



Objective

Fisheries and Oceans Canada (DFO) is seeking capable research vessel charter(s) (vessel and crew) to conduct and deliver 'at-sea' field programs. The research mission's at-sea will vary in requirements as they relate to different ocean science operations (e.g. oceanography, marine mammal studies, hydrography, etc.) and fisheries science (e.g., stock assessment, biodiversity, habitat management, etc.). The requirements for these research vessel charter(s) will also vary depending on the location of the science mission(s) (e.g., Atlantic, Pacific and Arctic Oceans, etc.). The potential requirement for research vessel charter(s) is for multiple programs and could range from 28 to 265 days annually with options for multiple years.

Procurement Process

DFO has released a Request for Information and will be hosting three (3) Industry Engagement Day Sessions prior to issuing a Request for Supply Arrangement (RFSA) for research vessel charter(s). This engagement with industry seeks to help potential bidders increase their understanding of the science requirements for vessel capabilities as well as DFO's procurement process for vessel charter(s).

In order to establish a supply arrangement DFO will be categorizing and prequalifying vessels. The prequalifying will be done through a vessel inspection by Government of Canada employees. Upon completion of the prequalification process the vessel operator will be notified of the outcome of the inspection and the vessel will be categorized depending on what qualifications specifications are met. Bidders will be provided a copy of the prequalification factors prior to the inspection process.

This Request for Supply Arrangement will be conducted in 4 phases:

- Phase 1: Industry Engagement through a series of Industry Days – Late March early April 2019
- Phase 2: Request for Supply Arrangement (RFSA) – May to June 2019
- Phase 3: Vessel Inspections – Summer 2019
- Phase 4: Request for Proposal (RFP) – As needed

Documents Required Prior to Vessel Inspection:

1. Provide a Curriculum Vitae for the vessel. The CV Should include the following:
 - a. Vessel particulars;
 - b. Vessels core operations and non-core operations;
 - c. Research Project Work including location of work and time of year it was conducted; and
 - d. Vessel and Crew Profile/Qualifications
2. A schematic of the vessel either in PDF or Computer Aided Design (CAD) (i.e. AutoCAD DWG, SolidWorks SLDRW, etc.) format for DFO to review. This schematic should highlight the lab spaces and the open deck spaces for working and equipment storage. The schematic should also show the vessel as it will be provided at time of contract award. AutoCAD DWG format is preferred (other CAD file formats will be accepted) to allow DFO to take measurements of the spaces. (All obstacles or obstructions on the vessel will need to be identified). DFO understands



that vessel may change from year to year and the vessel can remain on the prequalification list as long as changes and new schematics are provided to the project authority upon completion of the changes and I writing to the contract authority.

3. Schematics and specifications of any on deck container labs or storage containers that may be part of the mission outfit for DFO for confirmation by DFO upon inspection.
4. Any certifications for the gear that science will be using (i.e. cranes, winches, fume hoods, etc.) to show that the equipment was recently inspected and in good working order.

**Certifications must be maintained for the duration of the Supply Arrangement. Failure to maintain certifications may result in removal from the Supply Arrangement.

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Vessel Inspection Categorization Factors

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1.0 Vessel Certifications

This information is needed for the safety of science staff and to ensure that the vessel meets Transport Canada (or equivalent) regulations and can legally operate in Canadian waters.

Criteria/Specifications	Yes	No	Comments
1.1 Does the vessel require authorization to work in Canadian waters?			
1.2 Does the vessel have an unconditional valid copy of the vessels Transport Canada (or international equivalent in English or French from the certifying agency) Minimum Safe Manning Document-Convention with Trading Area of Unlimited Voyage.			
1.3 If not Unlimited Voyage, what is the ships certification (i.e. near coastal 1, near costal 2, etc.)			
1.4 Does the vessel possesses Transport Canada Safety Certificates or international Equivalents. They will need to be provided in English or French from the certifying agency for review by the inspection team?			
1.5 Does the vessel have sufficient insurance in place at the time of inspection and for the duration of the contract. The insurance documents will need to be provided in English or French for the vessel inspection team from the certifying agency? **These will be asked for at the Request for Supply Arrangement stage and again for contract award.			
1.6 Does the vessel have a drug and alcohol policy?			



2.0 Vessel Particulars

DFO will require a variety of vessels of different sizes and capabilities. Providing this information will allow the vessel to be assigned to a class that can be called upon for a mission.

Criteria/Specifications	Actual Size
2.1 Vessel overall Length	
2.2 Vessel Breadth	
2.3 Vessel Draft	
2.4 Vessel Gross Tonnage	
2.5 Vessel Horse Power	

Criteria/Specifications	Yes	No	Classification/Comments
2.6 Ice Classification			
2.7 Does the vessel have adjustable at sea ballast?			

Criteria/Specifications	Voltage	Amperage	Plug Type
2.8 Vessel Power Supply			

Criteria/Specifications	12hr	24hr	Other
2.9 Vessels Hours of Operation			

Criteria/Specifications	Percentage	Other
2.10 Percentage of Indigenous/First Nations ownership of the vessel		
2.11 Percentage of Indigenous/First Nations employed on the vessel		



3.0 Auxiliary Support

For some DFO programs there is a need to launch and recover instrumentation or for small sampling activities. This would allow staff to have more control over delicate instrumentation.

Criteria/Specifications	Yes	No	Comments
3.1a Does the vessel carry a zodiac or launch craft that science can use for operations? (capacity, size, horse power, etc.)			
3.1b Is there a charge for use of the zodiac or launch outside the vessels day rate?			
3.1c Does the vessel have qualified crew to operate the zodiac or launch for science operations?			
3.1d If not can the zodiac or launch be operated by licensed and qualified science staff?			
3.2 Does the vessel have a helipad?			
3.3 Does the vessel carry a helicopter?			
3.4 Can the helicopter be used for science operations?			
3.5 Is there a separate charge for use of the helicopter outside the vessel day rate?			



4.0 Vessel Safety Requirements

Safety requirements need to be inspected in order for the vessel to conform with the DFO OHS standards in place for field work and to ensure the safety of science staff while working on the vessel.

Criteria/Specifications	Yes	No	Comments
4.1 Does the vessel have lifesaving equipment sufficient for both crew and scientific personnel? The lifesaving equipment will be reviewed by the inspection team to ensure the quantities are sufficient for the proposed science party and they conform to safety policies and are inspected yearly.			

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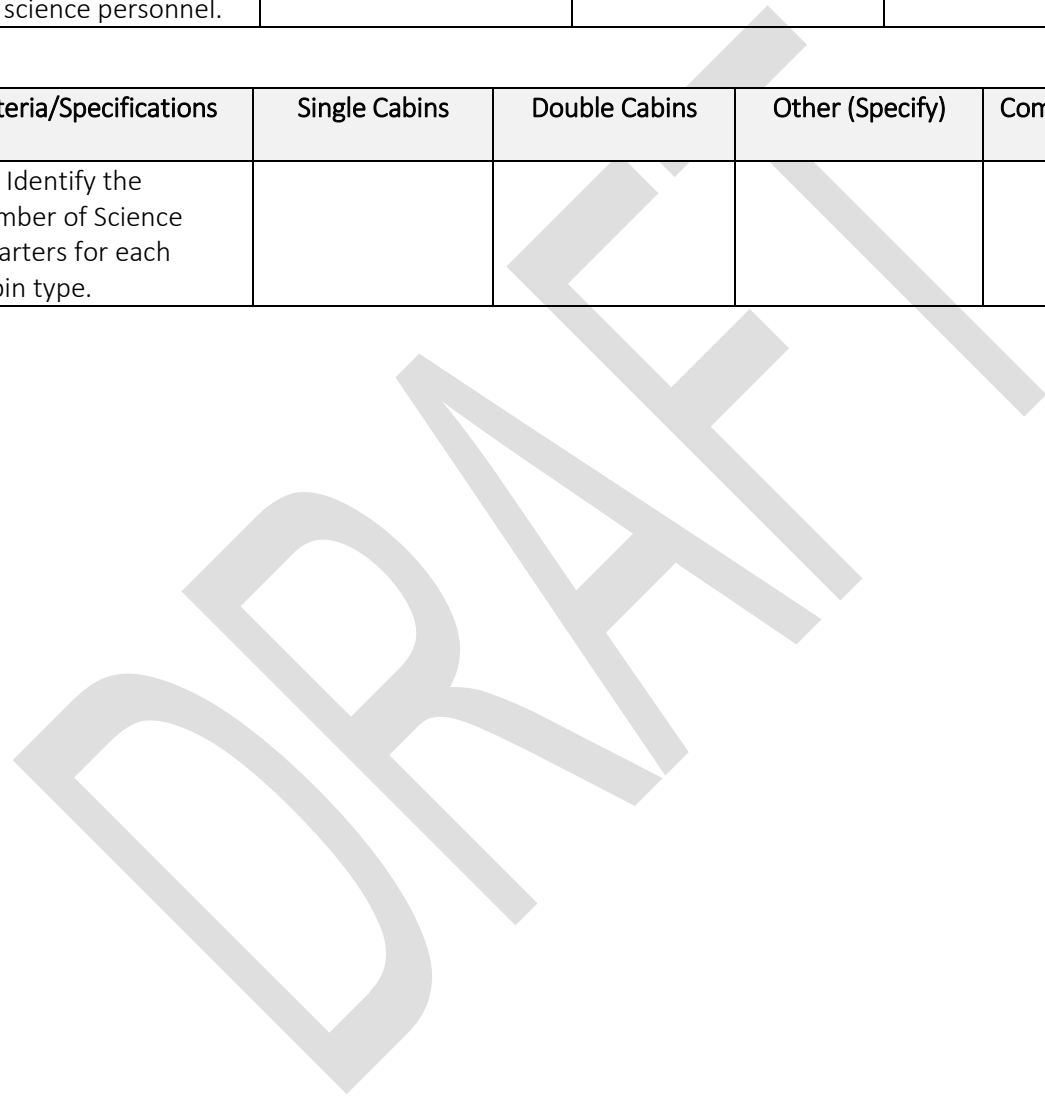


5.0 Berths Available for Science Personnel

DFO programs carry a compliment of scientists and technicians to complete program work and there is a requirement for each to have their own berth along with equivalent amenities to being at home.

Criteria/Specifications	Yes	No	No. of Available Berths for Science
5.1 Is the vessel equipped with berthing for science personnel.			

Criteria/Specifications	Single Cabins	Double Cabins	Other (Specify)	Combination of Both
5.2 Identify the number of Science Quarters for each cabin type.				





6.0 Berthing and Vessel Amenities

The following amenities are considered to support quality of life at sea.

Criteria/Specifications	Yes	No	Comments
6.1 Does the vessel offer a minimum of 3 meals per day?			
6.2 Does the vessel have a mess area to accommodate Science personnel?			
6.3 Does the vessel have laundry facilities available on board?			
6.4 Does the vessel have an exercise area?			
6.5 Does the vessel have a common area such as a lounge?			
6.6a Is the vessel equipped an internet connection for personnel use?			
6.6b If so is the connection(s) through an Ethernet port or Wi-Fi?			
6.7 Is smoking tobacco permitted while onboard?			
6.8 Is drinking alcohol permitted while onboard?			

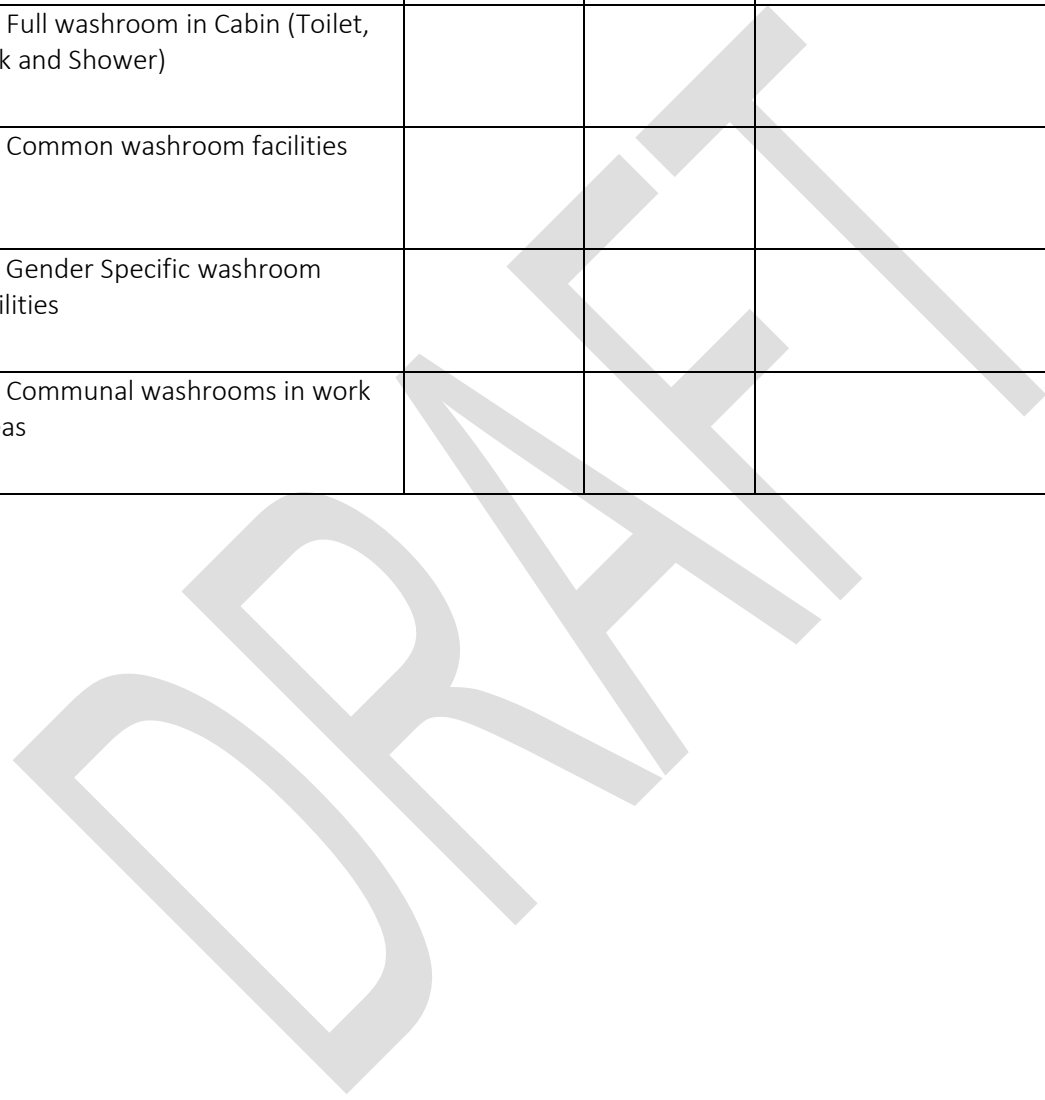
	Other Amenities Onboard
6.9 Are there other amenities available onboard the vessel? (i.e. Sauna, Ping Pong, Dartboard, etc.)	



7.0 Washroom and Shower Facilities

DFO programs carry both male and female staff so washroom facilities for both sexes are needed for privacy reasons.

Criteria/Specifications	Yes	No	Comments
7.1 Water closet in Cabin (Toilet and sink)			
7.2 Full washroom in Cabin (Toilet, Sink and Shower)			
7.3 Common washroom facilities			
7.4 Gender Specific washroom facilities			
7.5 Communal washrooms in work areas			





8.0 Lab Spaces

There may be a requirement for the vessel to have lab space to carry out predefined scientific analysis while at-sea. This requirement may be accommodated with one (1) large lab or multiple smaller labs. There may be a need for both wet and dry lab spaces.

Criteria/Specifications	No. of Lab Spaces	Measurements	Type of Lab (Wet/Dry)
8.1 Designated Lab Spaces			
8.2 Total size of designated lab space.			
8.3 Does the lab(s) have access to the main deck?			

Criteria/Specifications	Dimensions	Deck lab is located on	Comments
8.4 What is the size of the opening to the lab?			
8.5 Where are the labs located on the vessel?			



9.0 Lab Amenities

With the diversity of at-sea sample processing DFO Science may require certain amenities in the lab spaces for this work to be completed.

Criteria/Specifications	Yes	No	Comments/Measurement
9.1 Is there a minimum of one (1) operational and certified fume hood that can fully enclose chemicals for science use?			
9.2 Do any lab spaces have a conveyor system installed?			
<ul style="list-style-type: none"> Conveyor Length 			
<ul style="list-style-type: none"> Conveyor Speed 			
<ul style="list-style-type: none"> Conveyor Material (Stainless Steel, Steel, etc.) 			
9.3 Does the vessel have at least one (1) sink for science use to dispose excess sea water and cleaning of sample vials? The sink must have hot and cold fresh water supplies.			
9.4 Does the vessel have a fresh clean supply of sea water available in at least one lab for science use?			
9.5 Does the vessel have a chemical store room?			



Criteria/Specifications	Yes	No	Comments/Measurement
9.6 Does the vessel have the ability to carry containerized labs equipped with the following connection points:			
<ul style="list-style-type: none"> • Power Connection 			
<ul style="list-style-type: none"> • Network connection 			
<ul style="list-style-type: none"> • Navigational Data (i.e. NEMA) 			
<ul style="list-style-type: none"> • Fire/General Alarm Connection 			
<ul style="list-style-type: none"> • Salt Water Connection 			
<ul style="list-style-type: none"> • Fresh Water Connection 			

9.7 Does the vessel have a LAN in place and be able to support the connection DFO computers and allow for data transfer between science spaces.			
9.8 Are there electronic racks in the lab spaces for installation of DFO equipment?			

Criteria/Specifications	Yes	No	Size
9.9 Does the vessel have provisions for the safe storage of gas cylinders?			
9.10 How many cylinders can be accommodated?			
9.11 Is the storage space located within the lab space?			
9.12 If it's external are there access ports where gas lines can be run into labs to permit use during operations?			



Criteria/Specifications	Yes	No	Dimensions
9.13a Does the vessel have freezers/refrigerators to hold scientific samples?			
9.13b If yes, what are the size and temperature ranges of the units? (i.e. 0°C, -80°C, etc.)			
9.13c If no, does the vessel have space for DFO to setup freezers/refrigerators for samples?			
9.13d Is this space located in the labs?			

Criteria/Specifications	Total Length	Width	Comments
9.14a Are bench spaces available in the labs?			
9.14b If so, what is the length and width?			
Criteria/Specifications	Yes	No	Comments
9.15 Does the vessel have a means for securing science equipment and computers to bench tops?			



10.0 Deck Machinery General

DFO Programs utilize a variety of research equipment that may be deployed to multiple kilometers below the ocean surface. Much of this equipment is heavy and requires the use of cranes, winches and/or launch and recovery systems.

Criteria/Specifications	Yes	No	Specifications/Comments
10.1 Is the vessel equipped with a fan tail mounted A-Frame?			
10.2 Is the vessel equipped with a marine crane?			
10.3a Is/Are shipboard crane(s) usable at sea?			
10.3b Does the crane have a wire whip with a hook on it?			
10.3c Does the crane have a long enough whip to reach the waterline?			

Crane, A-Frame Reach:

Criteria/Specifications	<2m	2-5m	>5m
10.4 Over the side			
10.5 Above the rail			
10.6 Inboard			

Crane, A-Frame Safe Working Load:

Criteria/Specifications	Yes	No	Safe Working Load (SWL)
10.7 Is the Safe Working Load (SWL) printed on the cranes, A-frame, etc.?			
10.8 What is the Marine Crane SWL?			
10.9 What is the A-Frame SWL?			
10.10 What is the LARS (Launch and Recovery System) SWL?			



Winch Specifics:

Criteria/Specifications	Yes	No	Length/No. of Conductors/Type of Connector(s)
10.11 is the vessel fitted with Oceanographic Winches?			
10.12 If not can DFO supplied winches be fitted to the vessel?			
10.13 What is the length of cable on the winches that are on the vessel?			
10.14 Do the winches have an instrumented cable?			
10.15 How many conductors does the cable have and what type of connector(s) is on the cable?			
10.16 What is the breaking strength of the winch wire?			
10.17 Is the vessel fitted with winches for trawling?			
10.18a Is the vessel fitted with sweep line winch(es)?			
10.18b Is the vessel fitted with Gilson winch(es)?			
10.19 If so, how many and what is the: <ul style="list-style-type: none"> • Drum Diameter 			
<ul style="list-style-type: none"> • Cable Diameter 			
<ul style="list-style-type: none"> • Cable breaking strength 			



11.0 Deck Requirements

During DFO missions there is sometimes a need to carry equipment that is large and needs to be stored on the deck of the vessel. DFO will need a way to secure that equipment to the vessel.

Criteria/Specifications	Yes	No	Measurements
11.1 Does vessel have work space on deck for science operations?			
11.2 Does vessel have space on deck for the storage of scientific equipment?			
11.3 Does the vessel have mechanisms to secure equipment on deck?			
11.4 Does the vessel have at least one (1) clean salt and fresh water supply on deck?			
11.5 Does the vessel have an enclosed space for deployment, recovery and sampling of science equipment?			
11.6 Does the vessel have a dedicated area for sampling with minimum dimensions of 2.4m X 2.4m [8ft X 8ft]. with a minimum overhead height of 2.4m [8ft]?			



12.0 Internal Storage Options

During some DFO missions there is a large amount of equipment and sample boxes taken along. Science needs a place that they can store these boxes and crates. Some of these boxes will have extra sample vials, spare equipment, etc.; so there is a need to be able to access them while at sea.

Criteria/Specifications	Yes	No	Measurements
12.1 Does the vessel have dry storage space for DFO equipment?			
12.2 Are the spaces accessible at sea?			

Criteria/Specifications	Number of Spaces	Size of Spaces	Location of Spaces
12.4 How many storage spaces are available for science?			
12.5 What is the size of storage space openings?			
12.6 Where are the spaces located on the vessel? (i.e. what deck(s) are they located on?)			



13.0 Network, Data Handling and Power Specifications

A large percentage of scientific equipment is computer controlled and the data collected require certain metadata such as; position, speed, heading, time, etc. which would normally be provided by the ship's systems.

Criteria/Specifications	Yes	No	Comments
13.1 Is the vessel able to provide access to navigational data (i.e. National Marine Electronics Association (NEMA) data strings for position, speed, and heading) in the lab(s) for logging by DFO computers and instruments.			

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14.0 Vessel Mounted Transducers and Systems

DFO operations will have equipment lowered to or near to the ocean floor. When DFO is putting this equipment on or near the bottom there is a requirement that an reliable bottom track is available.

Criteria/Specifications	Yes	No	Make, Model and Frequency
14.1 Does the vessel have a hull mounted Acoustic Doppler Current Profiler (ADCP) and data acquisition system?			
14.2 Multibeam			
14.3 Single Beam			
14.4 Wide Band			
14.5 Sound Velocity probe			
14.6 12 kHz Transducer			
14.7 3.5 kHz Transducer			
14.8 Acoustic Release Transducer			
14.9 EK60 Transducer Suite			
14.10 EK80 Transducer Suite			
14.11 Does the vessel have a trawl monitoring system?			



15.0 Science on the Bridge

During some science missions, there will be a sea bird observer(s) as well as marine mammal observer(s) on board. To ensure that correct sampling protocols are followed, these observers will conduct their surveys from the bridge and will require space near a window on the port or starboard side.

Criteria/Specifications	Yes	No	No. of Staff Allowed
15.1 Does the vessel allow science to access and work on the bridge?			
15.2 If so how many people can be on the bridge in addition to the crew?			
15.3 Is there a source of power on the bridge for science use?			
15.4 Is there a network feed and navigation feed for science staff on the bridge?			

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16.0 Onboard Communications

During DFO operations with the lifting and lowering of equipment there is a need for constant communications between the deck and the bridge on top of general ship announcements.

Criteria/Specifications	VHF/UHF	Intercom	Both
16.1 A reliable communication system has to be in place for communication between the labs, deck and bridge. This can be done via VHF radios as long as there are no dead areas in critical spaces.			

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17.0 Tackle

Some DFO operations may require a wire to be run through a block or sheave to complete their work. DFO will have a need for both instrumented (metering) and non-instrumented blocks/sheaves.

All tackle supplied by the vessel must be in good condition with certificates valid for the duration of the Supply Arrangement.

Criteria/Specifications	<5 ton	>5ton	Comments
<p>17.1 Does the vessel have blocks available for science use?</p> <p>Certifications and dimensions of the blocks will be verified on inspection.</p>			
Criteria/Specifications	Yes	No	Comments
<p>17.2 Does the vessel have metering blocks that are sized to fit the winch wires?</p> <p>Certifications and dimensions of the blocks will be verified on inspection.</p>			
<p>17.3 Is the vessel fitted with all the required amenities for trawling operations? Does the vessel have the following amenities:</p>			
<ul style="list-style-type: none"> • Stern trawl ramp 			
<ul style="list-style-type: none"> • Stern Gantry 			
<ul style="list-style-type: none"> • Outhaul Boom for towing the trawl off the deck 			
<ul style="list-style-type: none"> • Trawl doors or otter boards 			
<ul style="list-style-type: none"> • Net drum winch 			
<ul style="list-style-type: none"> • Trawling gallows or ice davit(s) with trawling sheave(s) 			
<ul style="list-style-type: none"> • Sheaves fitted to trawl warp wires 			



Criteria/Specifications	Yes	No	Comments
17.4 Does the vessel have the ability to load and fish DFO supplied trawls and equipment? Can the vessel operate the following units?			
<ul style="list-style-type: none">• Western IIA trawl			
<ul style="list-style-type: none">• Campelen Trawl			
<ul style="list-style-type: none">• Seine			
<ul style="list-style-type: none">• Long Line			

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