










## SSOW 003 – Operation of Patrol Vessel and Boarding and Inspection of Fishing Vessels and Gear at Sea



Safe System of Work for:			Operation of Patrol Vessel and Boarding and Inspection of Fishing Vessels and gear at Sea					
Date Created:	13 <sup>th</sup> July 2022	Created by:	Sarah Clark	Further Review: Adding AVRDP Policy April 2023 – Sarah Clark	Code: SSO W003			
		Reviewed by:	Gavin Mayhew, Dan Creswell					
Key Objectives								
<ul style="list-style-type: none"><li>To understand the hazards and risk of undertaking operating D&amp;S IFCA’s patrol vessels at sea and the boarding of fishing vessels at sea and follow safe working practices to ensure safety and health of all officers.</li><li>To understand the hazards of inspection of fishing vessels and fishing ger at sea</li><li>SSOW001 should be read in conjunction with <a href="#">RA1</a> and <a href="#">RA6</a> and <a href="#">RA7</a> and relevant SOPs (e.g. <a href="#">Body Worn Video SOP</a> and <a href="#">Audio &amp; Visual Recording Devices (AVRD) Policy 2023</a>)</li></ul>								
General/ Main Hazards								
			 Flammable					
Slips and trips	Crushing	Manual handling	Fuel	Cuts and injury form sharp edges	Overhead hazards	Drowning	Entanglement in ropes or gear	Angry/ hostile people

 <p>Warning Strong tides</p>	 <p>Warning Wind over tide</p>							
Tidal Conditions	Sea Conditions	Collision with other vessels	Working at sea at night	Underwater Hazards	Noxious gases			
<b>PPE Necessary</b>								
								
Safety Footwear	Life jackets	Protective/ warm gloves	Appropriate coastal clothing /drysuits	Wear sunscreen	Body/vest Camera to be worn and operational during enforcement activity	Helmets fitted with integrated comms system		

### **Major Risks**

- Death by drowning caused by falling overboard when boarding or disembarking a fishing vessel
- Death by drowning caused by conducting operations on deck of a fishing vessel
- Physical injury due to vessel movements at in higher sea states including whole-body vibrations
- Crushing injuries caused by vessels colliding
- Damage to patrol vessel due to collisions at sea
- Injury caused by tripping and slipping
- Floating and submerged objects
- Hostility / violence from fishing vessel master or crew
- Injury from moving fishing gear or equipment on the vessel
- Entanglement in ropes or fishing gear from moving around the vessel or inspecting gear
- Bites and cuts from inspection of catch
- Injury from lifting and falling heavy objects and equipment
- Cuts and injury from sharp edges if hauling fishing gear from patrol vessel
- Below decks refrigeration fish rooms/ confined spaces and hazards associated with them
- Adverse environmental conditions – weather, tides
- Health impacts to crew working around radar

## A. Working on Board D&S IFCA Patrol Vessels at Sea

Step	Procedure	Hazard or Risk	Control Measures
1	<p><b>Working on board patrol vessel at sea</b></p>  <p>Figure 1 Patrol Vessel David Rowe</p>  <p>Figure 2 Patrol Vessel Enforcer</p>	<ul style="list-style-type: none"> <li>Falling overboard and drowning</li> <li>Vessel bouncing on waves leading to injury and whole-body vibrations</li> <li>Collision with other vessel whilst at sea</li> <li>Exposure to adverse environmental conditions</li> <li>Strong tides and currents and wind over tide</li> <li>Working at sea at night</li> <li>Fatigue</li> <li>Non-IFCA personnel on board vessel are not familiar with the vessel, protocols and emergency procedures</li> <li>Health impacts from radar</li> <li>Risk of fire due to fuel</li> </ul>	<ul style="list-style-type: none"> <li>All officers have completed STCW95 training courses to include firefighting, sea survival and first aid.</li> <li>Follow procedures set out in RA7</li> <li>PPE to be worn correctly at all times by D&amp;S IFCA Officers and passengers</li> <li>Ensure all items of PPE are securely fitted with no loose items hanging from clothing or PPE</li> <li>Helmet integrated comms system is functioning and in operational</li> <li>Coxswain and crew must hold required qualification and certificates for working at sea</li> <li>Coxswain to follow <a href="#">COLREGS</a> at all times</li> <li>All persons to remain seated in shock mitigation seats at all times whilst vessel is steaming.</li> <li>Follow relevant SOPs/Policies (e.g., body worn camera) at all times.</li> <li>Wear sunscreen when appropriate</li> <li>Safety harness/lanyard to be worn during all deck operations at all times unless instructed by the coxswain</li> <li>Officers trained in VHF radio procedures and follow <a href="#">emergency procedure</a> if necessary</li> <li>Navigation lights and Radar Target Enhancer are utilised at all times in reduced visibility</li> <li>Decks of the vessel are kept clear at all times to minimise trips and falling overboard</li> <li>D&amp;S IFCA Enforcement team plan boarding and ensure that onshore officers know of the planned trip and when launching and recovery will take place</li> <li>Tides tables are referred to before each patrol</li> <li>Weather conditions are checked before each patrol</li> </ul>

Step	Procedure	Hazard or Risk	Control Measures
			<ul style="list-style-type: none"> <li>All visiting personnel on board the patrol vessel must be given a safety briefing prior to setting off on the patrol</li> <li>Officers to regularly check condition of other crew members</li> <li>First aid training (as part of STCW95) used to identify signs of hypothermia</li> <li>All crew and passengers must comply with coxswain's instructions at all times</li> <li>Crew should always remain below the radar line of sight when in the patrol vessel.</li> <li>Radar is used only when the patrol vessel is underway at sea. When boarding a fishing vessel, the radar should be on standby</li> </ul>
2	<b>Hauling and shooting of fishing gear from the Patrol Vessel</b> <ul style="list-style-type: none"> <li>Coxswain to communicate with crew intention for hauling of gear</li> <li>Crew ,who will be hauling, to position themselves on deck wearing gloves and attach themselves with securing line to strong point on vessel. Crew not involved in hauling of gear to always remain seated.</li> <li>If more than one crew member on deck, ensure securing lines</li> </ul>	<ul style="list-style-type: none"> <li>Entanglement in ropes</li> <li>Cuts and injury from sharp edges, including all parts of the fishing gear e.g., Hooks in hand</li> <li>Injury from marine organism</li> <li>Injuries from lifting heavy equipment</li> <li>Crushing from heavy equipment</li> <li>Falling overboard and drowning</li> </ul>	<ul style="list-style-type: none"> <li>Officer to wear appropriate PPE at all times including appropriate gloves for the task.</li> <li>All communication to take place with the helmet integrated comms system.</li> <li>Officers will only haul fishing gear when it is safe and appropriate to do so.</li> <li>Any person undertaking any deck operation should use safety lanyards where appropriate.</li> <li>If hauling or shooting away is necessary by Officers on the patrol vessel, officers must follow instructions from the Coxswain</li> <li>All persons on board should be made aware of the procedure to follow and assist in the operation where necessary</li> <li>All officers should be trained in manual handling</li> <li>Officers should ensure they carry a knife secured in sheath ready to cut pot rope if necessary.</li> <li>Ensure all equipment is stowed and the deck is cleared prior to hauling so there is room on the deck to bring the fishing gear aboard, (as much as is possible and practicable).</li> <li>Once hauling has commenced and it becomes clear that there will be insufficient space on the deck of the Patrol Vessel, the gear should be cut, buoyed off and returned to sea.</li> </ul>

Step	Procedure	Hazard or Risk	Control Measures
	<p>are free of obstruction and entanglement.</p> <ul style="list-style-type: none"> <li>• Coxswain to approach buoy in a slow and controlled manner and communicate with crew which side of the vessel the buoy will be coming alongside.</li> <li>• Using a boat hook (where appropriate) crew capture buoy and communicate with helm which way the line is leading in the water. Coxswain to position the patrol vessel to aid lifting.</li> <li>• Crew who are hauling to slowly haul the gear ensuring they do not become entangled in rope on deck.</li> <li>• Crew hauling gear to lift in a manner consistent with what is prescribed in manual handling training.</li> </ul>		<ul style="list-style-type: none"> <li>• Coil rope and chain in a tidy manner to reduce clutter and reduce the risk of entanglement, and trips.</li> <li>• Stand clear of ropes or coils of ropes and chains to avoid entanglement</li> <li>• Ensure that fishing gear is kept away from the propellers and other moving parts</li> </ul>



Step	Procedure	Hazard or Risk	Control Measures
	<ul style="list-style-type: none"> <li>• When gear approaches the surface, additional crew may be required to bring the gear onto the deck for inspection.</li> <li>• Awareness of space is required before considering lifting further pots if gear has been identified to be a string of pots or a net that is too long to be contained safely on the deck of the patrol vessel.</li> <li>• If gear is to be seized, then it should be stowed in a tidy manner preferably (in the case of a pot) by coiling any loose line inside the pot.</li> <li>• If gear is to be returned to the sea, then this should be communicated with the Coxswain. Helm to position patrol vessel where the gear was retrieved.</li> </ul>		

Step	Procedure	Hazard or Risk	Control Measures
	<ul style="list-style-type: none"> <li>• Coxswain to give the ok for gear to be returned to the sea.</li> <li>• Crew on deck to ensure they are clear of any loose rope and in a controlled manner return the pot to the sea.</li> </ul> <p>Communication between crew and Coxswain should be maintained throughout so that the line does not become entangled with the propellers of the patrol vessel.</p> <ul style="list-style-type: none"> <li>• When all gear including line is free of the patrol vessel then this should be communicated with the Coxswain</li> </ul>		



## .B. Boardings at sea between Patrol Vessel (PV) and Fishing Vessel (FV)




Step	Procedure	Hazard or Risk	Control Measures
3	<p><b><u>3.1 Prepare for Boarding of all types of fishing vessels:</u></b></p> <ul style="list-style-type: none"> <li>Establish communication with the fishing vessel before boarding and the Coxswain will determine the easiest boarding access point. (this may be achieved through radio contact or for smaller vessels this may be more easily achieved through coming alongside the vessel and communicating directly with the master and crew)</li> <li>Fully inform fishing vessel of D&amp;S IFCA's intentions and pass any necessary instructions (i.e., Course change, boarding ladder requirement etc.)</li> <li>Wait for FV skipper to give the go ahead for the boarding whilst PV alongside</li> <li>Use a boarding ladder if freeboard is greater than 1.5m</li> </ul>	<ul style="list-style-type: none"> <li>Slips and trips during the boarding procedure</li> <li>Falling overboard or between vessels</li> <li>Crushing injuries due to vessels colliding</li> <li>Drowning</li> <li>Violent or hostile behaviour from FV skipper or crew</li> <li>Transferring equipment/ objects across unstable platforms (vessels)</li> <li>Health impacts if radar is left functioning whilst boarding</li> </ul>	<ul style="list-style-type: none"> <li>Follow procedures as set out in RA1</li> <li>Life jackets and helmets with integrated comms to be worn at all times whilst at sea, on the Patrol vessel and during boardings.</li> <li>Other PPE for boardings must be worn such as body worn camera. Gloves should be available for inspecting gear and catch.</li> <li>Ensure all items of PPE are securely fitted with no loose items hanging from clothing or PPE</li> <li>Coxswain to risk assess sea and environmental /weather conditions and fishing vessel to be boarded for suitability of boarding</li> <li>All persons to stay secured in their seats at all times unless instructed by the coxswain</li> <li>Coxswain will assess and evaluate the vessel and determine the safest method of boarding.</li> <li>Coxswain and crew should , where appropriate, wait until the fishing operation has ceased before boarding. This will be determined by the type of fishing vessel and the assessment of the safety of the boarding operation.</li> <li>Coxswain will brief all crew on the boarding process</li> <li>Any queries or concerns around the process should be raised and discussed at this time</li> <li>Keep limbs and body parts away from the side of the PV close to the fishing vessel to be boarded to avoid crushing injuries</li> <li>All Officers are trained in working at height protocols</li> <li>Climb ladders whilst adhering to working from height protocols</li> <li>All boarding parties should consist of at least two Officers if possible</li> <li>Officers boarding should be doing so empty handed keeping both hands free for the boat at all times to enable a safe boarding.</li> </ul>



Step	Procedure	Hazard or Risk	Control Measures
	<ul style="list-style-type: none"> <li>Boarding officers to prepare boarding equipment</li> <li>Ensure helmet integrated comms system is operational</li> <li>Turn radar to standby</li> </ul> <p><b>3.2 Boarding a Fishing Vessel:</b></p> <ul style="list-style-type: none"> <li>Coxswain starts approach to the vessel and engages friction lock</li> <li>Coxswain to confirm that friction lock established</li> <li>Boarding Officers to make way around seaward side of the wheelhouse listening for any instructions from Coxswain</li> <li>Coxswain to instruct each Boarding Officer off the Patrol Vessel one at a time.</li> <li>After the first Boarding Officer is onboard, any equipment should be passed over.</li> <li>Once all crew transferred, Coxswain to break friction lock and safely move away from vessel to holding position, within communication range (handheld VHF range),</li> </ul>		<ul style="list-style-type: none"> <li>Lead boarding Officer to coach and identify hazards to less experience boarding Officers.</li> <li>Where equipment is transferred between the vessels safe handling procedures must be followed.</li> <li>All officers trained in manual handling techniques</li> <li>All Officers trained in conflict resolution</li> <li>Conflict management if skipper or crew become violent or aggressive</li> <li>Abort boarding/inspection if unsafe to continue</li> <li>Boarding Officers can instruct the fishing vessel to return to port if boarding conditions are unsafe.</li> <li>Carry mobile phone and VHF radio.</li> <li>All boarding officers to wear body worn cameras to record boarding</li> <li>When boarding a fishing vessel with a freeboard greater than 1.5m use a boarding ladder, if appropriate. (The majority of inshore vessels are less than 1.5m freeboards so ladder is not required).</li> <li>Ensure no parts limbs or body parts are between the fishing vessel and patrol vessel.</li> <li>Radar is put on standby during boardings.</li> </ul> <div style="display: flex; justify-content: space-around; align-items: flex-end;"> <div style="text-align: center;">  <p>Figure 3 Officers boarding a static gear fishing vessel</p> </div> <div style="text-align: center;">  <p>Figure 4 Body worn camera - worn by Boarding Officers</p> </div> </div>

Step	Procedure	Hazard or Risk	Control Measures
	<p>ideally maintain visual contact with the vessel.</p> <ul style="list-style-type: none"> <li>If a single Officer boards the vessel (due to its size or COVID restrictions) the Patrol vessel should stay alongside the fishing vessel.</li> </ul>		

## C. Inspections of Boarded Vessel, Fishing Gear And Catch.

Step	Procedure	Hazard or Risk	Control Measures
4	<p><b>Hauling and shooting of fishing gear by fishing vessel during boarding inspection</b></p> <ul style="list-style-type: none"> <li>Officers ask skipper of the vessel where to stand and undertake inspection on board the fishing vessel to ensure officers are safe and not to inhibit the fishing operation.</li> <li>Officers instruct skipper/crew of fishing vessel to be notify them prior to fishing gear being re-engaged.</li> <li>Officer report back to Patrol vessel at least every 30 minutes</li> <li>Coxswain./ Officers on the patrol vessel must ensure the regular communications and welfare checks of boarding officers take place.</li> </ul>	<ul style="list-style-type: none"> <li>Entanglement in ropes</li> <li>Injuries to head, arms, hands and legs from contact with moving fishing equipment and gear</li> </ul>	<ul style="list-style-type: none"> <li>Boarding of fishing vessels to take place once fishing operation has concluded. and deck machinery not in use, where possible. This is particularly relevant for static gear vessels as they have reduced manoeuvrability.</li> <li>Allow skipper and crew to finish normal fishing operations prior to inspection</li> <li>Officers to stay clear of all fishing gear including beams, winches and trawl wires and do not get involved in the hauling or shooting of fishing gear</li> <li>Officers to be aware of heavy equipment moving over head</li> <li>Follow the skipper's instructions to ensure safety of Officers and continued fishing operations.</li> <li>Officers to stand clear of the deck whilst hauling and shooting away of fishing gear</li> <li>Officer to be aware of ropes on deck and stand clear of them during fishing operations</li> <li>Lead boarding Officer to coach and identify hazards to less experience boarding Officers</li> <li>Communications and welfare checks between the patrol vessel and boarding Officers must be adhered to.</li> <li>Appropriate PPE is to be worn at all times.</li> </ul>

Step	Procedure	Hazard or Risk	Control Measures
			  <p><i>Figure 6 Fishing vessel trawl drums</i></p> <p><i>Figure 5 Fishing Vessel shooting pots</i></p>
5	<b>Moving around the fishing vessel</b>  <p><i>Figure 7 Deck of potting vessel showing fishing gear and trip hazards</i></p>	<ul style="list-style-type: none"> <li>• Injury from slips and trips due to wet /slippery surfaces</li> <li>• Entanglement in fishing gear or ropes on deck</li> <li>• Injury due to moving fishing gear</li> </ul>	<ul style="list-style-type: none"> <li>• Avoid fishing gear and equipment on deck as much as practicable apart from when inspecting the gear</li> <li>• Avoid stepping on fish or trawl debris</li> <li>• Ensure Skipper is fully aware of Officers' intentions</li> <li>• Communicate with skipper and crew during the inspection and follow their instructions</li> <li>• Maintain spatial awareness at all times on the vessel when necessary</li> <li>• Officers to familiarise themselves with the layout of the vessel? as soon as possible on boarding</li> <li>• Lead boarding Officer to coach and identify hazards to less experienced boarding Officers</li> <li>• Stand clear of ropes and moving parts</li> </ul>
6	<b>Inspection of fishing gear whilst on board fishing vessel</b>	<ul style="list-style-type: none"> <li>• Entanglement in ropes or gear</li> <li>• Cuts and injury from sharp edges</li> </ul>	<ul style="list-style-type: none"> <li>• Wear appropriate PPE at all times</li> <li>• Ensure fishing gear is safe and stable before inspection and measuring</li> <li>• Gain assistance from other Officers or crew when necessary</li> <li>• Using appropriate equipment for measuring gear ( from grab bag)</li> <li>• Stand clear of ropes and any other trip hazard</li> <li>• Use appropriate manual handling techniques when inspecting gear</li> </ul>

Step	Procedure	Hazard or Risk	Control Measures
			  <p><i>Figure 8 Escape gap inspection</i></p> <p><i>Figure 9 Fish landed on a pelagic trawler</i></p>
6	<b>Inspection of catch whilst on board fishing vessel</b>	<ul style="list-style-type: none"> <li>• Bites and cuts</li> <li>• Infections and diseases</li> <li>• Injuries from lifting heavy objects</li> </ul>	<ul style="list-style-type: none"> <li>• Wear appropriate PPE at all times including gloves</li> <li>• Handle all catch appropriately and with care and follow skipper./crew instructions on finishing inspection to ensure no damage to catch</li> <li>• Consider manual handling techniques if moving loads</li> <li>• Gain assistance from other Officers or crew when necessary</li> <li>• Ensure existing cuts or abrasions are covered before inspection</li> <li>• If injury occurs during inspections take appropriate action, such as clean wound and apply a dressing as soon as possible. Also consider first aid, next level of care etc.</li> <li>• Report injury and complete accident report once back at the office.</li> <li>• Conduct inspection in a safe and clear area of the deck</li> </ul>
7	<b>Inspecting vessel below deck and in refrigeration rooms</b>	<ul style="list-style-type: none"> <li>• Injury from slips and trips due to wet /slippery surfaces</li> <li>• Inhalation of noxious gases causing damage to moth, throat lungs, eyes.</li> <li>• Injury due to fire</li> <li>• Injury from electric shocks</li> </ul>	<ul style="list-style-type: none"> <li>• Follow instruction from skipper/crew before proceeding with the inspection.</li> <li>• Become familiar with escape routes.</li> <li>• Risk assess environment as to whether it is safe to go into areas below deck.</li> <li>• Request that fishing vessel master/crew enter refrigerated holds first, before proceeding with inspection.</li> <li>• Boarding Officers should not enter the hold alone.</li> <li>• Ensure coxswain is aware prior to entering confined space, below deck.</li> <li>• Maintain some communication throughout, using helmet integrated comms and line of sight where possible.</li> </ul>



## D. Disembarking Fishing Vessel to Patrol Vessel after Inspection

Step	Procedure	Hazard or Risk	Control Measures
8	<b>Disembarking from the Fishing Vessel to the Patrol Vessel</b> <ul style="list-style-type: none"> <li>Boarding Officers contact Coxswain of Patrol Vessel via helmet integrated comms or VHF to confirm results from inspection and advise completed.</li> <li>Patrol vessel to establish radio comms with master of fishing vessel to ensure awareness and pass any necessary instructions to facilitate safest possible disembarkation.</li> <li>Coxswain to proceed to fishing vessel and engage friction lock on the vessel as in 2 above</li> <li>Visual contact should be made and maintained between the Boarding Officers and Coxswain.</li> <li>Coxswain (maybe via the crew) to signal Boarding Officers that the friction lock is established</li> </ul>	<ul style="list-style-type: none"> <li>Slips and trips during the disembarking procedure</li> <li>Falling overboard or between vessels</li> <li>Crushing injuries due to vessels colliding</li> <li>Drowning</li> <li>Transferring equipment/ objects across unstable platforms (vessels)</li> </ul>	<ul style="list-style-type: none"> <li>Follow procedures as set out in RA1</li> <li>Life jackets and helmets with integrated comms to be worn at all times whilst at sea, on the Patrol vessel and during boardings and disembarkation.</li> <li>Other PPE for boardings must be worn to include gloves and body worn camera.</li> <li>Coxswain will assess and evaluate the vessel and determine the safest method of disembarkation.</li> <li>Coxswain will brief all crew (both onboard the Fishing Vessel and Patrol Vessel on the disembarkation process</li> <li>Any queries or concerns around the process should be raised and discussed at this time</li> <li>Keep limbs and body parts away from the side of the PV close to the fishing vessel to avoid crushing injuries</li> <li>All Officers are trained in working at height protocols</li> <li>Climb ladders whilst adhering to working from height protocols</li> <li>Officers disembarking should be doing so empty handed keeping both hands free for the boat at all times to enable a safe disembarkation.</li> <li>Where equipment is transferred between the vessels safe handling procedures must be followed.</li> <li>All officers trained in manual handling techniques</li> <li>Officers can instruct the fishing vessel to return to port if disembarkation conditions become unsafe.</li> <li>Carry mobile phone and VHF radio</li> <li>All boarding officers to wear body worn cameras to record boarding/disembarkation</li> <li>When disembarking the fishing vessel use the boarding ladder if appropriate</li> </ul>

Step	Procedure	• Hazard or Risk	• Control Measures
	<ul style="list-style-type: none"> <li>• The Boarding Officers should take it in turn to disembark and only one officer should use the boarding ladder at any time</li> <li>• Equipment transferred separately to ensure both hands of Officers are free for the boat.</li> <li>a. Once aboard the patrol vessel , immediately return to their seat via seaward side of the wheelhouse and secure themselves in their seat.</li> <li>b. Once all persons safely seated, coxswain breaks friction lock and moves away to a safe distance.</li> </ul>		<ul style="list-style-type: none"> <li>• Ensure no parts limbs or body parts are between the fishing vessel and patrol vessel</li> <li>• Officers on board the patrol vessel to assist the officers disembarking the fishing vessel where possible and appropriate</li> <li>• Officer to ensure they are secure in their seats and safety harness is attached.</li> <li>• Debrief with all Officers involved in boarding process, inspection and disembarkation for any lessons learned</li> <li>• Any accidents, incidents or near misses to be reported on return to the office.</li> </ul>

End