

# Model Curriculum

## Marine Capture Fisherman cum Primary Processor

**SECTOR: AGRICULTURE & ALLIED**  
**SUB-SECTOR: FISHERIES**  
**OCCUPATION: CAPTURE FISHERIES**  
**REF ID: AGR/Q5001, V1.0**  
**NSQF LEVEL: 4**



## Certificate

### CURRICULUM COMPLIANCE TO QUALIFICATION PACK – NATIONAL OCCUPATIONAL STANDARDS

is hereby issued by the

**AGRICULTURE SKILL COUNCIL OF INDIA**

for the

### MODEL CURRICULUM

Complying to National Occupational Standards of

Job Role/Qualification Pack: **Marine Capture Fisherman cum Primary Processor** QP No. **'AGR/ Q5001 NSQF Level 4'**

Date of Issuance: January 30<sup>th</sup>, 2018

Valid up to: March 31<sup>st</sup>, 2021

\* Valid up to the next review date of the Qualification Pack



Authorised Signatory  
(Agriculture Skill Council of India)

## TABLE OF CONTENTS

<b>1. Curriculum</b>	<b>01</b>
<b>2. Trainer Prerequisites</b>	<b>07</b>
<b>3. Annexure: Assessment Criteria</b>	<b>08</b>

# Marine Capture Fisherman cum Primary Processor

## CURRICULUM / SYLLABUS

This program is aimed at training candidates for the job of a “Marine Capture Fisherman cum Primary Processor”, in the “Agriculture & Allied” Sector/Industry and aims at building the following key competencies amongst the learner

<b>Program Name</b>	Marine Capture Fisherman cum Primary Processor		
<b>Qualification Pack Name &amp; Reference ID.</b>	AGR/Q5001, v1.0		
<b>Version No.</b>	1.0	<b>Version Update Date</b>	
<b>Pre-requisites to Training</b>	No formal education; Class 5, Preferably		
<b>Training Outcomes</b>	<p><b>After completing this programme, participants will be able to:</b></p> <ul style="list-style-type: none"> <li> <b>Prepare for carrying out fishing activities:</b>            choose the gear with appropriate mesh according to target species, choose hook and appropriate bait, fabricate nets, select and construct pots and traps suited for the available species, operate motorised and non-motorised vessels, decide for day today activity according to weather conditions         </li> <li> <b>Carry out capture of fish</b>            operate the nets, locate fish with the help of fish finding devices, navigate with the help of GPS, undertake fish landing and cleaning of nets, use safety equipment         </li> <li> <b>Carry out primary processing and sale of fish</b>            Sort commercially important edible and non edible fishes, handle fishes, operate machinery, undertake descaling, fish cutting, evisceration and bleeding, undertake proper icing and storage of fish.         </li> <li> <b>Prepare and sell primary fish products/ sashimi</b>            handle ice making machines, chill and store the fish, freeze the fish, produce canned fish and shellfish products, smoke the fish, undertake fish deboning, prepare value added product; packaging fish and fishery products, prepare sashimi products         </li> <li> <b>Ensure safety, hygiene and sanitation practices for capture fisheries</b>            Maintain personal hygiene &amp; safety, undertake cleaning of deck, fish holds, crates and utensils, maintain engines and vessel, maintain record and follow Code of conduct for responsible fishing, quality control         </li> </ul>		

This course encompasses 4 out of 4 Compulsory NOS (National Occupational Standards), 2 out of 2 Optional NOS of “Marine Capture Fisherman cum Primary Processor” Qualification Pack issued by “Agriculture Skill Council of India”.

#### COMPULSORY NOS:

Sr. No.	Module	Key Learning Outcomes	Equipment Required
1	<p><b>Introduction</b></p> <p><b>Theory Duration</b> (hh:mm) 10:00</p> <p><b>Practical Duration</b> (hh:mm) 04:00</p> <p><b>Corresponding NOS Code</b> Bridge Module</p>	<ul style="list-style-type: none"> <li>Understand general discipline in the class room (Do's &amp; Don'ts)</li> <li>Acquire knowledge about Marine capture fisheries</li> <li>Get acquainted with the importance of fish and fishery products in human nutrition</li> <li>Understand fish spoilage, causes of spoilage and quality of fish</li> <li>Get acquainted with the Wild Life Protection Act, 1972</li> <li>Get acquainted with the Environment (Protection) Act, 1986</li> <li>Familiarize with the Fishing policy, act and regulations</li> <li>Get introduced to various crafts and gears used in Marine fishing</li> <li>Identify commercially important marinewater fish</li> </ul>	Laptop, white board, marker, projector, Models of various crafts and gears used in Marine capture fisheries, preserved specimens of commercially important marine fishes
2	<p><b>Perform pre fishing activities</b></p> <p><b>Theory Duration</b> (hh:mm) 10:00</p> <p><b>Practical Duration</b> (hh:mm) 20:00</p> <p><b>Corresponding NOS Code</b> AGR/N5001</p>	<ul style="list-style-type: none"> <li>Get acquainted with commercially important marine fishery resources</li> <li>Understand the biology of commercially important marinewater fishes</li> <li>Understand fish behaviour and fishing methods</li> <li>Get acquainted with the relevant environmental parameters- temperature, depth, productivity etc</li> <li>Study about gears used to capture commercially important marinewater fishes.</li> <li>Learn use of fishing gears according to availability of marine fishes</li> <li>Learn use of fishing traps and pots</li> <li>Get acquainted with the petrol and diesel engines</li> <li>Study the infrastructure requirement for landing fish: harbour, landing center etc.</li> <li>Learn the economics of fishing operation</li> </ul>	Laptop, white board, marker, projector, Audio-visual aids, Dissection box, Thermometer, lead line, sechii disk, cut models of petrol diesel engines, working models of inboard and out bard engines, models of traps and pots, various netting materials such as floats, sinkers, ropes and twines, anchors, signals etc. different kinds of hooks, minimum one motorised boat, oars, anchor, ropes etc., small workshop for teaching various knots, net making, net mending, net rigging, fabrication of traps and pots.

Sr. No.	Module	Key Learning Outcomes	Equipment Required
3	<b>Capture the fish</b>  <b>Theory Duration</b> (hh:mm) 20:00  <b>Practical Duration</b> (hh:mm) 52.00  <b>Corresponding NOS Code</b> AGR/N5002	<ul style="list-style-type: none"> <li>Get acquainted with meteorology</li> <li>Access navigational, communicational and acoustic fish detection devices/ equipments</li> <li>Familiarize with the life saving devices</li> <li>Operate motorised and non-motorised vessel</li> <li>Learn different fishing method such as gill netting, boat seine, beach seine, cast netting, operation of hooks &amp; line, operation of various traps.</li> <li>Collect day today meteorological data from print and electronic media</li> <li>Use communication devices such as VHF</li> <li>Use acoustic fish detection devices</li> <li>Undertake setting of gear</li> <li>Land the catch on the boat</li> </ul>	Laptop, white board, marker, projector, Audio-visual aids, Internet connection/android mobile with access to internet, GPS, VHF, Compass, echo sounder (Fish finding device), motorised vessel, various types of nets and traps used in fishing, crates baskets, shovels, gloves, gumboots. Life jackets, ring buoys etc
4	<b>Perform post fishing activities</b>  <b>Theory Duration</b> (hh:mm) 22:00  <b>Practical Duration</b> (hh:mm) 38:00  <b>Corresponding NOS Code</b> AGR/N5003	<ul style="list-style-type: none"> <li>Understand the importance of handling, pre-processing and packaging of fish</li> <li>Acquire the knowledge of handling and preservation of fish</li> <li>Perform organoleptic evaluation of the catch</li> <li>Adhere to GMP/HACCP norms during handling/primary processing</li> <li>Acquaint self with ice making machines</li> <li>Calculate requirement of ice</li> <li>Preserve fish by icing</li> <li>Get acquainted with the packaging machinery and material</li> <li>Visit local markets to study consumer behaviour and consumption pattern</li> <li>Sort fish as per species and grades</li> <li>Undertake chilling, freezing, drying etc</li> <li>Undertake beheading, evisceration, removal of gills, bleeding etc.</li> <li>Undertake storage of fish: Bulking, shelving or boxing</li> <li>Maintain records of harvest and sale of fish</li> </ul>	Laptop, white board, marker, projector, Audio-visual aids, well equips pre-processing shed with minimum processing facility, cutting boards, set of knives, cutting machine, MAP, insulated box, ice making machines, thermometer, plastic crates, various packaging material, insulated boxes, weighing balance, approved fish preservatives, stainless steel utensils
5	<b>Ensure safety, hygiene and sanitation practices for capture fisheries and fishing assistance</b>	<ul style="list-style-type: none"> <li>Maintain personal hygiene &amp; safety</li> <li>Understand the importance of hygiene in fish handling and preservation</li> <li>Maintain cleanliness and hygiene of deck, pre-processing shed, fish</li> </ul>	First aid box, Hand gloves, boots, Head gear, Apron, napkins, bleaching powder, brooms, scrubbers, mops,

Sr. No.	Module	Key Learning Outcomes	Equipment Required
	<b>Theory Duration</b> (hh:mm) 8:00  <b>Practical Duration</b> (hh:mm) 16:00  <b>Corresponding NOS Code</b> AGR/N5103	holds, crates and utensils <ul style="list-style-type: none"> <li>Undertake cleaning and maintenance of gears</li> <li>Maintain engines and vessel</li> <li>Familiarize with the communication and life saving devices</li> <li>Perform timely record keeping and documentation</li> <li>Follow Code of conduct for responsible fishing</li> <li>Maintain personal hygiene of the fish handlers</li> <li>Adhere to BMP, GMP etc</li> </ul>	
	<b>COMPULSORY NOS:</b> <b>Total Duration:</b>  Theory Duration (hh:mm) 70:00  Practical Duration (hh:mm) 130:00	Unique Equipment Required:  Laptop, white board, marker, projector, Audio-visual aids, computer, motorised vessel, GPS, VHF, Echo sounder (Fish finding device), thermometer, sechii disc, lead line, models of petrol/diesel engines, working models of inboard and outboard engines, models of traps and pots, weighing balance	

### OPTIONS (Optional to choose any or all or none)

#### OPTION 1: Prepare and sell primary fish products

Sr. No.	Module	Key Learning Outcomes	Equipment Required
1	<b>Prepare and sell primary fish products</b>  <b>Theory Duration</b> (hh:mm) 12:00  <b>Practical Duration</b> (hh:mm) 28:00  <b>Corresponding NOS Code</b> AGR/N5009	<ul style="list-style-type: none"> <li>Get acquainted with different types of value added fish products.</li> <li>Undertake preparation of pickled and marinated fish product.</li> <li>Undertake preparation of fish mince</li> <li>Undertake drying such as sun drying, cabinet drying etc.</li> <li>Undertake smoking of fish</li> <li>Undertake basic function associated with canning</li> <li>Use deboning machine, salient cutter, meat mincer</li> <li>Undertake preparation of value added products such as Fish finger, fish cutlet, fish wada, fish shev, fish chakali, fish curry, fish pickle, etc</li> <li>Adhere to BMP, GMP, SSOP, GHP and HACCP etc</li> <li>Undertake proper packaging and labelling of the products</li> </ul>	Laptop, white board, marker, projector, Audio-visual aids, Plate freezer, cold storage, can reforming machine, flanging machine, double seaming machine, retort, labelling machine, kiln, cabinet dryer, solar tent dryer, deboning machine, meat mincer, Vacuum Packaging machine

Sr. No.	Module	Key Learning Outcomes	Equipment Required
		<ul style="list-style-type: none"> <li>Get introduced to various central and state government schemes about processing of fish</li> </ul>	
	<b>OPTION 1 : Total Duration</b>  Theory Duration 12:00  Practical Duration 28:00	<b>Unique Equipment Required:</b>  Laptop, white board, marker, projector, Fish cutting machines, Modified Atmospheric Packaging machines, Vacuum packaging machine, weighing balance of various types, insulated boxes, Plate freezer, cold storage, can reforming machine, flanging machine, double seaming machine, retort, labelling machine, kiln, cabinet dryer, solar tent dryer, deboning machine and meat mincer	

#### OPTION 2: Undertake production of Sashimi products

Sr. No.	Module	Key Learning Outcomes	Equipment Required
1	<b>Undertake production of Sashimi products</b>  <b>Theory Duration</b> (hh:mm) 12:00  <b>Practical Duration</b> (hh:mm) 28:00  <b>Corresponding NOS Code</b> AGR/N5010	<ul style="list-style-type: none"> <li>Select fishes (tuna, bill fishes) from the catch for preparation of sashimi products</li> <li>Perform organoleptic evaluation of sashimi grade fishes</li> <li>Adhere to hygienic handling practices- GMP, SSOP, GHP and HACCP norms</li> <li>Prepare different sashimi products viz. saku, poke, loins, cubes etc.</li> <li>Undertake vacuum packaging</li> <li>Undertake modified atmospheric packaging of the product</li> <li>Undertake proper labelling of the products in accordance with the industry standards</li> <li>Build marketing channels for the sale of the products</li> </ul>	Laptop, white board, marker, projector, Audio-visual aids, chilling machine, freezer, Vacuum Packaging machine, Modified Atmospheric Packaging machines, labelling machine
	<b>OPTION 2 : Total Duration</b>  Theory Duration 12:00  Practical Duration 28:00	<b>Unique Equipment Required:</b>  Laptop, white board, marker, projector, Fish cutting machines, Modified Atmospheric Packaging machines, Vacuum packaging machine, weighing balance of various types, insulated boxes, Plate freezer, cold storage, can reforming machine, flanging machine, double seaming machine, retort, labeling machine, kiln, cabinet dryer, solar tent dryer, deboning machine and meat mincer	

	<b>GRAND Total Duration</b>  <b>Minimum Duration for the QP= 200 hrs</b>	<b>Unique Equipment Required for the QP:</b>  Laptop, white board, marker, projector, Audio-visual aids, computer, Laptop, white board, marker, projector, Audio-visual	
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	<p><b>Theory: <u>70 hrs</u></b> <b>Practical: <u>130 hrs</u></b></p> <p><b>Maximum Duration for the QP= <u>280 hrs</u></b> <b>Theory: <u>94 hrs</u></b> <b>Practical: <u>186 hrs</u></b></p>	<p>aids, computer, motorised vessel, GPS, VHF, Echo sounder (Fish finding device), thermometer, sechii disc, lead line, models of petrol/diesel engines, working models of inboard and outboard engines, models of traps and pots, weighing balance, Fish cutting machines, Modified Atmospheric Packaging machines, Vacuum packaging machine, insulated boxes, Plate freezer, cold storage, can reforming machine, flanging machine, double seaming machine, retort, labelling machine, kiln, cabinet dryer, solar tent dryer, deboning machine and meat mincer</p>
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*(This syllabus/ curriculum has been approved by [Agriculture Skill Council of India](#))*

## Trainer Prerequisites for Job role: “Marine Capture Fisherman cum Primary Processor” mapped to Qualification Pack: “AGR/Q5001, v1.0”

Sr. No.	Area	Details
1	Description	Trainer is responsible for educating the trainees – Pre-fishing activities, Fishing methods, Post-fishing activities, icing & storage of fish, pre-processing, hygiene & cleaning, preparation of value added products, marketing, use of life saving devices, communication & navigational devices
2	Personal Attributes	Trainer should be Subject Matter Expert. He/ she should have good communication, leadership, observation and practical oriented skills.
3	Minimum Educational Qualifications	Diploma in Fisheries
4a	Domain Certification	Certified for Job Role: “ <u>Marine Capture Fisherman cum Primary Processor</u> ” mapped to QP: “ <u>AGR/Q5001 v1.0</u> ”. Minimum accepted score is 80%.
4b	Platform Certification	Certified for the Job Role: “Trainer”, mapped to the Qualification Pack: “ <u>MEP/Q0102</u> ”. Minimum accepted % as per respective SSC guidelines is 80%.
5	Experience	<ul style="list-style-type: none"> <li>• Bachelors in Fishery Sc.</li> <li>• B.Sc. (Fisheries) with 1 Year of experience in relevant field</li> <li>• B.Sc. (Zoology) with 2 Years of experience in relevant field</li> <li>• Diploma in Fisheries with 3 Years of experience in relevant field</li> </ul>

## Annexure: Assessment Criteria

<b>Assessment Criteria</b>	
<b>Job Role</b>	<b>Marine Capture Fisherman cum Primary Processor</b>
<b>Qualification Pack</b>	<b>AGR/Q5001, v1.0</b>
<b>Sector Skill Council</b>	<b>Agriculture</b>

### **Guidelines for Assessment:**

1. Criteria for assessment for each Qualification Pack will be created by the Sector Skill Council. Each Performance Criteria (PC) will be assigned marks proportional to its importance in NOS. SSC will also lay down proportion of marks for Theory and Skills Practical for each PC.
2. The assessment for the theory part will be based on knowledge bank of questions created by the SSC.
3. Assessment will be conducted for all compulsory NOS, and where applicable, on the selected elective/option NOS/set of NOS.
4. Individual assessment agencies will create unique question papers for theory part for each candidate at each examination/training center (as per assessment criteria below).
4. Individual assessment agencies will create unique evaluations for skill practical for every student at each examination/training center based on this criterion.
5. To pass the Qualification Pack , every trainee should score a minimum of 70% of aggregate marks to successfully clear the assessment.
6. In case of *unsuccessful completion*, the trainee may seek reassessment on the Qualification Pack.

Assessment outcomes	Assessment Criteria for outcomes	Total Marks	Out Of	Marks Allocation	
				Theory	Skills Practical
1.AGR/Q5001 Perform pre fishing activities	PC1.decide on the species to capture depending on the climatic and environmental condition, region and their seasonal availability	70	3	3	0
	PC2. select a suitable method from active and passive gears depending on the species to capture and duration of the trip		1	1	0
	PC3. adjust and alter the net according to the method chosen and the species type for capture		1	0	1
	PC4. sample large proportions of the whole fish stock or large numbers of fish using the active gears		1	0	1
	PC5. select the appropriate active gear from trawling, seine netting, purse seining, trawling and harpoon methods for capture		1	1	0
	PC6. catch using trawling method depending on type of ground being fished, depth of water fished, way in which the gear is constructed and rigged,		2	0	2
	PC7. be aware of the length of time the net is towed through water in order to capture the fish species the net passes through		1	1	0
	PC8. ensure the method chosen produces a high quality catch		1	1	0
	PC9. select the appropriate passive gear from gill net, long lining, jigging and trapping		1	1	0
	PC10. use the mesh size depending upon the species and the size range being targeted		2	2	0
	PC11. determine the size of fish and the species caught by use of the appropriate hook size and type of bait		1	1	0
	PC12. select the trap nets determined by the size of mesh used		1	1	0
	PC13. decide on the crafts to be used for fishing from mechanized or non-mechanized types		1	1	0

	PC14. choose the appropriate mechanized boat type from hand line boat, pole and line fishing vessel, trawling vessel, dol netter, gill netter and stern trawlers depending on the type of species, method chosen, climatic condition and the water level to go for the fishing operation		2	0	2
	PC15. choose the appropriate non-mechanized boat types from catamaran, dugout-canoes, plank built canoes, masula boat, built-up boats depending on the type of species, method chosen, climatic condition and the water level to go for the fishing operation		2	0	2
	PC16. take necessary measures and study the weather before getting on shore so that storms, fogs and wind that may hamper fishing vessels causing them to suspend fishing operations and returning to port does not happen		2	0	2
	PC17. be aware of operations, particularly of mechanized boats		2	0	2
	PC18. equip the fishing boats for long stays at sea		1	1	0
	PC19. ensure boats contain refrigerators to keep the fish fresh until returning to shore		1	1	0
	PC20. have facilities on-board in large fishing vessels that operate in deep water having technologically advanced equipment to process the fish and prepare for sale		1	1	0
	PC21. ensure the fishing vessel is sea-worthy		1	1	0
	PC22. be familiar with navigation requirement and operation of all electronic equipment		3	0	3
	PC23. understand how to pilot and navigate vessels		3	0	3
	PC24. ready the nets, pots, traps, spears and dredges for fishing		2	0	2

	PC25. be prepared with compasses, charts, and electronic navigational equipment, including global positioning systems (GPS), radar and sonar to locate fish and to avoid obstacles above and below water		3	0	3
	PC26. utilize depth sounders to indicate the water depth and whether there is marine life between the vessel and sea bottom		2	0	2
	PC27. have life jackets, flash lights, boat lights, paddles		1	1	0
	PC28. ensure the rod, reel, line, hooks and bait, tongs, rakes, hoes, shovels and wire trap can withstand the rougher conditions and tougher fish		1	1	0
	PC29. ensure the navigation and communication needs are satisfied for all types of boats		1	1	0
	PC30. attach nets, slings, hooks, blades, and/or lifting devices to cables, booms, hoists, and/or dredges		1	0	1
	PC31. connect accessories such as floats, weights, flags, lights, or markers to nets, lines, or traps		1	0	1
	PC32. interpret weather and vessel conditions to determine appropriate responses		1	0	1
	PC33. load and unload vessel equipment and supplies, by hand or using hoisting equipment		1	0	1
	PC34. pull and guide nets, traps, and lines onto vessels, by hand or using hoisting equipment		1	0	1
	PC35. ensure the weather condition is suitable for fishing and no storms expected as it makes the waters rough and the work hazardous		1	1	0
	PC36. ensure location with best fishing grounds and body of water		1	1	0
	PC37. ready to work during any part of the day starting very early, long before dawn or last late into the night		1	1	0

	PC38. accustom to the living conditions in cramped large commercial vessels, offering little privacy and long fishing expeditions meaning weeks or months spent away from family members and friends		1	1	0
	PC39. ensure good health and strength, ability to perform the manual labor of fishing as well as its allied activities such as boat maintenance and repair		1	1	0
	PC40. avoid or go through bad weather, toil in inclement weather such as storms and winds, will to overcome danger such as faulty fishing equipment, icy decks, falls overboard and even failure of navigation equipment that may lead to collisions or shipwrecks		1	1	0
	PC41. oversee the purchase of supplies, gear and equipment such as fuel, netting and cables		2	2	0
	PC42. obtain the required fishing permits and licenses		2	2	0
	PC43. load equipments into the boat		1	1	0
	PC44. study and familiarize with the habits and behavior of the type of fish that's planned to focus on, natural habitat of the fish in order to increase their chances of having a great catch		3	1	2
	PC45. understand the feeding and breeding habits on the fish type that is planned to be captured		2	2	0
	PC46. have awareness on seamanship, vessel operations, marine safety, navigation, vessel repair, and fishing gear technology.		1	1	0
	PC47. estimate costs of operations and plan fishing season budgets accordingly.		2	1	1
	PC48. follow the rules and regulations of the fishing industry		1	1	0
			<b>70</b>	<b>35</b>	<b>35</b>
2. AGR/Q5002 Capture the fish	PC1. operate rowboats, dinghies or skiffs to transport fishers, divers and hookers or tow and position fishing equipment	70	6	3	3

	PC2. venture to distant coastal areas in search of fishing grounds using mechanized boats, small or medium, constructed with engines operated by oil		4	2	2
	PC3. put fishing equipment into the water and anchor or tow equipment, according to the fishing method used		6	0	6
	PC4. locate fish using fish finding equipment		6	0	6
	PC5. operate fishing gear letting out and pulling in nets and lines, and extract the catch from the nets or the line's hooks		5	0	5
	PC6. use dip nets to prevent the escape of small fish and gaffs to facilitate the landing of large fish		4	0	4
	PC7. steer vessels and operate navigational instruments.		5	0	5
	PC8. navigate waters possibly through treacherous conditions and catch fish		4	0	4
	PC9. prepare adequate emergencies in the boats		3	3	0
	PC10. have adequate safety equipments		3	3	0
	PC11. maintain the vessel properly		2	2	0
	PC12. have awareness and do not ignore the stability issues		2	2	0
	PC13. take necessary steps for reducing the hazards for fishermen declining the death rate		2	2	0
	PC14. guard against danger of injury from malfunctioning fishing gear, entanglement in fishing nets and gear, slippery decks, ice formation or large waves washing over the deck		3	3	0
	PC15. ensure the necessary first-aid kits, medicines are ready in hand for any injury or even necessary measures to avoid drowning		2	2	0
	PC16. practice caution when handling fish particularly large strong fish in deep sea		2	2	0
	PC17. be steady not to fall out of the boat and make sure the large species for not bite		2	2	0



	PC18. achieve advances in fishing technology and high efficiency fishing practices		3	3	0
	PC19. ensure higher catches and greater food abundance with lower market prices and greater profits		3	3	0
	PC20. improve need for greater efficiency and wasteful usage		3	3	0
			<b>70</b>	<b>35</b>	<b>35</b>
3.AGR/Q5003 Perform post fishing activities	PC1. maintain engines, fishing gear, and other on-board equipment by doing minor repairs		2	1	1
	PC2. ensure decks are clear and clean at all times and that the vessel's engines and equipment are kept in good working condition		1	1	0
	PC3. repair fishing gears, vessel engines, equipments, nets and accessories when necessary		6	2	4
	PC4. wash decks, conveyors, knives, and other equipment, using brushes, detergents and water		2	1	1
	PC5. remove catches from fishing equipment and measure them to ensure compliance with legal size		3	1	2
	PC6. adhere to hygienic handling practices- GMP and SSOP standards		10	5	5
	PC7. perform organoleptic evaluation of the catch		2	1	1
	PC8. process the fish caught on board and prepare for sale		6	2	4
	PC9. sort the species according to buying capability or customer requirements		10	5	5
	PC10. wash & store fish with ice to bring them back to shore for sale		6	2	4
	PC11. perform basic functions associated with chilling, freezing, drying etc		10	4	6
	PC12. ensure the fish is maintained fresh after the capture till sale		2	2	0
	PC13. transport fish to processing plants or to buyers		2	1	1
	PC14. adhere to HACCP norms during handling/primary processing	80	10	6	4

	PC15. sell the fish directly contacting and negotiating with buyers or through a fish auction		4	4	0
	PC16. record in logbooks specifics of fishing activities such as dates, harvest areas, yields, and weather and sea conditions		4	2	2
			<b>80</b>	<b>40</b>	<b>40</b>
4. AGR/N5103 Ensure safety, hygiene and sanitation practices for capture fisheries and fishing assistance	PC1. use safe working and emergency procedures of all machinery used, their controls and limitations		5	3	2
	PC2. update self with areas such as seamanship, rope work, working with nets and other onboard fishing equipment, all life saving and firefighting equipment on board, their uses and applications		10	6	4
	PC3. monitor pollution laws related to the disposal of fish, fisheries management laws related to fishing methods and gear, conservation laws related to banned species		5	3	2
	PC4. ensure adherence to safe operation of all fishing electronic equipments		5	2	3
	PC5. monitor international regulations for preventing collisions pertaining to fishing boats, and the CRZ pertaining to inshore areas		5	3	2
	PC6. update self with underwater dangers along the fishing route		5	3	2
	PC7. predict close quarter situations with other boats/ships well in advance		5	3	2
	PC8. apply emergency measures during rough weather		5	2	3
	PC9. demonstrate signals to exhibit while fishing		5	2	3
	PC10. identify poisonous creatures that come up with the catch and dispose of them safely		5	2	3
	PC11. carry out use of all personal life saving equipment on board, as and when required		5	2	3
	PC12. monitor the effect of bacteria on fish, rate of decomposition, how and why gutting prolongs freshness, importance of chilling quickly		5	2	3
		80	5	2	3

	PC13. handle fish without bruising it, store without crushing and in a hygienic manner		5	2	3
	PC14. update self with knowledge of risks, dangers and limitations of fishing in the sea and other water bodies		5	3	2
	PC15. ensure the assistance provided can withstand the rigors of the sea and other water bodies and does not endanger life or damage machinery		5	2	3
			<b>80</b>	<b>40</b>	<b>40</b>
5. AGR/N5009 Prepare & Sell Primary Fish Products	PC1. perform organoleptic evaluation of the capture		5	2	3
	PC2. adhere to hygienic handling practices		10	5	5
	PC3. undertake proper chilling methods		5	2	3
	PC4. undertake proper freezing methods		5	2	3
	PC5. undertake proper drying practices		5	2	3
	PC6. undertake salting/curing of the raw material		5	2	3
	PC7. undertake proper smoking methods		5	2	3
	PC8. undertake basic functions associated with canning		5	2	3
	PC9. operate the meat bone separator and associated machineries		5	2	3
	PC10. prepare various product series from fish mince		5	2	3
	PC11. undertake hygienic preparation of pickles from fish and shellfish		5	2	3
	PC12. prepare various product series from fish mince		5	2	3
	PC13. prepare marinated fish and shellfish products		5	2	3
	PC14. prepare ready to eat fish and shell fish curries in accordance with the delicacy of consumers		5	2	3
	PC15. do long term storage of fish and fishery products through drying		5	2	3
		150	5	2	3

	PC16. select appropriate packing materials based on the product specifications		10	4	6
	PC17. get acquainted with vacuum packaging technology of the products		5	2	3
	PC18. get acquainted with modified atmospheric packaging of the products		5	2	3
	PC19. undertake proper labelling of the products in accordance with the industry standards		5	2	3
	PC20. ensure minimum post-harvest losses in the entire process		5	2	3
	PC21. adhere to GMP, SSOP, GHP and HACCP norms		20	10	10
	PC22. establish micro-units post analyzing benefit : cost ratio		10	5	5
	PC23. develop marketing channels through entrepreneurship		5	3	2
			<b>150</b>	<b>65</b>	<b>85</b>
6. AGR/N5010 Undertake Production of Sashimi Products	PC1. select fishes (tuna, bill fishes) from the catch for preparation of sashimi products		6	3	3
	PC2. perform organoleptic evaluation of sashimi grade fishes		2	1	1
	PC3. adhere to hygienic handling practices- GMP, SSOP, GHP and HACCP norms		15	10	5
	PC4. prepare different sashimi products viz. saku, poke, loins, cubes etc.		20	5	15
	PC5. undertake chilling & freezing		6	2	4
	PC6. undertake vacuum packaging		6	3	3
	PC7. undertake modified atmospheric packaging of the product		5	2	3
	PC8. undertake proper labelling of the products in accordance with the industry standards		5	2	3
	PC9. build marketing channels for the sale of the products	70	5	2	3
			<b>70</b>	<b>30</b>	<b>40</b>