

## POST HARVEST FISH HANDLING

**UNIT CODE:** AQ/CU/AM/CR/05/4/B

### Relationship to Occupational Standards

This unit addresses the unit of competency: Handle harvested fish

**Duration of Unit:** 150 hours

### Unit Description

This unit describes the knowledge, skills and attitudes required to handle harvested fish. It involves the ability to apply food safety measures in handling harvested fish, hygienically handle, preserve, and process harvested fish. It includes marketing of fish, fish products and by-products. It also involves disposal of wastes from fish processing.

### Summary of Learning Outcomes

1. Apply food safety measures in handling harvested fish
2. Prepare harvested fish for preservation
3. Preserve harvested fish
4. Process harvested fish
5. Market fish, fish products and by-products
6. Manage waste from fish processing

### Learning Outcomes, Content and Suggested Assessment Methods

Learning Outcome	Content	Suggested Assessment Methods
1. Apply food safety measures in handling harvested fish	<ul style="list-style-type: none"><li>• Introduction to food safety<ul style="list-style-type: none"><li>○ Meaning of food safety</li><li>○ Importance of food safety</li><li>○ Principles of food safety</li></ul></li><li>• Prerequisite programmes<ul style="list-style-type: none"><li>○ Meaning and importance of prerequisite programmes</li><li>○ Relevant programmes for post-harvest handling of fish</li></ul></li><li>• Hazard analysis for post-harvest handling of fish<ul style="list-style-type: none"><li>○ Types and sources of hazards</li></ul></li></ul>	<ul style="list-style-type: none"><li>• Written tests</li><li>• Oral questioning</li><li>• Observation</li></ul>

	<ul style="list-style-type: none"> <li>○ Significance of hazards</li> <li>○ Methods of hazard control</li> <li>● Components of HACCP plan for post-harvest handling of fish <ul style="list-style-type: none"> <li>○ Critical control points</li> <li>○ Critical control limits</li> <li>○ Monitoring procedures on the control limits</li> <li>○ Corrective actions</li> <li>○ Verification and validation</li> <li>○ Record keeping</li> </ul> </li> <li>● Standards and legislations of food safety on handling harvested fish</li> </ul>	
2. Prepare harvested fish for preservation	<ul style="list-style-type: none"> <li>● Use of PPEs in preserving harvested fish</li> <li>● Safety measures to be observed</li> <li>● Use of fish preservation materials, supplies, tools and equipment</li> <li>● Fish handling procedures <ul style="list-style-type: none"> <li>○ Grading</li> <li>○ Cleaning</li> <li>○ Scaling</li> <li>○ Gutting</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>● Written tests</li> <li>● Oral questioning</li> <li>● Practical tests</li> </ul>
3. Preserve harvested fish	<ul style="list-style-type: none"> <li>● Fish spoilage</li> <li>● Fish preservation methods <ul style="list-style-type: none"> <li>○ Icing</li> <li>○ Smoking</li> <li>○ Sun-drying</li> <li>○ Salting</li> <li>○ Freezing</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>● Written tests</li> <li>● Oral questioning</li> <li>● Practical tests</li> <li>● Project</li> </ul>
4. Process harvested fish	<ul style="list-style-type: none"> <li>● Use of PPEs in processing harvested fish</li> <li>● Safety measures to be observed</li> <li>● Use of fish processing materials, supplies, tools and equipment</li> <li>● Types of processed fish products</li> <li>● Processing methods <ul style="list-style-type: none"> <li>○ Frying</li> <li>○ Smoking</li> <li>○ Salting</li> <li>○ Marinating</li> <li>○ Filleting</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>● Written tests</li> <li>● Oral questioning</li> <li>● Oral presentation</li> <li>● Practical tests</li> <li>● Projects</li> </ul>

	<ul style="list-style-type: none"> <li>○ Fermentation</li> <li>● Packaging and labelling <ul style="list-style-type: none"> <li>○ Packaging tools and equipment</li> <li>○ Packaging materials</li> <li>○ Labelling information</li> </ul> </li> <li>● Products storage</li> </ul>	
5. Market fish, fish products and by-products	<ul style="list-style-type: none"> <li>○ Factors affecting marketing of fish and fish products</li> <li>○ Price determination</li> <li>○ Distribution channels</li> <li>○ Selling methods</li> <li>○ Observation of hygiene</li> </ul>	<ul style="list-style-type: none"> <li>● Oral questioning</li> <li>● Written tests</li> <li>● Observation</li> </ul>
6. Manage waste from fish processing	<ul style="list-style-type: none"> <li>● Use of tools, materials and equipment in disposal of fish processing wastes</li> <li>● Environmental regulations for disposal of fish processing wastes</li> <li>● Types of fish processing wastes</li> <li>● Disposal methods of fish processing wastes</li> </ul>	<ul style="list-style-type: none"> <li>● Oral questioning</li> <li>● Practical tests</li> <li>● Written tests</li> <li>● Oral presentations</li> </ul>

### Suggested Delivery Methods

- Instructor led facilitation of theory
- Demonstration by trainer
- Practical work by trainee
- Viewing of related videos
- Group discussions
- Role plays
- Field trips

### Recommended Resources

#### Tools and equipment

Weighing balance, wheelbarrow, pallets, filleting tables, knives, waste disposal containers, ice box, smoking kiln, solar dryer, drying racks, drying mats or canvass, domestic freezers, cool boxes, meat mincer, blender, crockery, basins, buckets, hard brush, baskets, fire-fighting equipment

#### Materials and supplies

Ice, salt, frying oil, polybags, cartons, gunny bags, ice packs, sealing tape, labels

#### Personal protective equipment (PPEs)

Gum boots, head covers, gloves, dust coats, first aid kits, mouth pieces, aprons

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