction and equipment of fishing vessels, the accident rate in the fishing industry is unacceptably high. The main cause of accidents and loss of lives in the industry is not poorly designed, constructed or equipped vessels, but human errors resulting from lack of awareness of safety problems, and poor fishing practices and seamanship. Such practices often place demands on boats that exceed their design limitations. Regulations that result in the vessel being stronger, more stable or more seaworthy may simply result in the operators taking greater risks to improve their catches. This could be avoided by fisheries management measures that deter or prevent skippers from doing so, or by fisheries management measures that might remove some of the economic pressures that force fishermen to take risks.

At the 27th Session of the FAO Committee on Fisheries (COFI), a large number of members expressed concern about the safety at sea for fishing vessels, especially small-scale fishing vessels. FAO was urged to continue collaboration with IMO, and it was suggested that FAO should develop guidelines on best practices for safety at sea, and that COFI should consider developing an International Plan of Action (IPOA) on the subject.

An IPOA on the safety of fishing vessels and fishermen, which would incorporate guidelines on best practices for safety at sea, could become another milestone to improved safety, providing the opportunity to address safety in a holistic fashion. An IPOA is a voluntary instrument elaborated within the framework of the FAO Code of Conduct for Responsible Fisheries.

In implementing the existing IPOAs, States are required to carry out a set of activities in conjunction,

as appropriate, with relevant international organizations, and conduct a comprehensive assessment of the issue in question to determine if a problem exists. If a problem exists, States should adopt a National Plan of Action (NPOA), which is a plan that a state designs, implements and monitors to mitigate the problem.

The NPOA should prescribe appropriate mitigation measures; contain plans for research and development; prescribe means to raise awareness among fishers, fishing associations and other relevant groups; provide information about technical or financial assistance; and prescribe collection programmes of reliable data. This model could be carried forward by an IPOA on the safety of fishing vessels and fishermen.

#### **Changing fisheries**

States that determine that an NPOA is not necessary may be requested to review that decision on a regular basis, particularly taking into account changes in their fisheries. If, based on a subsequent assessment, states determine that a problem exists, they should implement an NPOA. States should report on the progress of the assessment, development and implementation of their NPOAs as part of their biennial reporting to FAO on the Code of Conduct for Responsible Fisheries.

An IPOA would have many advantages. Being a voluntary instrument, it would be unlikely to face the obstacles encountered in the development of a new international instrument. It is foreseeable that it could apply to all sizes of vessels. But as an instrument elaborated within the framework of the FAO Code of Conduct for Responsible Fisheries, it would have greater authority than voluntary guidelines. Following its adoption, an IPOA would require States to carry out, in effect, a national audit of the problem and the underlying causes, and to prescribe a broad range of actions to improve safety. It would also require states to report every two years to COFI on actions undertaken, and thus permit a sharing of experiences and lessons learned.

This article is by Jeremy Turner (Jeremy.turner@fao.org), Chief, Fishing Technology Service, FAO, and Ari Gudmundsson (ari.gudmundsson@fao.org), Fisheries Industry Officer, FAO

## Safety for Fishermen web-community (Per Danielsson, FAO Rome)

Fishing is probably the most dangerous occupation in the world. The International Labour Organization (ILO) estimated in 1999 that more than 24,000 fishermen die in accidents at sea every year, although many claim this figure is higher.

The Food and Agriculture Organization (FAO) has been working with safety for fishermen since the Organization was established in 1946. FAO is currently running a global safety at sea project with activities in West Africa and South Asia, where fishermen and boat builders are trained, and training and awareness material is produced. Numerous publications, awareness-raising material, posters and videos have also been produced within FAO and under other FAO projects. Material regarding safety at sea in the fisheries sector has also been developed by other organizations all over the world. There is a great interest among several organizations, including the Secretariat of the Pacific Community (SPC), the Bay of Bengal Programme - Inter-Governmental Organization (BOBP-IGO), and the National Institute of Occupational Safety and Heath (NIOSH), to distribute and share the information produced. FAO is a recognized knowledge organization and sharing information is of particular importance to the Organization. The idea is to gather information and material regarding safety for fishermen in one place, the Safety for Fishermen web-community.

The long-term goal is to create a knowledge community together with trusted partners in order to address the interest of sharing and distributing information and material on safety at sea for the fisheries sector. During the first phase of the safety for fishermen web-community the input will be received from a small group of experts. The selected group of trusted partners will be responsible for the quality of their own contribution of information and material. As the web-community grows, it would follow that the expert group would expand, prompting the web community to be more active.

The target group for this web-community includes maritime agencies, fisheries departments, coast guards, other governmental organizations, non-governmental organizations, training institutes, search and rescue (SAR) organizations, as well as organizations representing boat owners, boat builders and fishermen. One major objective is to highlight the importance of safety for fishermen to all the stakeholders and promote collaboration between them.



Figure 1 and 2. Beach landing site Gambia, West Africa



## **Resource Materials**

The strategy for the development of the webcommunity is to expand according to the needs and requests of the users. The amount of information and material available will be limited at first. However, the aim is to slowly expand through input from the expert group. The web-community will begin with about 5 topics (thematic areas) and various materials will be available for each topic.

Topics (Thematic areas)	Material				
Fisheries management					
Accident reporting	Publications				
Training & awareness	Posters				
Vessel & equipment	Videos				
Search and rescue					

It is our hope that the Safety for Fishermen webcommunity will be a well recognised gateway to high quality material and information related to safety at sea for the fisheries sector.

The Safety for Fishermen website was developed by the global safety at sea project.





Figure 4. Squid jigging fleet offloading, Paita, Northern Peru



Figure 3. Beach landing site Gambia, West Africa



Figure 5 and 6. India Port Vizag: Demersal Trawler fleet, Visakhapatnam



## When great isn't good enough (National Fisherman)

#### From U.S. Coast Guard reports

Even on a boat with a safety conscious owner and operator, accidents will happen. Vessels that are maintained in top condition, have all the latest safety and survival equipment, and have passed a Coast Guard safety examination suffer casualties. Crew members who have completed emergency instructions and drills and safety orientations get injured and die while fishing. Bad things can happen to a good vessel and a good crew. The chain of actions and reactions to any incident at sea can lead to disaster or deliverance.

On a November afternoon, the skipper and crewman of a steel-hulled, wheelhouse-forward stem trawler were fishing for dogfish about 70 miles off the coast of Maine. The 48-footer rode low in the water with a draft of about 7 feet. The air and water temperature were both about 50 degrees Fahrenheit with southwest winds at 15 to 20 knots. Waves were about 5 feet. The trawler was traveling with the seas and the wind.

With the outriggers down, the skipper switched on the autopilot, at about 3 knots heading northeast, so he could be at the stem to assist with hauling in the net. The haul was near maximum for the vessel, about 3,000 to 5,000 pounds. The stem board had been removed to bring the catch onboard, and they began securing the fish, which had caused a slight starboard list.

Shortly after the haul, the vessel took a wave on the port quarter, and water came on deck through the stem where the board had not yet been replaced. The wave knocked loose several fish trays and some of the catch, blocking the freeing ports. The crewman tried to clear the freeing ports as the skipper ran to the pilothouse.

Seconds later, a second wave came over the stem, swamping the vessel, and causing it to heel hard to port. The skipper realized it was going to capsize and yelled for the crewman to get to the starboard side. As she went over, the skipper was able to jump clear, but the crewman was pulled under. He came to the surface shortly after. Neither man was wearing PFD.

They tried to climb onto the overturned hull. Unsuccessful, they swam for the stem board when it floated to the surface. The stem board would not support both of them, so the skipper swam back to the vessel, assuming the crewman stayed with the stem board. After several attempts, the skipper was able to pull himself onto the hull. A short time later, he saw the crewman floating facedown in the water and away from the vessel. His death was ruled as drowning by the local medical examiners office. About two hours later, at sunset, the vessel sank, putting the skipper back into the water. He hung onto some floating debris until the inflatable life raft floated free of the trawler. The EPIRB did not deploy. The skipper was able to get into the life raft and shoot a parachute flare when he thought he saw an airplane, but there was no response. Several hours later he saw lights of a vessel and shot off another Bare. The vessel rescued the skipper and notified the Coast Guard. The next morning, with the skipper still aboard, the good Samaritan vessel located and recovered the body of the crewman.

#### **Lessons learned**

The vessel had satisfactorily completed a voluntary dockside safety exam and was issued a fishing vessel safety decal by the Coast Guard six months prior to the incident. At that time, the vessel was in full compliance with all safety equipment requirements, and it appeared to be in good material condition.

The vessel's life raft and EPIRB were serviced three months prior to the incident. A yard maintenance and servicing were performed on the vessel two months prior to the incident. This is indicative of an owner/operator who keeps his vessel in good condition and keeps all required safety and survival equipment in serviceable condition.

After the catch was hauled aboard, the stem board was not immediately replaced. This allowed extra water to wash over the deck from the wave that hit the port quarter. The wave knocked unsecured fish trays across the deck, blocking the two aft freeing ports. The forward four freeing ports had been closed, so there was little opportunity for water to drain from the deck. When the second wave hit, shipping more water onto the deck and shifting the load of fish, the vessel lost stability. Ensuring deck gear and equipment are properly secured until ready for use and all freeing ports are clear will help a vessel maintain stability.

Placing the vessel on autopilot so the skipper can help with the haul-back may be a common practice with small crews. Doing so in a following sea can put the boat in a vulnerable position, as it is more exposed to yawing, and there is no one at the helm to respond quickly. By the time the skipper reached the wheelhouse to correct the vessel's heading, she was already beginning to capsize. He was unable to reach a radio to issue a mayday.

Neither the skipper nor the crewman was wearing a PFD while working on deck, not an uncommon prac-

## Accidents and Incidents

tice. Their immersion suits were stowed in the wheelhouse, and the EPIRB was located on the starboard side of the pilothouse. Because events happened so quickly, the skipper was unable to retrieve the suits or EPIRB before he had to jump into the water. This left the two men in the water without any survival gear or emergency communication equipment. Having pros available where they were working may have saved the crewman.

In this incident, the EPIRB did not deploy, come to the surface and broadcast an emergency signal. The inflatable life raft did not deploy until after the trawler sank. Hydrostatic releases may not function until the device reaches depths up to 25 feet. So if a vessel is only capsized, the release may not be exposed to enough pressure to actuate and deploy the raft or EPIRB. Or if the emergency equipment becomes entangled on the vessel, it may not break free. It can be helpful to know at what settings your hydrostatic releases are designed to actuate.

Be aware of what you are doing out there, and be safe.

This article is based on U.S. Coast Guard reporting and is intended to bring safety issues to the attention of our readers. It is not intended to judge or reach conclusions regarding the ability or capacity of any person, living or dead, or any boat or piece of equipment.

## Fishermen in miracle rescue named (New Zealand Herald)

The two fishermen rescued yesterday after nearly 24 hours adrift in a tiny dinghy off the Hawke's Bay coast were named today by police. Search co-ordinator Sergeant Luke Shadbolt said Itintarawa Baraniko, 38, and his nephew Tebea Baraniko, 21, were "bloody lucky" to be alive.

The drama began when the pair, originally from Kiribati but now living in the Hastings suburb of Flaxmere, set out at 7.30pm on Monday to check their set net at the mouth of the Tukituki river at Haumoana, 10km northeast of Hastings. Their 2.5m dinghy capsized at the river mouth, and as they clung to the side of it they were pulled out of the river mouth into the Pacific Ocean. They managed to get back into the boat, but had to repeat the process as the boat capsized again during the night. The pair were left to huddle together, wet, throughout the cold and frosty night. Their oars had been lost and they had no engine, emergency equipment or lifejackets on board.

Police were alerted at about 12.30pm yesterday and began a full-scale search that included search and rescue, two Coastguard boats, a spotter plane and the Port of Napier pilot vessel. Various other private fishing and commercial boats also joined in, and the pair were discovered by the container ship Sunny Napier at 4pm yesterday, 26km off the Hawke's Bay coast.

A Kiribati community spokeswoman, Betty Ho, said the two men were recovering well from hypothermia in Hawke's Bay Hospital, and hoped to go home later today. "But fishing is off the list at the moment..."

Mr Shadbolt said the pair had been fortunate they were found. "These guys are bloody lucky. It becomes a very big search area - you're talking hundreds of square nautical miles of ocean. "Luckily they were right in the middle of the search area we had planned out, so had they not been spotted by the Sunny Napier, I'm confident we would have found them with the search techniques and planes and boats we were using."

Mr Shadbolt said rescues such as yesterday's were not uncommon in the Hawke's Bay. "It'll happen again - we have one like that every year and generally it ends in fatalities. It's a bit refreshing to find someone alive."

## Noted fisherman lost as 80-foot trawler sinks (Rhode Island News)

Amanda Milkovits, Peter B. Lord and Brandie Jefferson Journal staff writers

The patriarch of a Rhode Island fishing family and a well-known advocate for the Northeast fishing community has been missing off Cape May, N.J., since Wednesday night. Capt. Philip Ruhle Sr., 56, went down with his 80-foot fishing trawler, Sea Breeze, alone in the wheelhouse trying to gain control of the dangerously listing boat as his two-man crew attempted to raise a port outrigger dragging in the water. Only moments before, the boat had suddenly heeled in the 8-foot seas, catching the men unawares. "Everything happened so fast," crew member Rayford Carr, of New Bedford, told the Coast Guard later. The men fought to right the boat as it lurched 45 degrees and the swells came over. But the trawler, with 100,000 pounds of squid bound for Cape May sloshing in He is a third-generation fisherman, like his father and grandfather, and followed by his 34-year-old son, Phil Ruhle Jr., whom he'd taken fishing when he was a small boy. Ruhle Jr. became his father's partner on the stainless-steel trawler Sea Breeze, based at the Parascandolo wharf in Newport. It's a "proven boat," he says, that they'd bought nine years ago and rebuilt together. And, like his father, Ruhle Jr. began passing down the tradition to his own 7-year-old son, also named Phil. He and the boy recently spent two weeks netting squid off Cape May. "If I didn't think it was safe, I wouldn't bring my kid," Ruhle Jr. said yesterday, with family at his home in Peace Dale. When Ruhle Jr. brought the Sea Breeze into Cape May on Monday, it was Ruhle Sr.'s turn. The father headed

the hull, quickly rolled, Carr told the Coast Guard.

Carr and crew member Anthony "Tony" Hendrickson swam free and clung to the overturned boat. The emergency radio beacon had floated away; Hendrickson swam for it and activated it to alert the Coast Guard.

In the hours of waiting for rescue, the men looked for Ruhle to surface. They'd last seen him in



PHILIP RUHLE SR., of North Kingstown, has been on fishing boats soon after he was old enough to walk.



Philip Ruhle Sr., who, was missing at sea after his fishing boat sank off Cape May, N.J., Wednesday night. He is pictured in April 2008 talking about a new fishing net he had developed. The Providence Journal / Ruben W. Perez

out with Hendrickson, 21, who'd just begun fishing with him, and Carr, 50, who'd fished with them enough to be a family friend, Ruhle Jr. said.

The father and son had last spoken at 7 p.m. on Wednesday, after a good day at sea. Ruhle Sr. and his crew had netted 100,000 pounds of shortfin squid, which is used for bait and worth about 15 cents a pound, according to Mike Parascandolo Jr., of the N. Parascandolo & Sons Inc. fishing wharf.

Two days of fishing meant \$15,000. His father was happy, Ruhle Jr. said. "The price [for fish] was up. Fuel was down a little. And he had a boat full of meat," Ruhle Jr. said. His father said they were about 80 miles from the Cape May inlet, bound for Lund's Fisheries to unload its haul, and the weather wasn't bad, Ruhle Jr. said.

The captain and his crew ate dinner, and then he and Carr went to rest while Hendrickson went on watch, Carr told the Coast Guard later. He and Ruhle were taking the night watches as the trawler motored on autopilot.

## Accidents and Incidents

Hendrickson saw the wind come up and the seas hit the sides of the boat, Carr told the Coast Guard. Then, Hendrickson shouted that the boat was sinking.

Carr said he and Ruhle ran to the wheelhouse as the boat listed. "It happened so quick," he said in a videotaped interview with the Coast Guard. "The captain was at the wheel, trying to get the boat turned into it, to pop it back up."

The boat had heeled so far that the port outrigger, ordinarily 15 feet in the air, was in the water, Carr said. Ruhle sent him out to help Hendrickson get the outrigger's weight up. "By the time I got [to it], the boat capsized," Carr said. The captain didn't have a chance to get out, he said.

Sometime before 10 p.m., the Coast Guard station at Atlantic City called Ruhle Jr. to tell him that the Sea Breeze's emergency beacon had been activated. Later, he was told that the Sea Breeze was found upside down, about 45 miles east of Cape May.

Out on the 164-foot-deep seas, the two crewmen saw the flashing lights of a Coast Guard helicopter coming toward them from the Atlantic City station. Carr was plucked out of the water first, and a second helicopter came for Hendrickson. Ruhle was missing.

The Coast Guard searched for him with rescue crews from the air stations in Atlantic City and Elizabeth City, N.C., and an 87-foot cutter out of Norfolk, Va. At sunset last night, there was still no sign of him. Coast Guard officials said they planned to search through the night.

WORD TRAVELED about Ruhle's disappearance. Lund's Fisheries was expecting the Sea Breeze early yesterday morning when Ruhle Jr. called to tell them the news.

"The Sea Breeze was one of the nicest and well-kept boats, and they were one of the most experienced crews. These guys are on top of their game," said Wayne Reichle, a salesman at Lund's. "[Ruhle] is one of the last people I'd think this could happen to."

While some of the boats coming into Lund's reported squalls, no one heard any May Day calls that night, Reichle said. A Coast Guard spokeswoman said there were no distress calls there over the last 24 hours.

Carr told the Coast Guard that the captain didn't have time. "It happened in a second. By the time we got to the wheelhouse, in seven to ten minutes, it sank," he said.

There were thunderstorms, and a weather buoy about 20 miles east of Cape Henlopen, Del., the nearest to the Sea Breeze, showed 6-foot seas and sustained southerly 15-knot winds, gusting up to 19 knots, said National Weather Service meteorologist Anthony Gigi. A computer model showed 8-foot swells where the Sea Breeze sank, he said.

The vessel's load was heavy but not unusual, said Ruhle Jr. "We've made 4,000 trips with that weight and it was like another day at the office," he said.

Some question the refrigerated seawater system designed to keep the squid at 30 degrees in 10 big tubs below deck, and whether the load's shifting could have caused problems. But Ruhle Jr. doesn't believe that. "It's different, so a lot of guys are scared of it. But everybody down South uses it," he said.

Parascandolo wonders whether there was a "freak sea," something happening so fast there was no time to react.

Ruhle's son believes something gave way on the boat. The vessel was handling the heavy weight. It was handling the weather. But then something else happened, the "rule of three."

"I don't care what anybody else thinks happened," Ruhle Jr. said. "I know something else let go. That third thing."

**Editor's note:** Philip Ruhle, Sr., along with a team of researchers and fishermen, was the Grand Prize Winner in World Wildlife Fund's Third Annual Smart Gear Competition in 2007.

#### Rescue at sea (Fiji Times Online)

#### Sakiasi Nawaikama

A FISHERMAN is alive after a dramatic high seas rescue early on Wednesday.

The unnamed fisherman fell overboard while the Hua Yaun Yi 12 was at sea inside Fiji's Exclusive Economic Zone.

The 29-year-old Chinese national drifted for several hours while crew members launched a desperate attempt to save him.

Details of the rescue remained sketchy last night but it is understood that the ship was forced to turn back once the man was reported to have fallen overboard.

Late yesterday the man was recovering at the Rotuma Hospital in Ahau.

He was reported to be in a stable condition.

Sereki Waqabaca of the Surveillance Maritime Centre said the fishermwas wearing a life jacket when he fell overboard.

Mr Waqabaca said the vessel had to turn around and search for him after the captain was alerted.

"He didn't know how to swim luckily he was wearing a life jacket."

Mr Waqabaca said some fishermen refused to wear life jackets but in this case the vest saved the fisherman's life. It is understood he fell off the ship at night and crew members attempted to mark his position with searchlights.

Given the speed of the vessel and the length of cables strewn behind the ship, it was forced to make a wide turn to recover the floating crew member.

He was picked up early on Wednesday and the ship steamed for Rotuma where medical authorities treated the crew member for dehydration.

Sources on Rotuma say the man is expected to be airlifted to Suva and transferred to the Colonial War Memorial Hospital today.

They reported that the man appeared to be in shock after the incident.

Agents for the Hua Yuan Yu 12 could not be reached for comment last night.

The vessel is operated by Win Full Fishing Company,, a Chinese firm based in Suva.

The company operates a number of fishing vessels from the Suva Wharf.

In some instances, Mr Waqabaca said incidents turn fatal when safety precautions are not exercised.



## News from other places and reader contributions



## Recreational boaters and their responsibilities

Les Nouvelles Calédoniennes (23/06/08)

Recreational boating regulations in both metropolitan France and New Caledonia recently underwent extensive changes but the Order's publication in the Official Gazette of New Caledonia went almost unnoticed.

The Maritime Affairs Administrator in New Caledonia, Vincent Denamur, reviewed the main features of these new regulations, which apply to all pleasure craft under 24 metres in length. Before 2005, there were up to six ship categories depending on the vessel's characteristics and equipment. Since 2005, there have only been two categories, i.e. up to six nautical miles (11 km) and over six nautical miles, and they applied to vessels under five metres in length.

Regulations now cover vessels under 24 metres in length that go beyond the characteristics of a beach craft, kayak, sailing dingy or jet boat. All users are subject to the same legislation. Three sailing zones have been identified within this framework, i.e. up to two nautical miles from shelter (3.7 km), from two to six miles from shelter and over six miles from shelter. With this reform, small registered boats no longer have any mandatory limits.

"This reform increases the skipper's responsibility," explained Mr. Denamur. "The second goal is to continue to bring equipment up to date by taking into account the latest technology. So, cumbersome buoyancy devices are no longer mandatory. You have to have one vest per person, which could be replaced by an immersion suit as long as it is worn. We understand that given the hot climate in New Caledonia, this solution will not be used and so, people will carry vests onboard. In the same way, the horseshoe buoy has been eliminated if people are wearing vests equipped with lights, which is why automatically inflating life jackets are good."

#### "The goal is to set safety rules and not precise gear."

Skippers do, then, have to adapt their safety equipment depending on whether they are sailing under two nautical miles, under six nautical miles or over six miles from shelter. Their responsibility is reasserted and gear continues to be brought up to date. These more flexible provisions are very revealing in this regard. In addition to the possibility of replacing lifejackets (by immersion suits) or horseshoe buoys with floating lights, distress signal devices are also covered. So, carrying an VHF-DSC (digital selective calling) radio that interfaces with a GPS means that you do not need parachute rockets or smoke flares for "deep-sea" sailing, i.e. more than six nautical miles from shelter. Hand flares, which, in such cases, help rescue crews locate the boat once the alert has been given, are still mandatory. As for first-aid kits, they are only legally required when sailing more than six nautical miles from shelter and only the most basic items are included. Or, as another example, you have a choice between a lifeboat and survival rafts for trips over six miles from shelter.

"You can see that the goal is to set safety rules and not precise gear," Vincent Denamur added before concluding with these words of caution, "This new legislation indicates the basic safety requirements and regulations without setting the exact material resources needed to meet them and without releasing owners from the responsibility of adding more equipment to meet their practices, concerns or local sailing conditions. In this regard, we recommend that a set of paper charts be kept on board ships equipped with electronic chart systems and we should recall that while MRCC (PC-Secours en mer- Sea Rescue Unit) and Noumea Radio do monitor VHF-ASN 70, this monitoring does experience certain coverage problems. That is why it is better to keep distress flares on board even if they are no longer mandatory like hand flares."

#### Files that can be consulted on Internet

A file on the new regulations for pleasure craft under 24 metres in length can be consulted (in French) at the Maritime Affairs Department's website (www.affmar. gouv.nc), in the section "loisirs nautiques".

You can also download information documents from the French Ministry for the Sea at www.affmar.gouv.nc www.mer.equipement.gouv.fr

#### Sudden strike operations

#### Given the rising number of sea rescues, the High Commission has decided to take action against recreational boaters who do not follow safety and navigation regulations by conducting a series of inspections after first holding a information and prevention campaign.

Safety operations will be conducted with the goal of getting people to follow the new regulations, raising awareness among those recreational boaters who do not worry about even the most basic precautions and encouraging such boaters to act more responsibly. The main causes of rescue operations, which are costly for government agencies, are boats running out of fuel, poor engine maintenance and people going out on the lagoon without checking the weather report. What's more, certain boaters do not even know how to give their position when they call for help, which makes search operations much more difficult. Capitan Philippe Long, Naval Commander for the 200-mile maritime economic zone, recalled that one hour of use for a Puma helicopter costs XPF 600 000 and an hour for the Gardian from the naval airbase costs XPF 1 million. The figures for 2008 have not been finalised yet but he did give some figures for Gardian, totalling about 10 million francs since the beginning of the year.

## The second operation will take place without prior notice during the school holidays

The High Commissioner asked that these operations be carried out with the support of all the

#### Les Nouvelles Calédoniennes (23/12/08)

government agencies that work at sea. For that reason, the Maritime Affairs Department, gendarmerie, maritime gendarmerie, Customs, Southern Province and French Navy will join forces to work on the same day in a preselected zone.

This decision was announced yesterday during a press conference at the High Commission, which was attended by all the heads of the maritime services involved. One date should be noted, i.e. Sunday, 4 January 2009. From 2 to 6 p.m. on that day, recreational boaters out in one of the four zones around Noumea will be inspected. Those who have not committed any serious offenses will get off with a simple warning. This will also be an opportunity to distribute information leaflets, in particular the one about the new regulations (April 2008) concerning the safety equipment that must be kept onboard (see inset). The second operation will take place unannounced some time during the school holidays. Boaters had better be properly equipped since punitive measures will be taken at that time.

Although it is not part of their normal work, the crews of the Southern Province's lagoon surveillance units will take part in these inspections by providing logistical support. Using what some are calling "sudden strike" operations, the High Commission and maritime authorities intend to lower the number of sea rescue operations, which total some 200 every year.

### **Fifty-seven boats inspected**

The safety and prevention visit campaign announced as part of the French Government's sea activities took place in the lagoon near Noumea. A total of 57 boats were inspected and eight tickets issued.

Four boats spread out over four zones. The maritime gendarmerie's patrol boat worked the area leading to and around Phare Amédée. The French Navy's Mako zodiac worked a corridor stretching from Nouville Point to Ilot Te Ndu. The patrol boat Kié from the Southern Province's lagoon surveillance unit patrolled a rectangular area located outside Boulari Bay between Ilot Bailly and N'Géa ,and the Customs Brigade's semi-rigid inflatable boat worked a zone located on the west coast of Nouville, off Anse Kuendu. These inspection ships had on board either gendarmes or Customs agents, and one of them had a person from the Maritime Affairs Office (Afmar). Les Nouvelles Calédoniennes (05/01/09)

#### A second operation was planned using the same resources during the school holidays but it took place unannounced.

The crew of the Dumbéa inspected 10 ships, including one sailboat. They did not note any offenses other than missing papers, which resulted in a simple warning to the owner. The gendarmes on the patrol boat Kié carried out 15 inspections of boats and jet-skis. They issued four tickets for missing life vests on one boat, which had seven people on board when it was only authorised to have five; another for the same reason on a boat carrying 10 people when its capacity was eight. They also caught an underwater fisher by surprise in the Ile aux Canards reserve and gave a ticket to the owner of a jet-ski that did not have any emergency flares. The gendarmes on board the Mako, which was also carrying an Afmar representative, inspected 17 boats. They issued four tickets for missing safety equipment. The gendarmes on the Calédonienne inspected seven boats but they did not find any problems.

Finally, the Customs agents carried out eight inspections and did not issue any tickets for safety gear.

During these operations, the captain of the patrol boat Dumbéa received a call from PC-Secours en mer (sea rescue unit) informing him that a sailboat had got stuck on the reef at the point of Maa Bay. He did not have to go there though as some recreational boaters nearby were able to quickly help the ship out of its predicament. As an aside, the crew of the Dumbéa were confronted with a refusal to cede the right of way by a taxi boat when they were headed towards the entrance to the small harbour. The ship's captain got a warning.

A total of 57 recreational vessels were inspected, which resulted in eight tickets being issued. This time, the media gave boaters had advance warning of the prevention operation. A second operation is planned using the same resources during the school holidays, but it will take place unannounced — and that time punitive measures will be enforced.

## **Surprise inspections**

The second part of the water recreation safety campaign took place the following weekend in the zone around Noumea, where our islands' highest concentration of boats can be found.

A total of 41 inspections were carried out on Sunday in the waters off Noumea and nine tickets were issued for various offenses. This operation, decided by the High Commission, had been announced during the initial prevention-at-sea campaign in January. However, the authorities had not announced the date it would take place so as that it would come as a surprise. Conditions were stricter than the last time, with nine offenses noted for which tickets were issued. These nine offenses involved not having the mandatory fire extinguishers on board or carrying out-dated distress rockets or hand flares.

## "Many sea rescue operations are due to simple breakdowns or vessels running out of fuel..."

Like the previous time, the operation involved the staff and resources of all the government agencies

#### Les Nouvelles Calédoniennes (06/01/09)

and offices that work at sea, i.e. gendarmerie (nautical brigade and maritime gendarmerie), maritime affairs, Customs, the French Navy, and the Southern Province's Environmental Department. A total of five boats were used. The authorities justified these inspections by the fact that many sea rescue operations are due to simple breakdowns or vessels running out of fuel and so, many of these situations could be avoided by a taking a few precautions. In fact, half of the 13 rescue operations coordinated by the Noumea *PC Secours en mer* (sea rescue squad), which came to the assistance of 25 people, were the result of irresponsible behaviour.

That is why inspectors distributed information leaflets produced by the Secretariat of the Pacific Community (SPC) showing, in a simple and easy-to-understand way, the basic precautions to be taken before going out to sea. "A great many emergencies would be avoided if people followed the advice given in the leaflet," noted the authorities in the official press release reporting on this operation.

#### © Copyright Secretariat of the Pacific Community, 2009

All rights for commercial / for profit reproduction or translation, in any form, reserved. SPC authorises the partial reproduction or translation of this material for scientific, educational or research purposes, provided that SPC and the source document are properly acknowledged. Permission to reproduce the document and/or translate in whole, in any form, whether for commercial / for profit or non-profit purposes, must be requested in writing. Original SPC artwork may not be altered or separately published without permission. The views expressed in this Bulletin are those of the authors and are not necessarily shared by the Secretariat of the Pacific Community.

Original text: English

Secretariat of the Pacific Community, Marine Resources Division, Fisheries Information Section BP D5, 98848 Noumea Cedex, New Caledonia Telephone: +687 262000; Fax: +687 263818; cfpinfo@spc.int; http://www.spc.int/coastfish