



NATIONAL BOARD FOR TECHNICAL EDUCATION

PLOT B BIDA ROAD, P.M.B. 2239, KADUNA, NIGERIA

IN COLLABORATION WITH



NATIONAL OCCUPATIONAL STANDARDS (NOS)

FISH FARMING ACTIVITY LEVELS 4&5

JUNE, 2026



**RENEWED HOPE
IN AGRICULTURE**

PREFACE

The development of the National Occupational Standards (NOS) for the agricultural sector marks another important milestone in Nigeria's commitment to strengthening Technical and Vocational Education and Training (TVET), promoting skills development, and improving workforce productivity. These standards have been developed to provide nationally recognized benchmarks for the knowledge, skills, and competencies required for effective performance in various agricultural occupations.

The National Occupational Standards were developed through a collaborative process involving industry experts, employers, professional bodies, regulatory agencies, training institutions, development partners, and other key stakeholders. Their contributions ensured that the standards reflect current industry practices, emerging technologies, and the competency requirements of the modern agricultural sector.

I wish to express my sincere appreciation to the Honourable Minister of Education for providing the policy direction that made this initiative possible. I also acknowledge the support of the Honourable Minister of Agriculture and Food Security and the Honourable Minister of Livestock Development for their commitment to advancing agricultural skills development in Nigeria.

I extend my profound gratitude to the Tertiary Education Trust Fund (TETFund) for its intervention and support, which facilitated the development of these National Occupational Standards. I also appreciate the invaluable contributions of the Sector Skills Council for Agriculture (SSC4A), members of the Implementation Committee, resource persons, industry practitioners, employers, professional associations, regulatory agencies, the French Embassy in Nigeria, development partners, and all stakeholders who contributed their expertise throughout the development process.

These National Occupational Standards will serve as an important reference for competency-based training, assessment, certification, apprenticeship, Recognition of Prior Learning (RPL), and workforce development within the agricultural sector. It is my expectation that all implementing institutions and industry partners will effectively utilize these standards to enhance the quality, relevance, and competitiveness of agricultural skills development in Nigeria.

I commend all stakeholders for their dedication and commitment to this important national assignment and look forward to the successful implementation of these National Occupational Standards for the benefit of the agricultural sector and the nation as a whole.

Professor Idris M. Bugaje, FNSE
Chairman, Implementation Committee

EXECUTIVE SECRETARY

National Board for Technical Education (NBTE), Kaduna

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NATIONAL SKILLS QUALIFICATION (NSQ)

LEVEL 4

FISH FARMING ACTIVITY



GENERAL INFORMATION

OVERVIEW

This qualification is designed for individuals who are interested in pursuing a career in **Fish Farming Activities** for the award of National Skills Qualifications (NSQ). It is aimed at producing specialists and supervisors in Fish Farming Activity at NSQ Level 4 with the competencies necessary to support and work in Fish farms while complying with relevant regulatory requirements, health and safety.

This qualification is subject to review as and when the need arises.

QUALIFICATION PURPOSE

The purpose of this qualification is to prepare competent personnel who can independently manage commercial fish farming enterprises and supervise fish farming production activities in accordance with industry standards, occupational health and safety requirements, environmental sustainability principles, and national regulatory requirements.

QUALIFICATION REQUIREMENTS

Candidates must:

- a. Be at least eighteen (18) years of age
- b. Be medically fit
- c. Be mentally fit (Mental alertness)
- d. The person must have level 3 fish farming qualification.
- e. Have achieved all the Safety and Health mandatory units in the qualification
- f. Be a Nigerian citizen
- g. Possess an international passport and, for other nationals, a valid residence permit
- h. Be vetted

QUALIFICATION OBJECTIVES

To achieve this qualification, the learner should be able to:

1. Plan, coordinate and manage fish production systems.
2. Supervise hatchery, nursery, grow-out and harvesting operations.
3. Manage fish feeding programmes and production records.
4. Implement fish health management and biosecurity programmes.
5. Monitor and maintain optimum water quality and environmental conditions.
6. Supervise staff and allocate farm resources efficiently.
7. Apply quality assurance systems and maintain production standards.
8. Manage farm inventories and operational budgets.
9. Implement environmental management and climate-smart fish farming practices.

10. Improve productivity, profitability and sustainability of fish farming enterprises. NATIONAL SKILLS QUALIFICATION TABLE

MANDATORY UNITS

Unit	Unit Reference Number	Unit Title	Credit Value	Guided Learning Hours	Practice Time	Remark
1	AGR/FFA/001/L4	Communication in Fish Farming Workplace	4	40	120	Mandatory
2	AGR/FFA/002/L4	Teamwork in Fish Farming Workplace	4	40	120	Mandatory
3	AGR/FFA/003/L4	Health and Safety in Fish Farming Workplace	5	50	150	Mandatory
4	AGR/FFA/004/L4	Fish Production Systems Management	10	100	300	Mandatory
5	AGR/FFA/005/L4	Fish Health and Biosecurity	7	70	210	Mandatory
6	AGR/FFA/006/L4	Water Quality Management	7	70	210	Mandatory
7	AGR/FFA/007/L4	Fish Farming Personnel Management	4	40	120	Mandatory
8	AGR/FFA/008/L4	Fish Farming Business Management	5	50	150	Mandatory
Total			46	460	1380	

QUALIFICATION STRUCTURE

This qualification comprises a total of eight (8) Mandatory Units, with a credit value of 46 and 460 Guided Learning Hours (GLH) across the full qualification. One (1) credit is equivalent to ten (10) GLH. Guided Learning Hours are the time a learner spends in the classroom, workshop and laboratory of the Skills Training Centre (STC), being taught, instructed, supervised or assessed by a qualified trainer, facilitator or assessor.

In addition to the GLH, the qualification requires at least twice or thrice the GLH as practice time. Practice time is the time a learner is expected to spend applying the skills of each unit in a real workplace environment, carrying out the same tasks repeatedly until performance becomes consistent, accurate and habitual to the standard the qualification demands. It is undertaken under the guidance of a workplace supervisor, recorded in the learner's logbook and duly endorsed. Practice time is the principal setting where core assessment is conducted. It is through repeated performance in the workplace that a learner's achievement of the Learning Outcomes and Performance Criteria is judged and evidenced. Practice time is an additional requirement to GLH and does not replace them.

To achieve this qualification, the learner must complete all mandatory units, undertake the prescribed practice time, and accumulate the minimum credit value approved by NBTE. Credit is awarded only when a learner has been assessed as competent against all Learning Outcomes and Performance Criteria of a unit.

GENERAL GUIDE

Unit title	Provides a clear explanation of the content of the unit.
Unit number	The unique number assigned to the unit.
Unit reference	The unique reference number given to each unit at qualification approval by NBTE.
Unit level	Denotes the level of the unit within the Nigerian Skills Qualification Framework (NSQF).
Unit credit value	The value that has been given to the unit based on the expected learning time for an average learner. 1 credit = 10 learning hours.
Unit aim	Provides a brief outline of the unit content.
Learning outcome	A statement of what a learner will know, understand or be able to do as a result of a process of learning.
Assessment criteria	A description of the requirements a learner must achieve to demonstrate that a learning outcome has been met.
Unit assessment guidance	Any additional guidance provided to support the assessment of the unit.
Unit guided learning hours	The average number of hours of supervised or directed study time or assessment required to achieve a qualification or unit of a qualification.

Unit 001: Communication in Fish Farming Workplace

Unit reference number: AGR/FFA/001/L4

NSQ Level: 4

Credit value: 4

Guided learning hours: 40

Unit Purpose: The purpose of this unit is to equip the learner with the competencies required to communicate technical and operational information effectively.

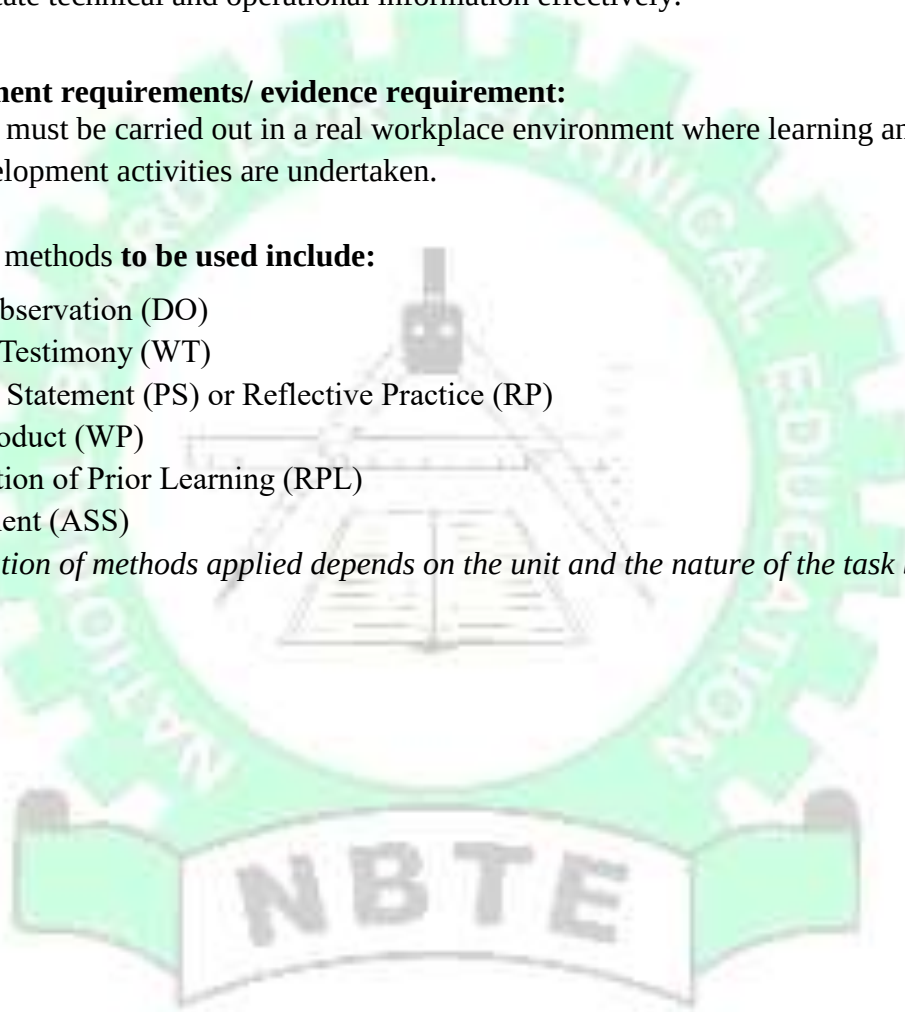
Unit assessment requirements/ evidence requirement:

Assessment must be carried out in a real workplace environment where learning and human development activities are undertaken.

Assessment methods **to be used include:**

1. Direct Observation (DO)
2. Witness Testimony (WT)
3. Personal Statement (PS) or Reflective Practice (RP)
4. Work Product (WP)
5. Recognition of Prior Learning (RPL)
6. Assignment (ASS)

The combination of methods applied depends on the unit and the nature of the task being assessed.



Unit 001: Communication in Fish Farming Workplace

LEARNING OUTCOME (LO)		PERFORMANCE CRITERIA	Evidence Type	Evidence Ref.	Page No.
The learner will:		The learner can:			
LO 1: Communicate work place information.	1.1	Convey farm instruction clearly to staff and work team.			
	1.2	Communicate production targets and operational schedules accurately.			
	1.3	Explain standard operating procedures to workers			
	1.4	Confirm understanding of instructions through feedback.			
LO 2: Prepare technical report.	2.1	Compile production data accurately			
	2.2	Prepare daily, weekly, monthly and annual reports.			
	2.3	Prepare inventory and feed utilisation reports			
	2.4	Compile water quality monitoring results.			
	2.5	Prepare farm performance report to management.			
LO 3: Conduct meetings.	3.1	Organise operational meetings			
	3.2	Conduct staff briefing before activity.			
	3.3	Facilitate discussion on fish production challenges			
	3.4	Encourage staff participation during meetings.			
LO 4: Communicate with customers and stakeholders	4.1	Provide accurate information on fish products and services.			
	4.2	Respond professionally to customers' inquiries and complaints.			
	4.3	Liaise with suppliers regarding farm inputs.			
	4.4	Interact effectively with extension officers and regulatory agencies.			
LO 5: Utilise digital communication technologies	5.1	Use email for official correspondence			
	5.2	Prepare electronic reports and presentations			
	5.3	Utilise mobile communication platforms for farm coordination.			

Unit 002: Teamwork in Fish Farming Workplace

Unit Reference Number: AGR/FFA/002/L4

NSQ Level: 4

Credit Value: 4

Guided Learning Hours: 40

Unit Purpose: The purpose of this unit is to equip the learners with competencies and skills to work collaboratively, lead Teamwork, coordinate fish farm activities, and foster a productive working environment to achieve farm production targets and organisational goals.

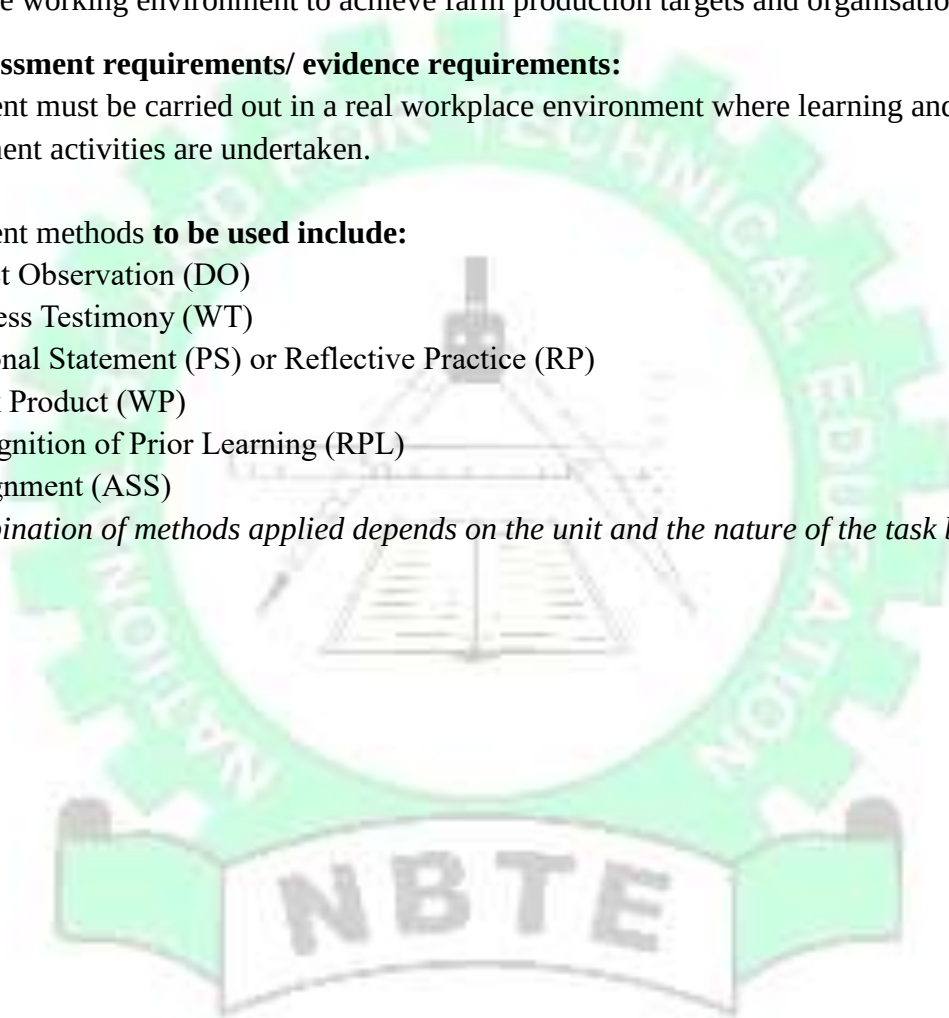
Unit assessment requirements/ evidence requirements:

Assessment must be carried out in a real workplace environment where learning and human development activities are undertaken.

Assessment methods to be used include:

1. Direct Observation (DO)
2. Witness Testimony (WT)
3. Personal Statement (PS) or Reflective Practice (RP)
4. Work Product (WP)
5. Recognition of Prior Learning (RPL)
6. Assignment (ASS)

The combination of methods applied depends on the unit and the nature of the task being assessed.



Unit 002: Teamwork in Fish Farming Workplace

LEARNING OUTCOME (LO)		PERFORMANCE CRITERIA	Evidence Type	Evidence Ref. Page No.
The learner will:		The learner can:		
LO 1: Build effective working relationship	1.1	Establish positive working relationships with team members		
	1.2	Promote mutual respect and cooperation among workers.		
	1.3	Encourage open communication within the work team.		
	1.4	Recognise and value individual differences among team members		
	1.5	Demonstrate professionalism in all workplace interactions		
LO 2: Coordinate team activities.	2.1	Assign tasks according to workers' competencies and job requirements.		
	2.2	Coordinate team activity to ensure efficient workflow.		
	2.3	Monitor task completion against established schedule.		
	2.4	Ensure team members understand their roles and responsibilities		
	2.5	Adjust work assignments to meet changing operational needs.		
LO 3: Support team performance	3.1	Provide guidance and technical support to team members		
	3.2	Assist workers in solving operational problems		
	3.3	Encourage team participation in decision-making process.		
	3.4	Motivate workers to achieve production targets.		
	3.5	Acknowledge individual and team achievements.		
LO 4: Manage Work Place Conflict	4.1	Identify sources of workplace conflicts promptly		
	4.2	Address disagreements fairly and objectively.		
	4.3	Facilitate discussions to resolve conflicts amicably		
	4.4	Report unresolved conflicts to appropriate authority when necessary		
LO 5: Lead team improvement activities.	5.1	Encourage team members to suggest improvement in farm operations		

	5.2	Facilitate team meetings to review performance.											
	5.3	Monitor implementation of agreed performance improvement actions.											

Learner's Signature:	Date:
Assessor's Signature:	Date:
IQA Signature (if sampled):	Date:
EQA Signature (if sampled):	Date:



Unit 003: Health and Safety in Fish Farming Workplace

Unit Reference Number: AGR/FFA/003/L4

NSQ Level: 4

Credit Value: 5

Guided Learning Hours: 50

Unit Purpose: The purpose of this unit is to enable the learners to develop, implement, monitor and continuously improve occupational health, safety and welfare systems to ensure a safe working environment and compliance with applicable legislation and organisational policies.

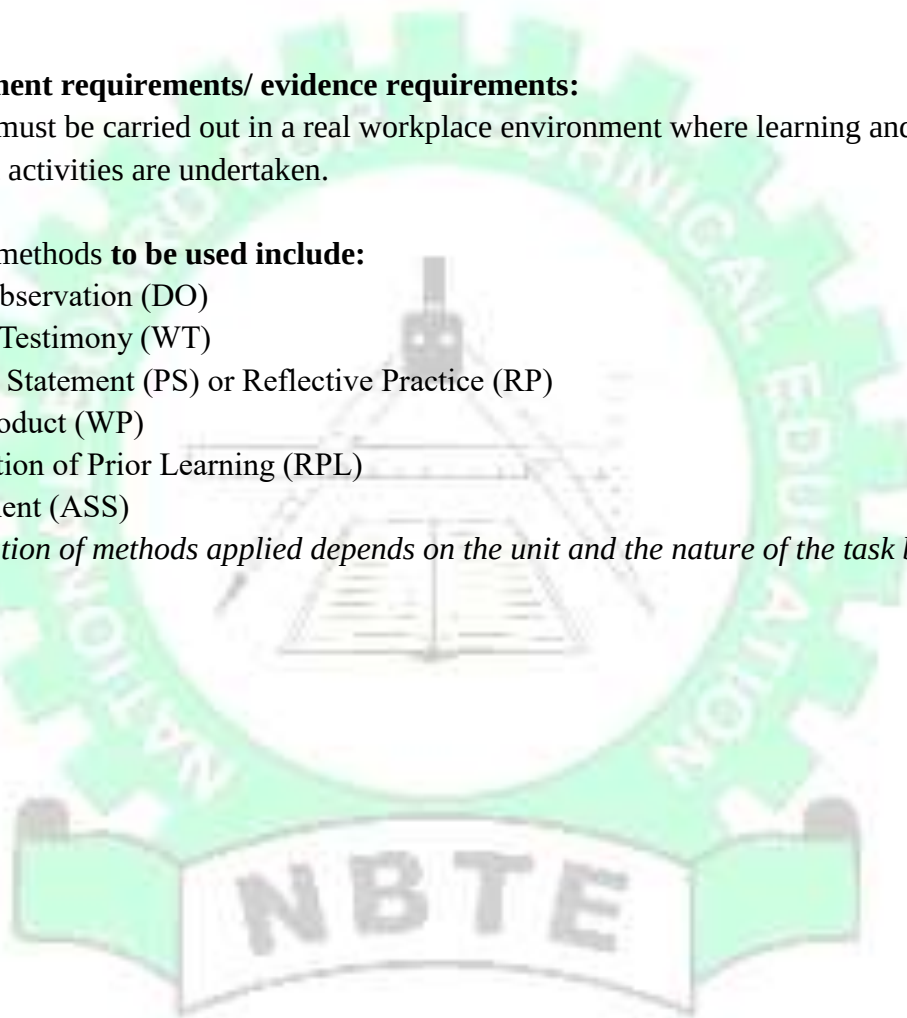
Unit assessment requirements/ evidence requirements:

Assessment must be carried out in a real workplace environment where learning and human development activities are undertaken.

Assessment methods **to be used include:**

1. Direct Observation (DO)
2. Witness Testimony (WT)
3. Personal Statement (PS) or Reflective Practice (RP)
4. Work Product (WP)
5. Recognition of Prior Learning (RPL)
6. Assignment (ASS)

The combination of methods applied depends on the unit and the nature of the task being assessed.



Unit 003: Health and Safety in Fish Farming Workplace

LEARNING OUTCOME (LO)		PERFORMANCE CRITERIA	Evidence Type	Evidence Ref. Page No.
The learner will:		The learner can:		
LO 1: Implement occupational health and safety policies.	1.1	Communicate Health and safety policies to staff		
	1.2	Implement fish farm standard operating procedures.		
	1.3	Assign safety responsibilities to staff		
	1.4	Monitor compliance with health and safety policies		
LO 2: Control workplace hazards.	2.1	Identify hazards through routine inspections.		
	2.2	Document workplace hazards		
	2.3	Implement appropriate control measures.		
LO 3: Ensure safe work practices	3.1	Ensure provision and proper usage of Personal Protective Equipment (PPE).		
	3.2	Operate machinery and equipment safely.		
	3.3	Ensure workers' compliance with established safety procedures.		
LO 4: Respond to workplace emergencies.	4.1	Implement emergency response plans.		
	4.2	Administer first aid where appropriate.		
	4.3	Report emergencies according to established procedures.		

Learner's Signature:	Date:
Assessor's Signature:	Date:
IQA Signature (if sampled):	Date:
EQA Signature (if sampled):	Date:

Unit 004: Fish Production Systems Management

Unit Reference Number: AGR/FFA/004/L4

NSQ Level: 4

Credit Value: 10

Guided Learning Hours: 100

Unit Purpose: The purpose of this unit is to enable the learner to plan, organize, and manage commercial fish production operations.

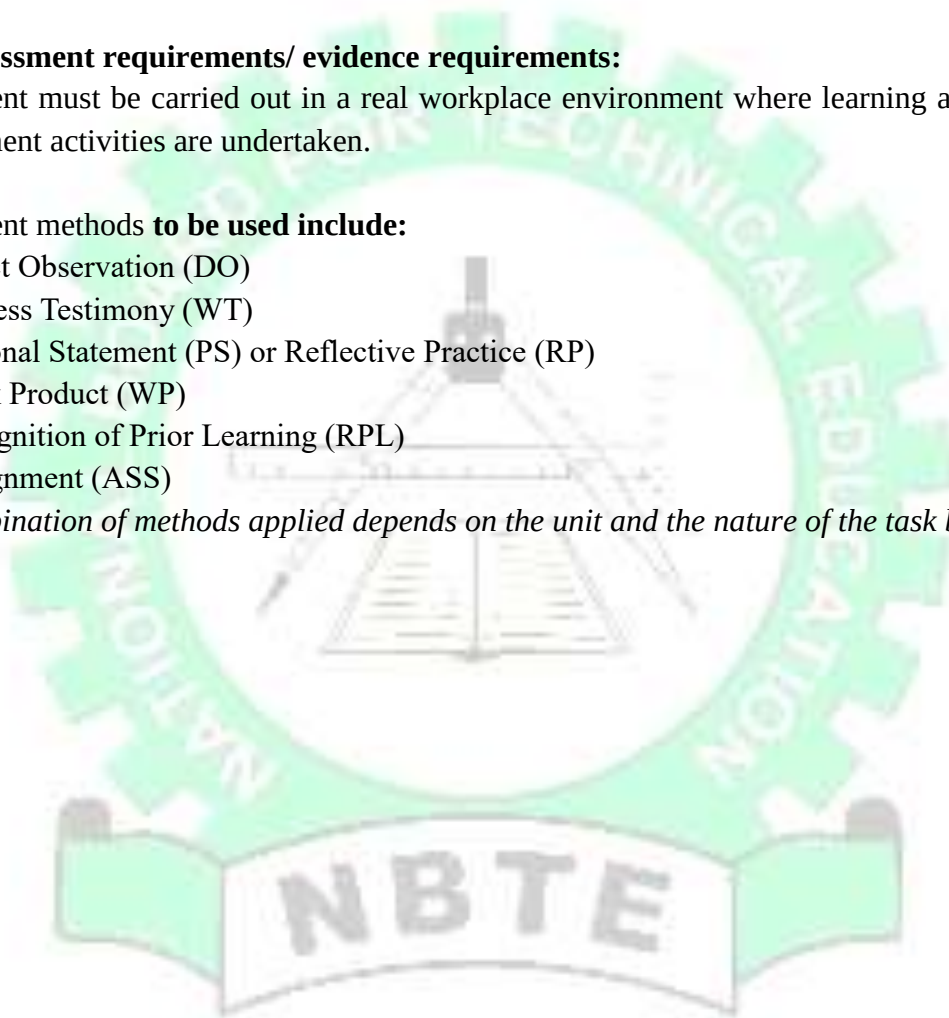
Unit assessment requirements/ evidence requirements:

Assessment must be carried out in a real workplace environment where learning and human development activities are undertaken.

Assessment methods to be used include:

1. Direct Observation (DO)
2. Witness Testimony (WT)
3. Personal Statement (PS) or Reflective Practice (RP)
4. Work Product (WP)
5. Recognition of Prior Learning (RPL)
6. Assignment (ASS)

The combination of methods applied depends on the unit and the nature of the task being assessed.



Unit 004: Fish Production Systems Management

LEARNING OUTCOME (LO)		PERFORMANCE CRITERIA	Evidence Type	Evidence Ref. Page No.
The learner will:		The learner can:		
LO 1: Develop Fish Production Plans	1.1	Assess farm resources, infrastructure and production capacity.		
	1.2	Analyse market demand and production opportunities.		
	1.3	Establish production goals and performance targets.		
	1.4	Develop annual, seasonal and production-cycle work plans.		
	1.5	Prepare production budgets and resource requirements.		
	1.6	Develop contingency plans for production risks.		
LO 2: Plan Stocking Operations	2.1.	Determine appropriate fish species and strains for production.		
	2.2.	Estimate stocking density based on production systems.		
	2.3.	Schedule stocking activities according to production objectives.		
	2.4.	Verify the quality and health status of fingerlings before stocking.		
	2.5.	Coordinate transportation of fingerlings.		
	2.6.	Manage acclimation process of fingerlings.		
	2.7.	Ensure stocking procedures comply with biosecurity requirements.		
LO 3: Manage Feeding Programmes	3.1	Estimate feed requirements based on biomass and growth stage.		
	3.2	Develop feeding schedules for different production phases.		
	3.3	Monitor feed consumption and feeding efficiency.		
	3.4	Adjust feeding programmes according to fish performance and environmental conditions.		
	3.5	Minimize feed wastage through efficient feeding practices.		
	3.6	Maintain feeding records accurately.		
LO 4: Monitor Fish Growth and Production	4.1	Develop growth monitoring schedules.		
	4.2	Conduct routine fish sampling.		

Performance	4.3	Measure fish weight, length and survival rates.											
	4.4	Record fish weight, length and survival rates.											
	4.5	Calculate growth performance indicators.											
	4.6	Interpret production data.											
LO 4: Monitor Fish Growth and Production Performance	4.7	Implement corrective actions where production targets are not achieved.											

Learner's Signature:	Date:
Assessor's Signature:	Date:
IQA Signature (if sampled):	Date:
EQA Signature (if sampled):	Date:

Unit 005: Fish Health and Biosecurity

Unit Reference Number: AGR/FFA/005/L4

NSQ Level: 4

Credit Value: 7

Guided Learning Hours: 70

Unit Purpose: The purpose of this unit is to enable the learners to implement comprehensive fish health and biosecurity programmes.

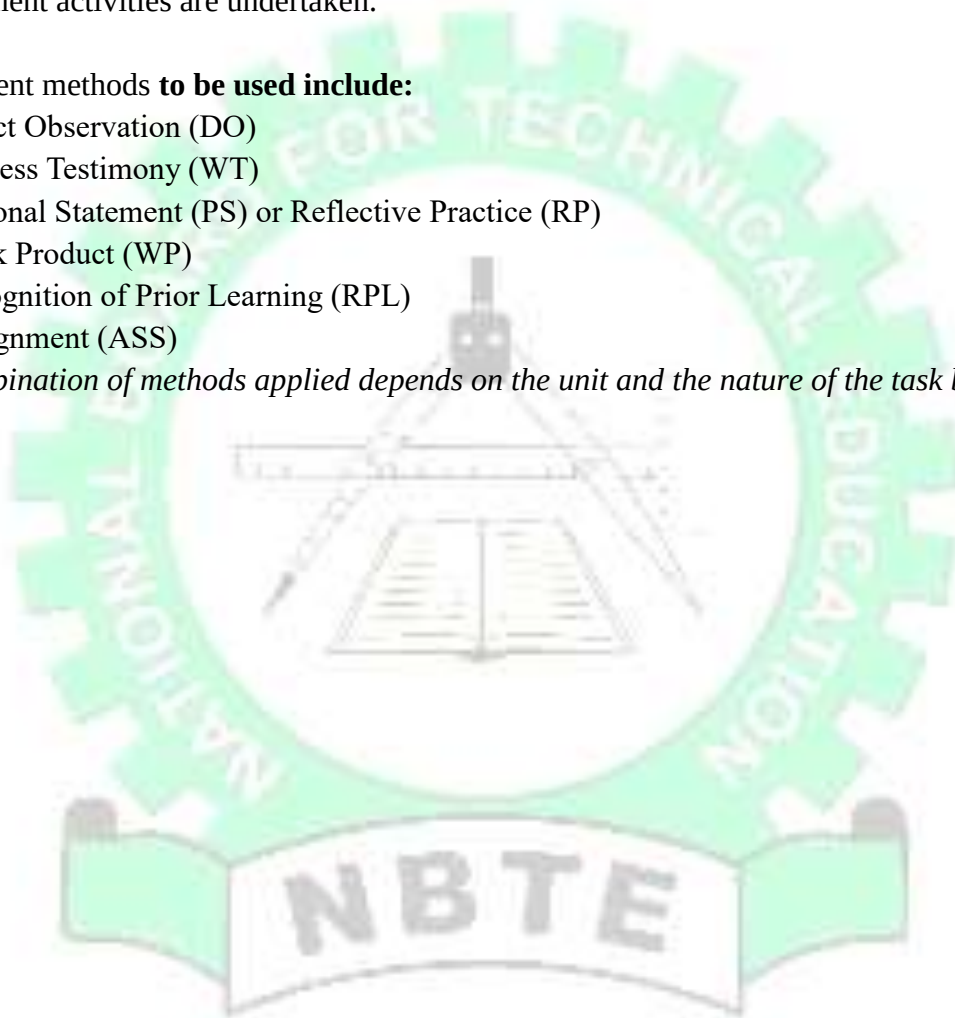
Unit assessment requirements/ evidence requirements:

Assessment must be carried out in real workplace environment where learning and human development activities are undertaken.

Assessment methods to be used include:

1. Direct Observation (DO)
2. Witness Testimony (WT)
3. Personal Statement (PS) or Reflective Practice (RP)
4. Work Product (WP)
5. Recognition of Prior Learning (RPL)
6. Assignment (ASS)

The combination of methods applied depends on the unit and the nature of the task being assessed.



Unit 005: Fish Health and Biosecurity

LEARNING OUTCOME (LO)		PERFORMANCE CRITERIA	Evidence Type	Evidence Ref. Page No.
The learner will:		The learner can:		
LO 1: Develop Fish Health Management Programmes	1.1	Assess fish health risks associated with the production system.		
	1.2	Develop a fish health management plan based on farm production objectives.		
	1.3	Establish routine fish health monitoring schedules.		
	1.4	Identify critical control points for disease prevention.		
	1.5	Allocate resources for fish health management activities.		
	1.6	Update fish health management plans periodically.		
LO 2: Implement Biosecurity Measures	2.1	Develop farm biosecurity protocols.		
	2.2	Implement farm biosecurity protocols.		
	2.3	Supervise cleaning and disinfection of ponds, tanks, equipment and vehicles.		
	2.4	Ensure proper quarantine procedures for new broodstock and fingerlings.		
	2.5	Implement visitor control and movement procedures.		
	2.6	Ensure proper disposal of dead fish and contaminated materials.		
	2.7	Maintain biosecurity records.		
LO 3: Monitor Fish Health	3.1	Conduct routine observation of fish behaviour and feeding response.		
	3.2	Identify abnormal swimming behaviour and physical abnormalities.		
	3.3	Monitor mortality rates and production performance.		
	3.4	Collect representative samples for health assessment.		
	3.5	Monitor environmental conditions affecting fish health.		
	3.6	Document fish health observations accurately.		
LO 4: Control Fish Diseases	4.1	Recognize common bacterial, viral, fungal and parasitic diseases.		
	4.2	Differentiate infectious from non-		

		limits.							
	5.3	Maintain optimum water exchange and aeration.							
	5.4	Minimize environmental stress on cultured fish.							
	5.5	Record water quality data.							
Supervise health and biosecurity	6.1	Monitor farm personnel on fish health management procedures.							
	6.2	Supervise compliance with biosecurity protocols.							
	6.3	Monitor the correct use of disinfectants, chemicals and approved therapeutants.							
	6.4	Conduct routine biosecurity inspections.							
	6.5	Investigate breaches in biosecurity procedures.							
	6.6	Implement corrective and preventive actions.							
Maintain health	7.1	Maintain fish health surveillance records.							

Learner's Signature:	Date:
Assessor's Signature:	Date:
IQA Signature (if sampled):	Date:
EQA Signature (if sampled):	Date:



Unit 006: Water Quality Management

Unit Reference Number: AGR/FFA/006/L4

NSQ Level: 4

Credit Value: 7

Guided Learning Hours: 70

Unit Purpose: The purpose of this unit is to enable learners to maintain optimum culture conditions and minimize environmental impacts.

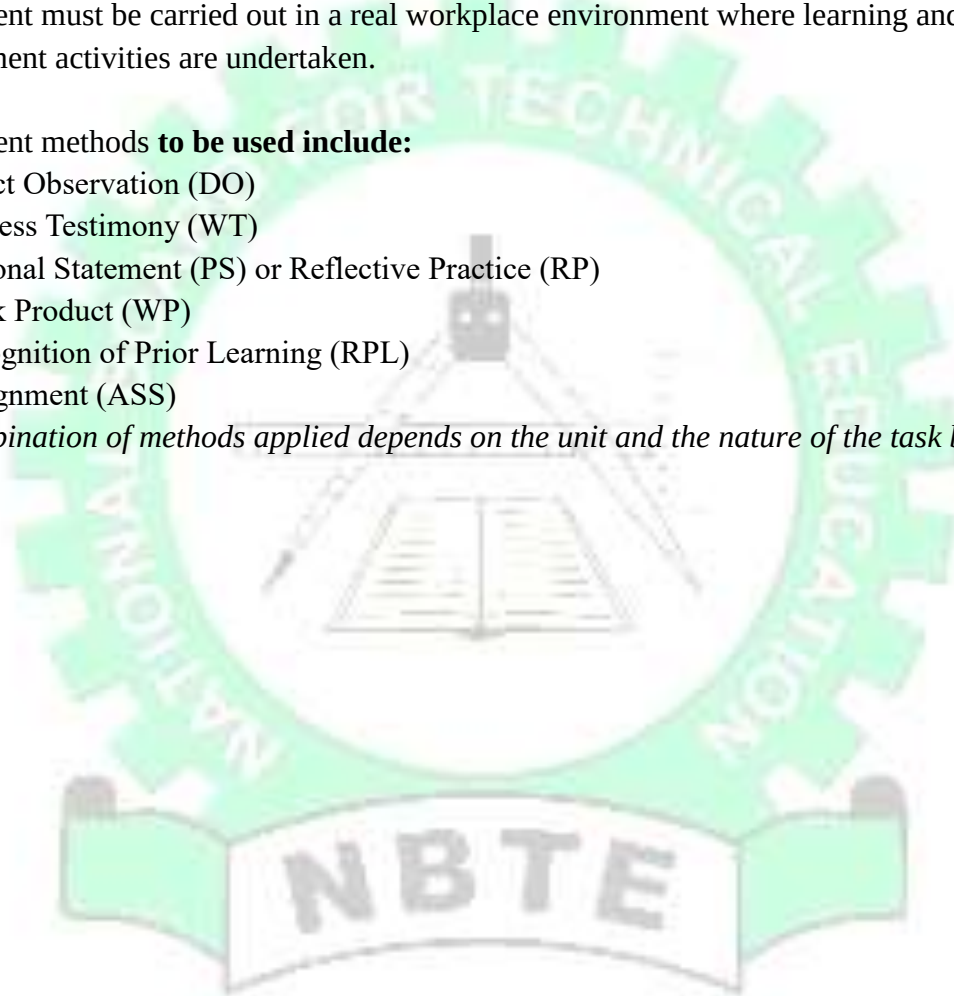
Unit assessment requirements/ evidence requirements:

Assessment must be carried out in a real workplace environment where learning and human development activities are undertaken.

Assessment methods to be used include:

1. Direct Observation (DO)
2. Witness Testimony (WT)
3. Personal Statement (PS) or Reflective Practice (RP)
4. Work Product (WP)
5. Recognition of Prior Learning (RPL)
6. Assignment (ASS)

The combination of methods applied depends on the unit and the nature of the task being assessed.



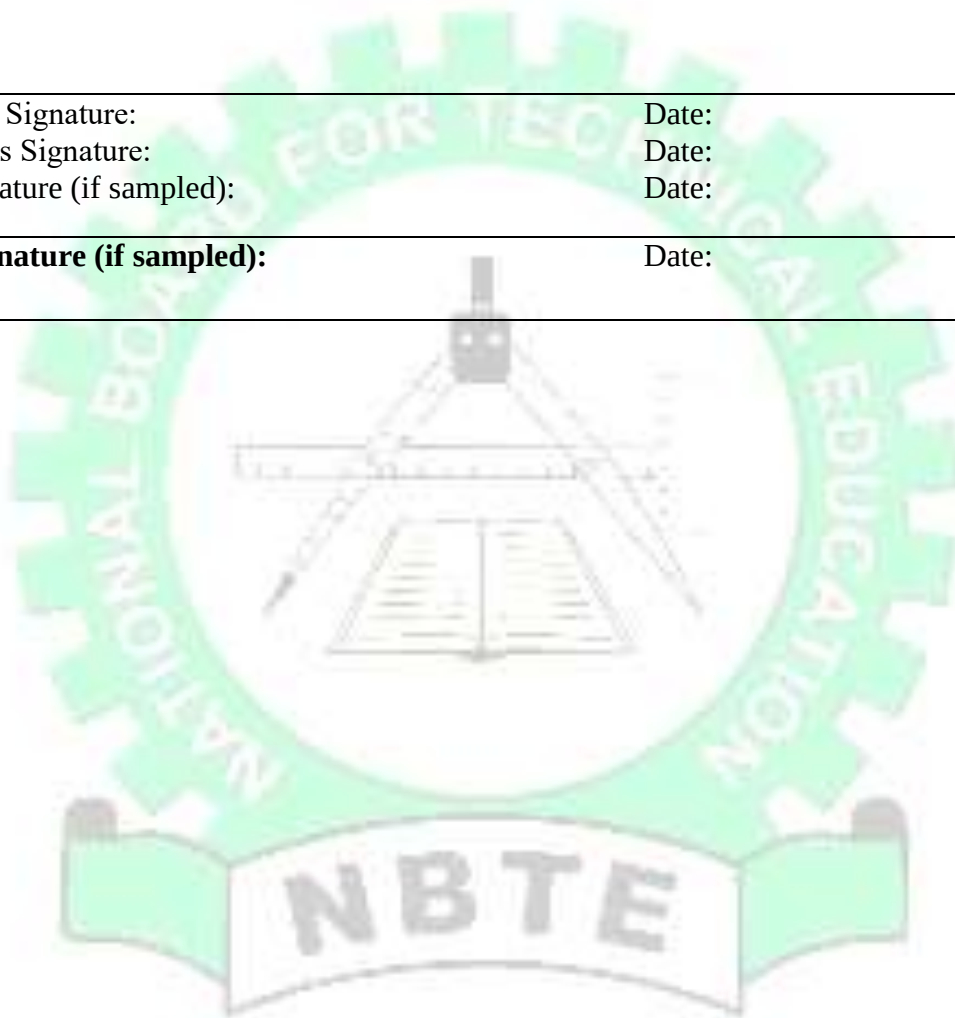
Unit 006: Water Quality Management

LEARNING OUTCOME (LO)		PERFORMANCE CRITERIA	Evidence Type	Evidence Ref. Page No.
The learner will:		The learner can:		
LO 1: Develop Water Quality Management Plans	1.1	Assess the water requirements of the cultured fish species and production system.		
	1.2	Develop a water quality management plan based on production objectives.		
	1.3	Identify critical water quality parameters and acceptable limits.		
	1.4	Establish monitoring schedules and sampling procedures.		
	1.5	Allocate resources for water quality monitoring and management.		
	1.6	Update water quality management plans periodically.		
LO 2: Monitor Water Quality	2.1.	Measure key water quality parameters, including temperature, dissolved oxygen, pH, ammonia, nitrite, alkalinity and turbidity.		
	2.2.	Collect representative water samples using standard procedures.		
	2.3.	Calibrate water quality testing equipment.		
	2.4.	Operate water quality testing equipment.		
	2.5.	Interpret water quality data against recommended standards.		
	2.6.	Identify trends and potential water quality problems.		
	2.7.	Maintain accurate water quality monitoring records.		
LO 3: Maintain Optimum Water Quality	3.1	Carry out water exchange to maintain suitable culture conditions.		
	3.2	Operate aeration systems efficiently.		
	3.3	Manage pond fertilization and liming programmes where applicable.		
	3.4	Apply appropriate water treatment measures.		
	3.5	Control excessive aquatic		

	4.5	Manage pollution from fish farming activities.						
	4.6	Protect surrounding ecosystems and biodiversity.						
	4.7	Promote climate-smart and sustainable fish farming practices.						
Monitor environmental impact	5.1.	Identify applicable environmental regulations and standards.						
	5.2.	Conduct environmental inspections of farm operations.						
	5.3.	Monitor effluent quality and discharge practices.						
	5.4.	Ensure compliance with environmental permits and operational guidelines.						
	5.5.	Investigate environmental incidents for corrective actions.						
	5.6.	Prepare environmental compliance reports.						
Supervise quality and	6.1.	Assign water quality monitoring responsibilities to farm personnel.						

[illegible]

Learner's Signature:	Date:
Assessor's Signature:	Date:
IQA Signature (if sampled):	Date:
EQA Signature (if sampled):	Date:



Unit 007: Fish Farming Personnel Management

Unit Reference Number: AGR/FFA/007/L4

NSQ Level: 4

Credit Value: 4

Guided Learning Hours: 40

Unit Purpose: The purpose of this unit is to enable learners to manage fish farm personnel for effective productivity.

Unit assessment requirements/ evidence requirements:

Assessment must be carried out in a real workplace environment where learning and human development activities are undertaken.

Assessment methods to be used include:

1. Direct Observation (DO)
2. Witness Testimony (WT)
3. Personal Statement (PS) or Reflective Practice (RP)
4. Work Product (WP)
5. Recognition of Prior Learning (RPL)
6. Assignment (ASS)

The combination of methods applied depends on the unit and the nature of the task being assessed.



Unit 007: Fish Farming Personnel Management

LEARNING OUTCOME (LO)		PERFORMANCE CRITERIA	Evidence Type	Evidence Ref. Page No.
The learner will:		The learner can:		
LO 1: Organize Farm Operations	1.1	Develop daily, weekly, and monthly work plans for farm operations.		
	1.2	Prioritize farm activities according to production schedules.		
	1.3	Allocate labour, equipment, and materials efficiently.		
	1.4	Coordinate hatchery, nursery, grow-out, feeding, harvesting, and maintenance activities.		
	1.5	Ensure adequate availability of production inputs before commencing operations.		
	1.6	Adjust operational plans to accommodate changing farm conditions.		
LO 2: Supervise Farm Personnel	2.1.	Assign duties according to staff competencies and workload.		
	2.2.	Communicate work instructions clearly and effectively.		
	2.3.	Monitor staff attendance, punctuality and productivity.		
	2.4.	Ensure staff understand and follow standard operating procedures.		
	2.5.	Provide guidance and on-the-job coaching.		
	2.6.	Evaluate staff performance against assigned responsibilities.		
	2.7.	Promote teamwork, discipline, and professional conduct.		
LO 3: Monitor Farm Operations	3.1.	Supervise stocking, feeding, grading, harvesting, and fish handling activities.		
	3.2.	Monitor the use of farm equipment and facilities.		
	3.3.	Verify that production activities comply with approved work schedules.		
	3.4.	Identify operational bottlenecks and implement corrective measures.		
	3.5.	Control production losses through effective supervision.		
	3.6.	Ensure farm operations are		

[illegible]

Learner's Signature:	Date:
Assessor's Signature:	Date:
IQA Signature (if sampled):	Date:
EQA Signature (if sampled):	Date:

Unit 008: Fish Farming Business Management

Unit Reference Number: AGR/FFA/008/L4

NSQ Level: 4

Credit Value: 5

Guided Learning Hours: 50

Unit Purpose: The purpose of this unit is to enable learners acquire the knowledge and skills to manage a fish farming business.

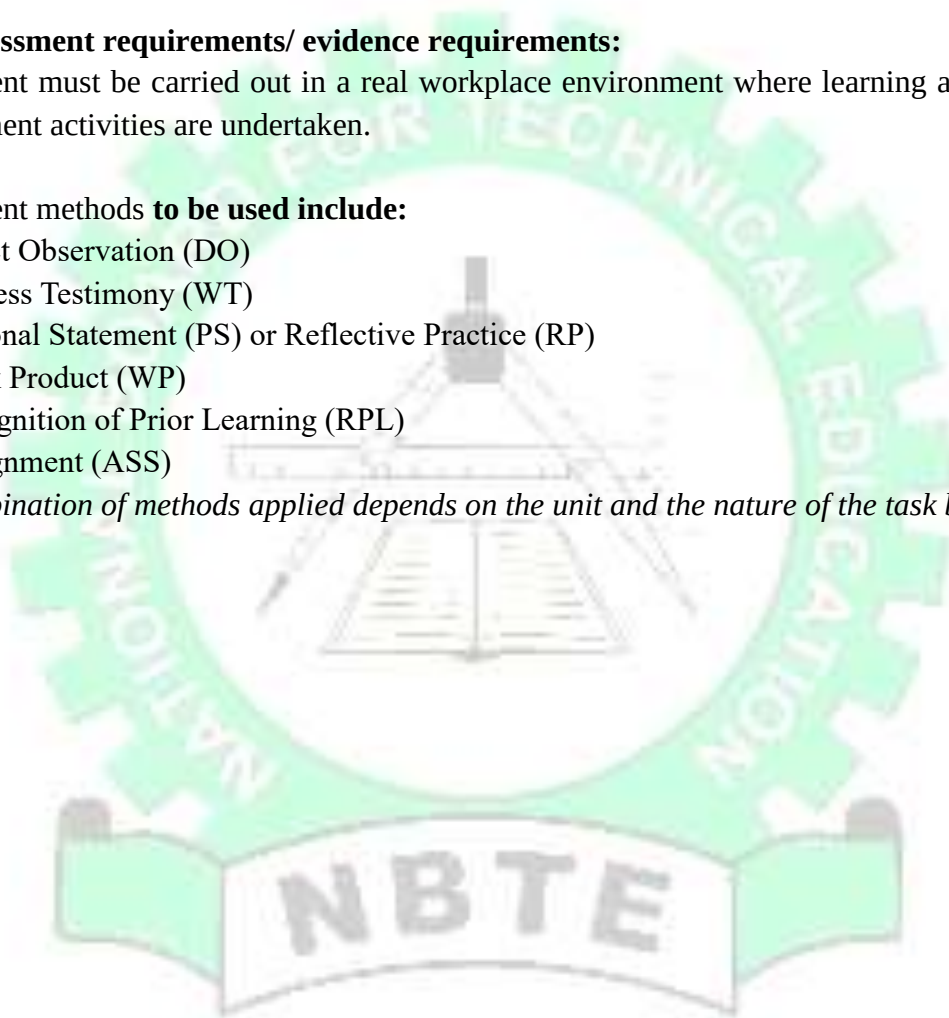
Unit assessment requirements/ evidence requirements:

Assessment must be carried out in a real workplace environment where learning and human development activities are undertaken.

Assessment methods **to be used include:**

1. Direct Observation (DO)
2. Witness Testimony (WT)
3. Personal Statement (PS) or Reflective Practice (RP)
4. Work Product (WP)
5. Recognition of Prior Learning (RPL)
6. Assignment (ASS)

The combination of methods applied depends on the unit and the nature of the task being assessed.



Unit 008: Fish Farming Business Management

LEARNING OUTCOME (LO)		PERFORMANCE CRITERIA	Evidence Type	Evidence Ref. Page No.
The learner will:		The learner can:		
LO 1: Develop Fish Farming Business Plans	1.1	Define business goals, objectives, and production targets.		
	1.2	Conduct market and enterprise analysis to identify business opportunities.		
	1.3	Prepare a comprehensive fish farming business plan.		
	1.4	Estimate capital and operational resource requirements.		
	1.5	Assess business risks		
	1.6	Recommend mitigation strategies.		
	1.7	Update the business plan periodically.		
LO 2: Monitor Financial Resources	2.1	Monitor annual and operational budgets.		
	2.2	Monitor production costs for fish farming operations.		
	2.3	Monitor income, expenditure, and cash flow.		
	2.4	Maintain accurate financial records.		
	2.5	Analyse financial performance using appropriate indicators.		
	2.6	Recommend measures to improve profitability and reduce production costs.		
LO 3: Manage Farm Inputs and Assets	3.1	Plan the procurement of feed, seed, equipment, chemicals, and other inputs.		
	3.2	Evaluate suppliers based on quality, cost, and reliability.		
	3.3	Monitor inventory levels to prevent shortages and overstocking.		
	3.4	Supervise the storage and utilization of farm inputs.		
	3.5	Maintain farm equipment and infrastructure.		
	3.6	Implement asset management and replacement plans.		
LO 4: Market Fish farming Products	4.1	Conduct market surveys to identify customer requirements.		
	4.2	Develop marketing strategies for fish and related products.		
	4.3	Evaluate pricing based on production costs and market		

		safety regulations.				
	5.3	Maintain licences, permits, and statutory records.				
	5.4	Prepare reports required by regulatory authorities.				
	5.5	Implement corrective actions for non-compliance.				
	5.6	Monitor changes in legislation and industry standards.				
Monitor Performance	6.1.	Establish key performance indicators (KPIs) for the enterprise.				
	6.2.	Compare actual performance against business targets.				
	6.3.	Analyse production, financial, and marketing data.				
	6.4.	Identify operational and financial constraints.				
	6.5.	Develop improvement strategies based on business performance.				
	6.6.	Prepare periodic business performance reports.				
Promote Business Growth and Sustainability	7.1	Identify opportunities for business diversification and value addition.				
	7.2	Recommend strategies to improve productivity and competitiveness.				
	7.3	Promote environmentally sustainable production practices.				

Learner's Signature:	Date:
Assessor's Signature:	Date:
IQA Signature (if sampled):	Date:
EQA Signature (if sampled):	Date:



NATIONAL SKILLS QUALIFICATION (NSQ)

LEVEL 5

FISH FARMING ACTIVITY



GENERAL INFORMATION

OVERVIEW

This qualification is designed for individuals who are interested in pursuing a career in **Fish Farming Activities** for the award of National Skills Qualifications (NSQ). It is aimed at producing specialists and supervisors in **Fish Farming Activities** at NSQ Level 5 with the competencies necessary to support fish farming operations.

This qualification is subject to review as and when the need arises.

QUALIFICATION PURPOSE

The purpose of this qualification is to prepare competent personnel who can independently manage commercial fish farming enterprises and supervise fish farming production activities in accordance with industry standards, occupational health and safety requirements, environmental sustainability principles, and national regulatory requirements.

QUALIFICATION REQUIREMENTS

Candidates must:

- a. Be at least twenty (20) years of age
- b. Be medically fit
- c. Be mentally fit (Mental alertness)
- d. Have achieved the NSQ Level 4 qualification in Fish Farming Activity, or its equivalent
- e. Be a Nigerian citizen
- f. Other nationals (International passport, residence permit)
- g. Be vetted
- h. The person must have level 4 fish farming qualification.

QUALIFICATION OBJECTIVES

To achieve this qualification, the learner should have the following competencies:

1. Plan, coordinate and manage commercial fish production systems.
2. Supervise hatchery, nursery, grow-out and harvesting operations.
3. Manage fish nutrition, feeding Programmes and production records.
4. Implement fish health management and biosecurity Programmes.
5. Monitor and maintain optimum water quality and environmental conditions.
6. Supervise technical staff and allocate farm resources efficiently.
7. Apply quality assurance systems and maintain production standards.
8. Manage farm finances, inventories and operational budgets.
9. Implement environmental management and climate-smart fish farming practices.
10. Improve productivity, profitability and sustainability of fish farming enterprises.

NATIONAL SKILLS QUALIFICATION TABLE

MANDATORY UNITS

Unit	Unit Reference Number	Unit Title	Credit Value	Guided Learning Hours	Practice Time	Remark
1.	AGR/FFA/001/L5	Strategic Communication in Fish Farming	5	50	150	Mandatory
2.	AGR/FFA/002/L5	Effective Teamwork in Fish Farming	5	50	150	Mandatory
3.	AGR/FFA/003/L5	Occupational Health, Safety and Environmental (OHSE) Management in Fish Farming	8	80	240	Mandatory
4.	AGR/FFA/004/L5	Strategic Fish Farming Production Systems	10	100	300	Mandatory
5.	AGR/FFA/005/L5	Fish Farming Research, Innovation and Technology Transfer	10	100	300	Mandatory
6.	AGR/FFA/006/L5	Fish Quality Assurance, Certification and Regulatory Compliance	10	100	300	Mandatory
7.	AGR/FFA/007/L5	Fish Farming Business Development	10	100	300	Mandatory
Total			58	580	1740	

QUALIFICATION STRUCTURE

This qualification comprises a total of seven (7) Mandatory Units, with a credit value of **58** and **580** Guided Learning Hours (GLH) across the full qualification. One (1) credit is equivalent to ten (10) GLH. Guided Learning Hours are the time a learner spends in the classroom, workshop and laboratory of the Skills Training Centre (STC), being taught, instructed, supervised or assessed by a qualified trainer, facilitator or assessor.

In addition to the GLH, the qualification requires at least twice or thrice the GLH as practice time. Practice time is the time a learner is expected to spend applying the skills of each unit in a real workplace environment, carrying out the same tasks repeatedly until performance becomes consistent, accurate and habitual to the standard the qualification demands. It is undertaken under the guidance of a workplace supervisor, recorded in the learner's logbook and duly endorsed. Practice time is the principal setting where core assessment is conducted.

It is through repeated performance in the workplace that a learner's achievement of the Learning Outcomes and Performance Criteria is judged and evidenced. Practice time is an additional requirement to GLH and does not replace them.

To achieve this qualification, the learner must complete all mandatory units, undertake the prescribed practice time, and accumulate the minimum credit value approved by NBTE. Credit is awarded only when a learner has been assessed as competent against all Learning Outcomes and Performance Criteria of a unit.

GENERAL GUIDE

Unit title	Provides a clear explanation of the content of the unit.
Unit number	The unique number assigned to the unit.
Unit reference	The unique reference number given to each unit at qualification approval by NBTE
Unit level	Denotes the level of the unit within the Nigerian Skills Qualification framework NSQF.
Unit credit value	The value that has been given to the unit based on the expected learning time for an average learner. 1 credit = 10 learning hours
Unit aim	Provides a brief outline of the unit content.
Learning outcome	A statement of what a learner will know, understand or be able to do, as a result of a process of learning.
Assessment criteria	A description of the requirements a learner must achieve to demonstrate that a learning outcome has been met.
Unit assessment guidance	Any additional guidance provided to support the assessment of the unit.
Unit guided learning hours	The average number of hours of supervised or directed study time or assessment required to achieve a qualification or unit of a qualification.

Unit 001: Strategic Communication in Fish Farming

Unit reference number: AGR/FFA/001/L5

NSQ Level: 5

Credit value: 5

Guided learning hours: 50

Unit Purpose: The purpose of this unit is to equip the learners with the knowledge and skills to develop and implement strategic communication systems to support sustainable fish farming enterprise development.

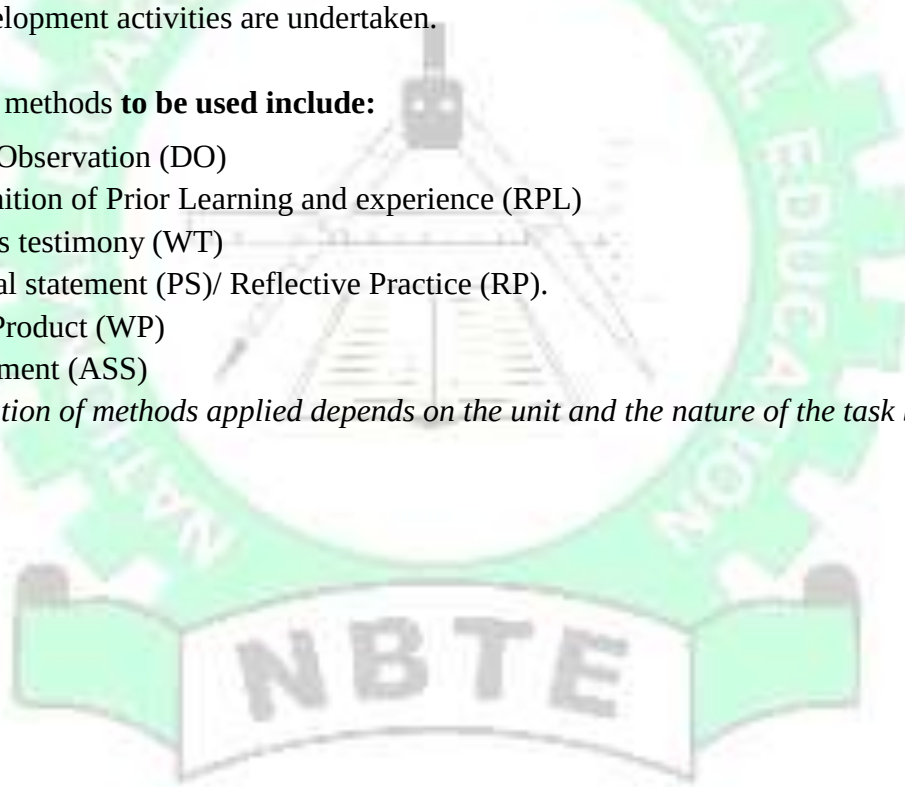
Unit assessment requirements/ evidence requirement:

Assessment must be carried out in a real workplace environment where learning and human development activities are undertaken.

Assessment methods **to be used include:**

1. Direct Observation (DO)
2. Recognition of Prior Learning and experience (RPL)
3. Witness testimony (WT)
4. Personal statement (PS)/ Reflective Practice (RP).
5. Work Product (WP)
6. Assignment (ASS)

The combination of methods applied depends on the unit and the nature of the task being assessed.



Unit 001: Strategic Communication in Fish Farming

LEARNING OUTCOME (LO)		PERFORMANCE CRITERIA	Evidence Type	Evidence Ref.	Evidence Page No.
The learner will:		The learner can:			
LO 1: Develop Organizational Communication Strategies	1.1	Assess the communication needs of the fish farming enterprise.			
	1.2	Develop communication strategies aligned with organizational objectives.			
	1.3	Establish communication channels for internal and external stakeholders.			
	1.4	Develop communication protocols for routine and emergency situations.			
	1.5	Ensure communication systems promote transparency and accountability.			
	1.6	Review communication strategies periodically.			
	1.7	Improve communication strategies.			
LO 2: Communicate with Internal Stakeholders	2.1.	Communicate organizational goals and operational priorities to management and staff.			
	2.2.	Lead meetings, briefings, and strategic planning sessions effectively.			
	2.3.	Facilitate information sharing across departments and production units.			
	2.4.	Provide constructive feedback to managers and employees.			
	2.5.	Promote effective upward, downward, and horizontal communication			
LO 3: Engage External Stakeholders	3.1.	Create effective relationships with customers, suppliers, financial institutions, regulatory agencies, research organizations, and development partners.			
	3.2.	Represent the enterprise at meetings, conferences, exhibitions, and public engagements.			
	3.3.	Communicate organizational policies and business objectives			

[illegible]

Learner's Signature:	Date:
Assessor's Signature:	Date:
IQA Signature (if sampled):	Date:
EQA Signature (if sampled):	Date:

Unit 002: Effective Teamwork in Fish Farming

Unit Reference Number: AGR/FFA/002/L5

NSQ Level: 5

Credit Value: 5

Guided Learning Hours: 50

Unit Purpose: The purpose of this unit is to equip learners with the knowledge and skills to provide strategic leadership to achieve organizational goals and sustainable fish farming development.

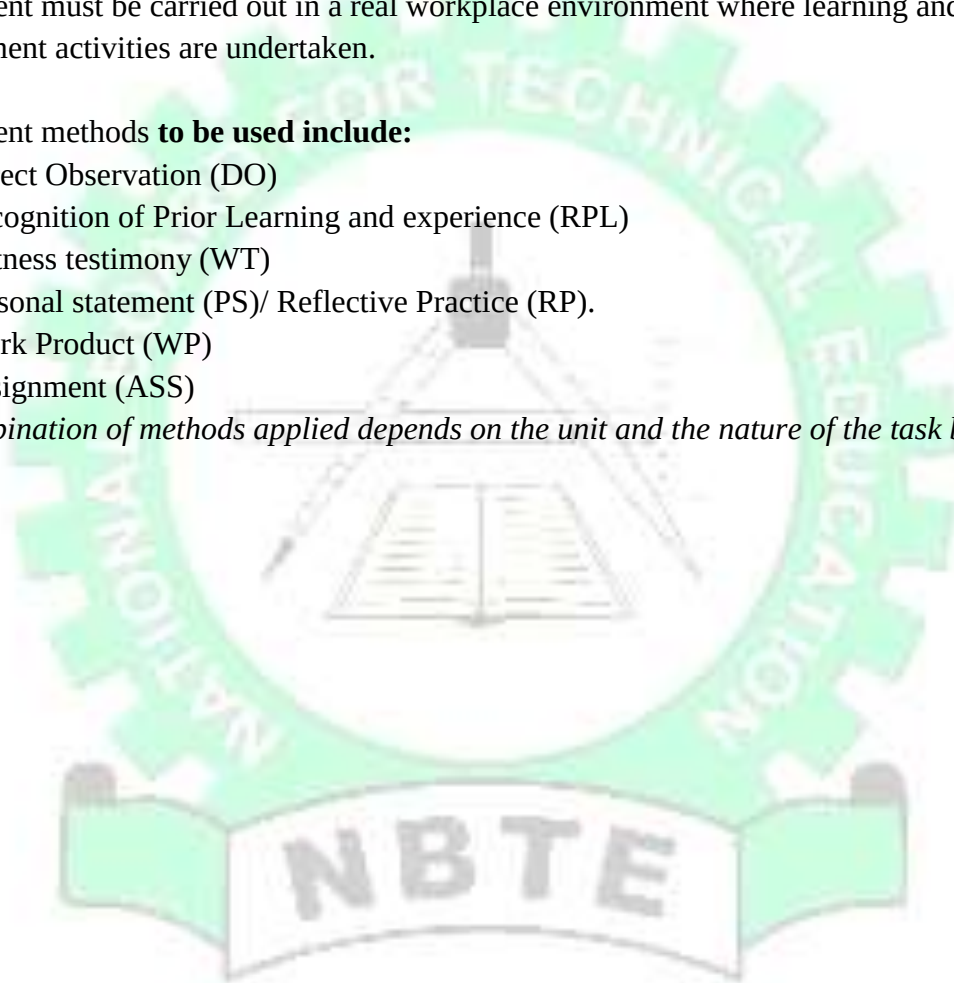
Unit assessment requirements/ evidence requirements:

Assessment must be carried out in a real workplace environment where learning and human development activities are undertaken.

Assessment methods to be used include:

1. Direct Observation (DO)
2. Recognition of Prior Learning and experience (RPL)
3. Witness testimony (WT)
4. Personal statement (PS)/ Reflective Practice (RP).
5. Work Product (WP)
6. Assignment (ASS)

The combination of methods applied depends on the unit and the nature of the task being assessed.



Unit 002: Effective Teamwork in Fish Farming

LEARNING OUTCOME (LO)		PERFORMANCE CRITERIA	Evidence Type					Evidence Ref. Page No.			
The learner will:		The learner can:									
LO 1: Develop High-Performing Teams	1.1	Analyse organizational workforce requirements.									
	1.2	Establish team goals aligned with organizational objectives.									
	1.3	Define team roles, responsibilities, and performance expectations.									
	1.4	Select team members based on competence and organizational needs.									
	1.5	Promote diversity, equity, and inclusion within teams.									
	1.6	Develop team performance improvement plans.									
LO 2: Provide Strategic Team Leadership	2.1.	Communicate organizational vision and strategic objectives to teams.									
	2.2.	Delegate responsibilities and authority appropriately.									
	2.3.	Empower team members to make operational decisions within their responsibilities.									
	2.4.	Motivate teams to achieve productivity and quality targets.									
	2.5.	Foster accountability and professional ethics among team members.									
	2.6.	Lead teams through organizational change and innovation initiatives.									
LO 3: Coordinate Multidisciplinary Teams	3.1.	Coordinate collaboration among hatchery, grow-out, fish health, feed production, processing, marketing, finance, and administrative units.									
	3.2.	Facilitate effective communication across departments.									
	3.3.	Integrate team activities to achieve enterprise production targets.									
	3.4.	Resolve operational conflicts between departments.									
	3.5.	Monitor interdepartmental collaboration and workflow efficiency.									
	3.6.	Promote knowledge sharing across functional teams.									
LO 4: Build	4.1.	Establish collaborative									

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Guided Learning Hours: 80

Unit Purpose: The purpose of this unit is to equip learners with the knowledge and skills to improve Occupational

Health, Safety and Environmental (OHSE) management systems to ensure safe, healthy, legally compliant, and environmentally sustainable fish farming operations.

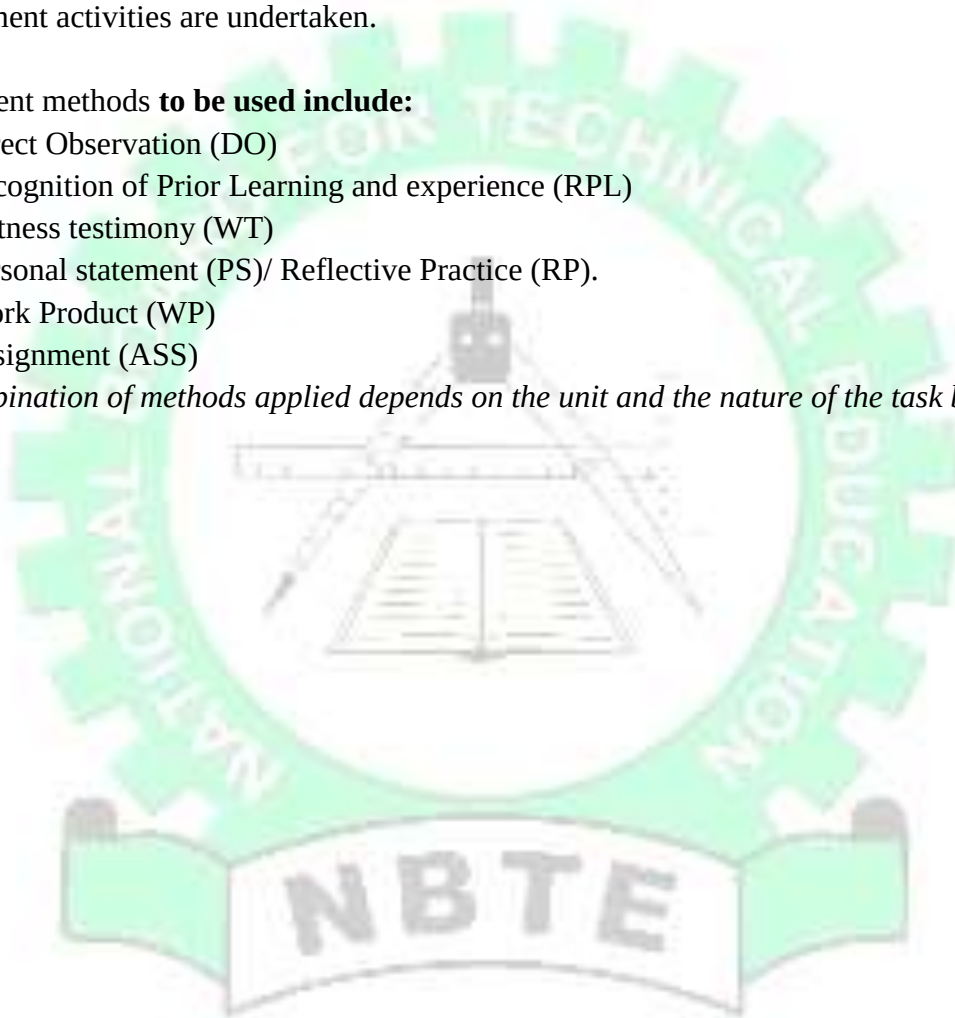
Unit assessment requirements/ evidence requirements:

Assessment must be carried out in a real workplace environment where learning and human development activities are undertaken.

Assessment methods to be used include:

1. Direct Observation (DO)
2. Recognition of Prior Learning and experience (RPL)
3. Witness testimony (WT)
4. Personal statement (PS)/ Reflective Practice (RP).
5. Work Product (WP)
6. Assignment (ASS)

The combination of methods applied depends on the unit and the nature of the task being assessed.



Unit 003: Occupational Health, Safety and Environmental (OHSE) Management in Fish Farming

LEARNING OUTCOME (LO)		PERFORMANCE CRITERIA	Evidence Type	Evidence Ref. Page No.
The learner will:		The learner can:		
LO 1: Develop Occupational Health, Safety and Environmental (OHSE) Policies	1.1	Conduct a comprehensive assessment of occupational health, safety, and environmental risks across fish farming operations.		
	1.2	Develop OHSE policies and objectives aligned with organizational goals and legal requirements.		
	1.3	Establish Standard Operating Procedures (SOPs) for safe work practices.		
	1.4	Define roles, responsibilities, and accountability for OHSE management.		
	1.5	Integrate OHSE requirements into enterprise strategic and operational plans.		
	1.6	Update OHSE policies periodically		
LO 2: Manage Occupational Risk	2.1.	Identify biological, chemical, physical, ergonomic, electrical, and psychosocial hazards in fish farming operations.		
	2.2.	Conduct formal workplace risk assessments.		
	2.3.	Apply the hierarchy of hazard controls to eliminate or minimize risks.		
	2.4.	Develop risk registers and risk management plans.		
	2.5.	Monitor implementation of risk control measures.		
	2.6.	Review risk assessments following operational changes or incidents.		
LO 3: Comply with Health, Safety and Environmental Regulations	3.1.	Interpret applicable occupational health, environmental, and labour legislation.		
	3.2.	Comply with statutory health and safety requirements.		
	3.3.	Coordinate regulatory inspections and compliance audits.		
	3.4.	Maintain required licenses, permits and statutory records.		

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Learner's Signature:	Date:
Assessor's Signature:	Date:
IQA Signature (if sampled):	Date:
EQA Signature (if sampled):	Date:

Unit 004: Strategic Fish Farming Production Systems

Unit Reference Number: AGR/FFA/004/L5

NSQ Level: 5

Credit Value: 10

Guided Learning Hours: 100

Unit Purpose: The purpose of this unit is to equip learners with the knowledge and skills to develop, implement, monitor, and evaluate strategic fish farming production systems that enhance productivity and profitability.

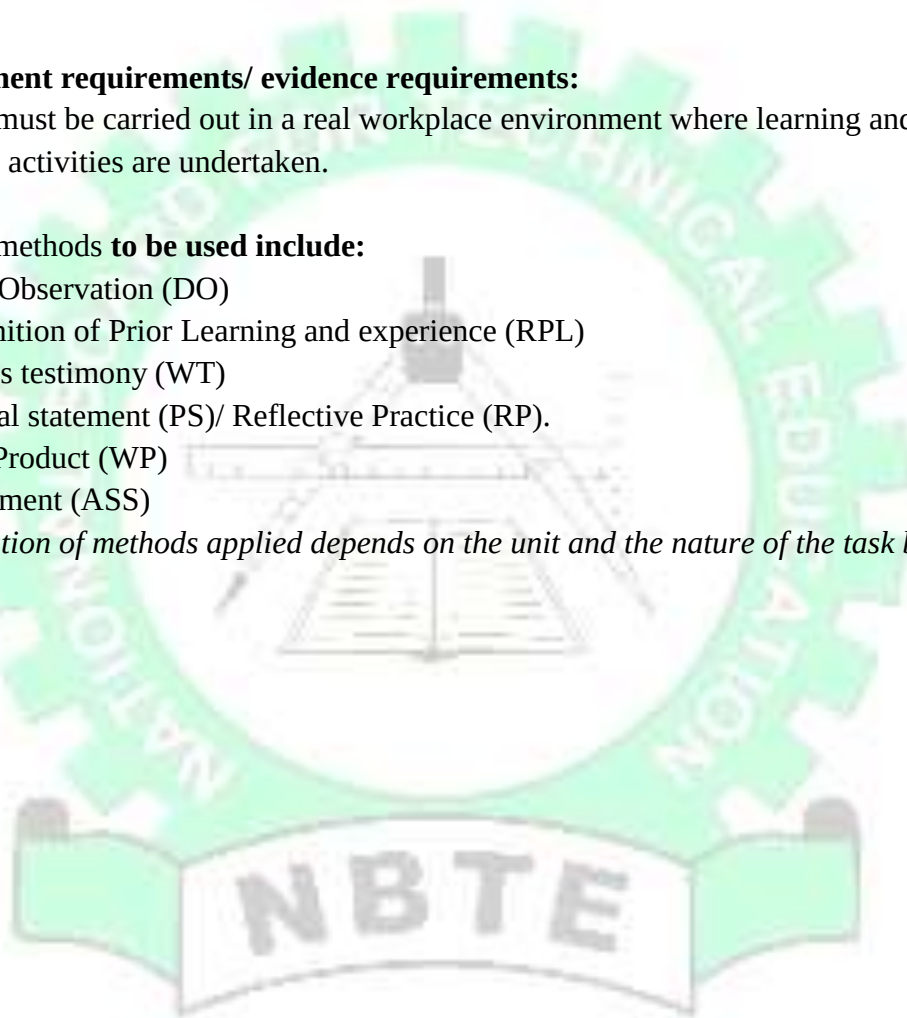
Unit assessment requirements/ evidence requirements:

Assessment must be carried out in a real workplace environment where learning and human development activities are undertaken.

Assessment methods to be used include:

1. Direct Observation (DO)
2. Recognition of Prior Learning and experience (RPL)
3. Witness testimony (WT)
4. Personal statement (PS)/ Reflective Practice (RP).
5. Work Product (WP)
6. Assignment (ASS)

The combination of methods applied depends on the unit and the nature of the task being assessed.



Unit 004: Strategic Fish Farming Production Systems

LEARNING OUTCOME (LO)		PERFORMANCE CRITERIA	Evidence Type	Evidence Ref. Page No.
The learner will:		The learner can:		
LO 1: Develop Strategic Fish Farming Production Plans	1.1.	Conduct situational analysis of fish farming production systems.		
	1.2.	Analyse national, regional, and global fish farming trends.		
	1.3.	Forecast production requirements based on market demand.		
	1.4.	Develop long-term production strategies aligned with organizational goals.		
	1.5.	Establish strategic production targets and performance indicators.		
	1.6.	Develop implementation plans and timelines.		
	1.7.	Update strategic production plans periodically.		
LO 2: Design Efficient Production Systems	2.1.	Evaluate available fish farming production systems for technical and economic suitability.		
	2.2.	Design production systems appropriate to species, environment, and market requirements.		
	2.3.	Integrate hatchery, nursery, grow-out, harvesting, and post-harvest operations.		
	2.4.	Enhance land, water, energy, labour, and capital utilization.		
	2.5.	Develop contingency plans for production risks.		
	2.6.	Recommend improvements to production infrastructure.		
LO 3: Integrate Modern Fish Farming Technologies	3.1.	Evaluate emerging fish farming technologies.		
	3.2.	Develop plans for technology adoption.		
	3.3.	Integrate automation, digital monitoring, and precision fish farming tools into production systems.		
	3.4.	Promote efficient feeding and water management technologies.		
	3.5.	Evaluate the effectiveness of new		

Unit 005: Fish Farming Research, Innovation and Technology Transfer

Unit Reference Number: AGR/FFA/005/L5

NSQ Level: 5

Credit Value: 10

Guided Learning Hours: 100

Unit Purpose: The purpose of this unit is to equip learners with the knowledge and skills to promote innovative fish farming technologies, systems, and practices that will improve productivity and efficiency.

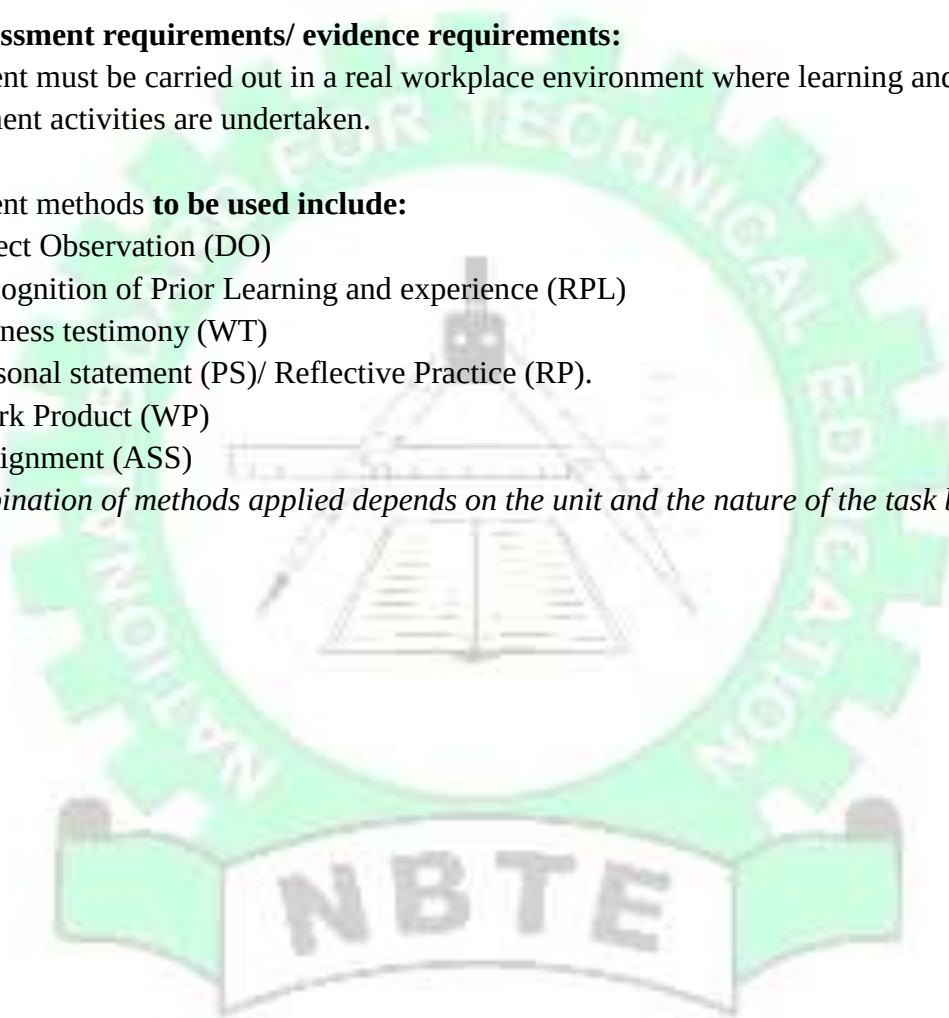
Unit assessment requirements/ evidence requirements:

Assessment must be carried out in a real workplace environment where learning and human development activities are undertaken.

Assessment methods to be used include:

1. Direct Observation (DO)
2. Recognition of Prior Learning and experience (RPL)
3. Witness testimony (WT)
4. Personal statement (PS)/ Reflective Practice (RP).
5. Work Product (WP)
6. Assignment (ASS)

The combination of methods applied depends on the unit and the nature of the task being assessed.



Unit 005: Fish Farming Research, Innovation and Technology Transfer

LEARNING OUTCOME (LO)		PERFORMANCE CRITERIA	Evidence Type	Evidence Ref. Page No.
The learner will:		The learner can:		
LO 1: Identify Innovation Opportunities in Fish Farming	1.1	Review global and local trends in fish farming innovation.		
	1.2	Analyse existing fish farming production systems to identify inefficiencies.		
	1.3	Identify gaps in productivity, technology use, and management practices.		
	1.4	Assess stakeholder needs for improved fish farming solutions.		
	1.5	Prioritize areas requiring technological or managerial innovation.		
LO 2: Evaluate Emerging Fish Farming Technologies	2.1.	Review new fish farming technologies, systems, and inputs.		
	2.2.	Assess technical feasibility of innovations in local contexts.		
	2.3.	Evaluate economic viability of new technologies.		
	2.4.	Assess environmental and social impacts of innovations.		
	2.5.	Compare alternative technologies for productivity improvement.		
	2.6.	Recommend suitable technologies for adoption.		
LO 3: Implement Innovation Programmes	3.1.	Design innovation Programmes for fish farming improvement.		
	3.2.	Coordinate pilot projects and field trials.		
	3.3.	Develop protocols for testing new fish farming management practices.		
	3.4.	Monitor implementation of innovation initiatives.		
	3.5.	Evaluate outcomes of innovation projects.		
	3.6.	Scale up successful innovations across production systems.		
LO 4: Improve Fish Farming Productivity Systems	4.1.	Analyse production performance indicators (FCR, survival, growth rate).		
	4.2.	Identify constraints affecting productivity in fish farming systems.		

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Learner's Signature:	Date:
Assessor's Signature:	Date:
IQA Signature (if sampled):	Date:
EQA Signature (if sampled):	Date:



Unit 006: Fish Quality Assurance, Certification and Regulatory Compliance

Unit Reference Number: AGR/FFA/006/L5

NSQ Level: 5

Credit Value: 10

Guided Learning Hours: 100

Unit Purpose: The purpose of this unit is to equip the learner with the knowledge and skills to improve quality assurance systems, certification processes, and regulatory compliance frameworks to ensure fish farming products meet national and international standards.

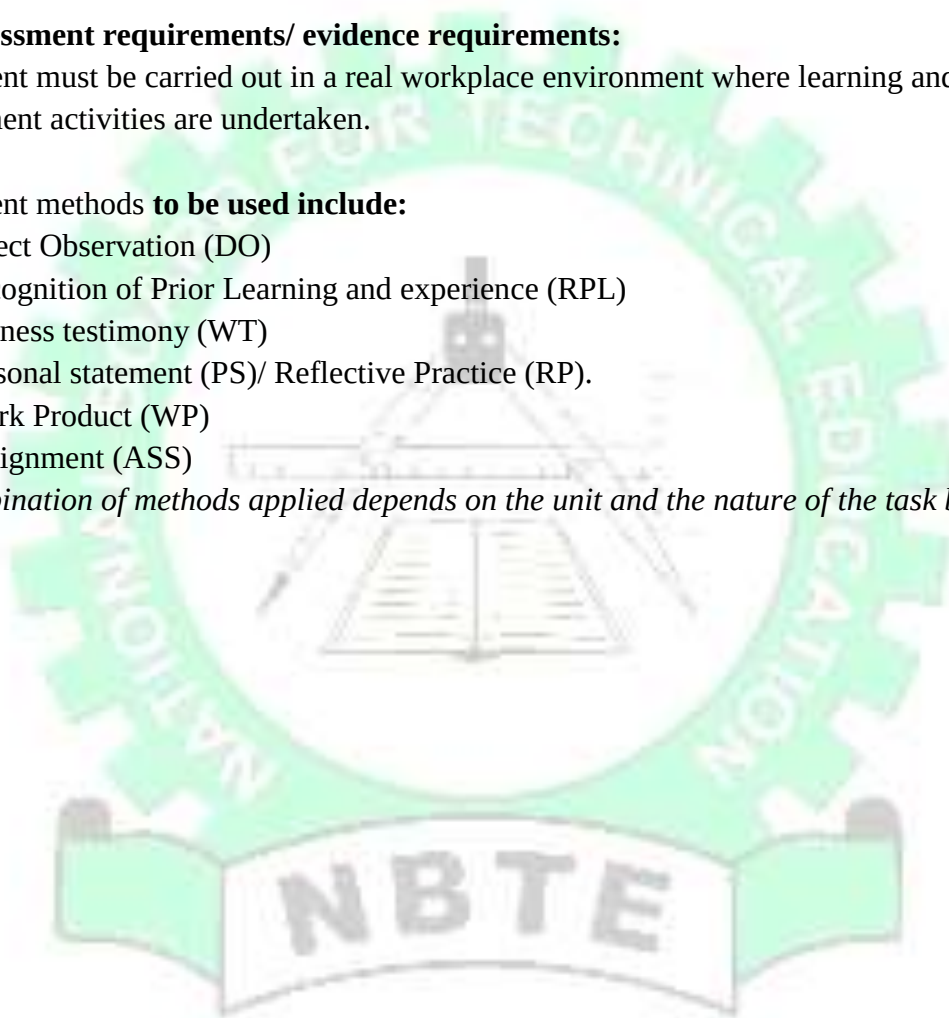
Unit assessment requirements/ evidence requirements:

Assessment must be carried out in a real workplace environment where learning and human development activities are undertaken.

Assessment methods to be used include:

1. Direct Observation (DO)
2. Recognition of Prior Learning and experience (RPL)
3. Witness testimony (WT)
4. Personal statement (PS)/ Reflective Practice (RP).
5. Work Product (WP)
6. Assignment (ASS)

The combination of methods applied depends on the unit and the nature of the task being assessed.



Unit 006: Fish Quality Assurance, Certification and Regulatory Compliance

LEARNING OUTCOME (LO)		PERFORMANCE CRITERIA	Evidence Type	Evidence Ref. Page No.
The learner will:		The learner can:		
LO 1: Develop Quality Assurance Systems	1.1.	Design an enterprise-wide quality assurance (QA) system for fish farming production.		
	1.2.	Define quality standards for fish production, handling, processing, and storage.		
	1.3.	Establish standard operating procedures (SOPs) for all production stages.		
	1.4.	Integrate quality control points into production systems.		
	1.5.	Develop documentation and traceability systems.		
	1.6.	Update QA systems regularly to meet evolving standards.		
LO 2: Implement Quality Control Procedures	2.1.	Monitor compliance with production quality standards.		
	2.2.	Ensure proper implementation of SOPs across all production units.		
	2.3.	Conduct routine inspections of production, feeding, harvesting, and handling activities.		
	2.4.	Verify adherence to hygiene and sanitation standards.		
	2.5.	Ensure proper calibration and use of monitoring equipment.		
	2.6.	Correct deviations from quality standards.		
LO 3: Manage Certification Processes	3.1.	Identify relevant fish farming certification schemes (e.g., HACCP, GAP, organic, export standards).		
	3.2.	Assess certification requirements and compliance gaps.		
	3.3.	Develop certification readiness plans.		
	3.4.	Coordinate internal and external certification audits.		
	3.5.	Prepare documentation required for certification bodies.		
	3.6.	Maintain certification status through continuous compliance.		
LO 4: Ensure Regulatory	4.1.	Identify applicable national and international fish farming		

NSQ Level: 5

Credit Value: 10

Guided Learning Hours: 100

Unit Purpose: The purpose of this unit is to equip learners with the knowledge and skills to lead fish farming business development.

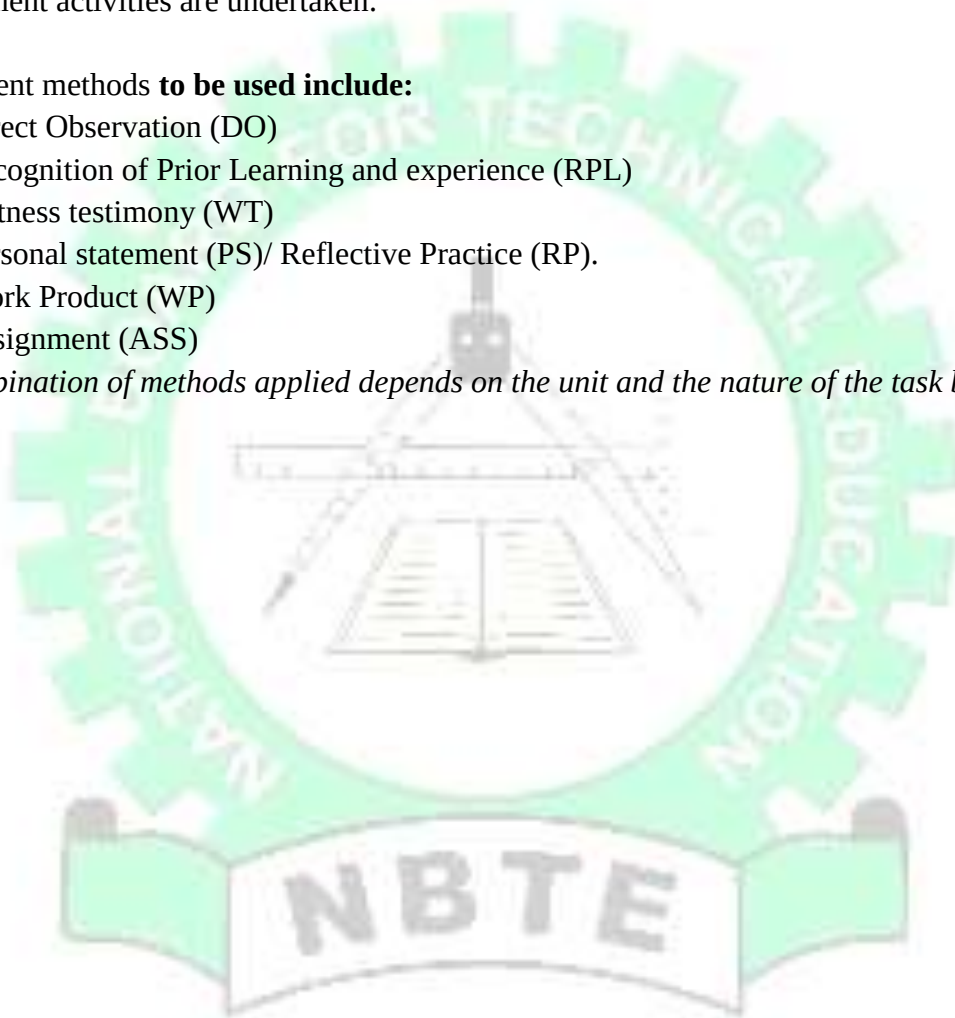
Unit assessment requirements/ evidence requirements:

Assessment must be carried out in a real workplace environment where learning and human development activities are undertaken.

Assessment methods to be used include:

1. Direct Observation (DO)
2. Recognition of Prior Learning and experience (RPL)
3. Witness testimony (WT)
4. Personal statement (PS)/ Reflective Practice (RP).
5. Work Product (WP)
6. Assignment (ASS)

The combination of methods applied depends on the unit and the nature of the task being assessed.



Unit 007: Fish Farming Business Development

LEARNING OUTCOME (LO)		PERFORMANCE CRITERIA	Evidence Type	Evidence Ref. Page No.
The learner will:		The learner can:		
LO 1: Identify Investment Opportunities	1.1	Analyse fish farming industry trends and market dynamics.		
	1.2	Identify viable fish farming investment opportunities across value chains.		
	1.3	Conduct feasibility studies for fish farming enterprise expansion.		
	1.4	Evaluate technical, financial, environmental, and social viability in fish farming business.		
	1.5	Prioritize investment options based on risk and return.		
	1.6	Prepare investment opportunity reports for stakeholders.		
LO 2: Develop Fish Farming Business Expansion Plans	2.1.	Define strategic objectives for business growth and diversification.		
	2.2.	Develop short-, medium-, and long-term expansion plans.		
	2.3.	Design scalable production and processing systems.		
	2.4.	Plan infrastructure development for business expansion.		
	2.5.	Integrate sustainability and climate resilience into expansion plans.		
	2.6.	Align expansion plans with regulatory and market requirements.		
LO 3: Mobilize Financial Resources for Investment	3.1.	Identify potential sources of funding (banks, investors, grants, PPPs).		
	3.2.	Prepare investment proposals and business cases.		
	3.3.	Negotiate financing terms with investors and financial institutions.		
	3.4.	Develop capital budgeting and financing strategies.		
	3.5.	Manage investor relations and reporting obligations.		
	3.6.	Utilize investment funds efficiently.		
LO 4: Manage Fish Farming	4.1.	Identify strategic partners across fish farming value chains.		

FISHERIES STANDARD EQUIPMENT LIST FOR LEVEL 1-5

S/N	CATEGORY	TOOL/EQUIPMENT	REQUIRED NUMBER
1.	Classroom Facilities	Whiteboards/Chalkboards	2
		Projectors and Screens	2
		Computers with Internet Access	2
		Audio-Visual Equipment	2
		Desks and Chairs	assorted
2.	Laboratories	Fish farming Laboratory Equipment: Microscope, • Refractometer	2 of each
		Fisheries Biology Laboratory Equipment: • Calipers	2
		Water Quality Testing Equipment: • Dissolved oxygen meter • pH meter • Ammonia meter • Nitrite, Nitrate meter • Conductivity meter • Thermometer • secchi disc	2 of each
		Microbiological equipment: • photo microscope • autoclave • incubator	1 of each
		Main Laboratory Equipment: • Scoop net • Weighing scales • Dissecting sets	2 of each
3.	Fish Hatchery Facilities	Egg Incubators	1
		Larval Rearing Tanks	2
		Fry Rearing Tanks	2
		Aerator	5
		Blower	1
		dissecting microscope	1
		Adjustable graders	1
		Water Filtration Systems	optional
		Plankton net	3
		Hapa net	5
		hatching net	5
4.	Fish farming Ponds/Tanks	Broodstock tank	2
		Fish Rearing Tanks/Ponds	5
		Recirculating Fish farming Systems (RAS)	1
		Net Cages for Offshore Fish	optional

		farming	
		Oxygenation Systems	1 (optional)
		Mechanical aerators	1
		Earthen pond	2 (optional)
		Tarpaulin pond	2
		Concrete pond	3
		Fibre glass tank	1 (optional)
		Plastic pond	2
		Temperature Control Systems	
5.	Fishing Gear and Equipment	Fishing Nets (Gill Nets, Seine Nets, drag net etc.)	1 each
		Fishing Traps and Pots	
		scoop net	
6.	Boats and Vessels	Small Fishing Boat	1 (optional)
		Safety Equipment (Life Jackets)	3
7.	Fish Processing Equipment	Fish Filleting Machines	1 (optional)
		Fish Scaling Machines	1 (optional)
		Fish Grading and Sorting Machines	1 (optional)
		Fish Smoking and Drying Equipment	1
		Cold /ice box	3
		Freezers and Cold Storage Facilities	1
		filleting knife	3
		cutting knife	3
		descaling tool	5
		working table	2
8.	Fish feed production facilities	Hammer mill	1
		Crusher/Pulverizer	1
		Mixer	1
		Pelletizer	1
		Feed Dryer	1 (optional)
		Weighing scale (5kg, and 100Kg)	1 each
		Extruding machine	1 (optional)
		Bag sealing machine	1 (optional)
		Bag sewing machine	1 (optional)
		Shovel	2
		Bowls of different sizes	1 each
9.	Fish Health and Disease Monitoring Equipment	Microscopes for Pathogen Identification	
		Parasite Identification Kits	
		Fish Health Monitoring Kits	
		Vaccination Equipment	
		Disease Identification charts	
		Isolation facilities	

		Quarantine Facilities	
	Safety Gear	Personal Protective Equipment (PPE) such as fishing gloves, Boots and Aprons	assorted
		First Aid Kits	1 set
	Workshop Tools and Equipment	Hand Tools (Pliers, Screwdrivers, etc.)	1 set
		Power Tools (Drills, Saws, etc.)	1 each (optional)
		Welding Equipment	1 (optional)
10.	Educational Resources	Textbooks and Reference Materials	assorted
		Training Manuals and Modules	assorted
		Educational Videos and Demonstrations	assorted
		Fish Identification Guides	assorted
		Fish farming Production Guidelines	assorted
11.	Infrastructure	Administrative Offices	1
		Staff Rooms	1
		toilet facilities	2
		Changing rooms	1
		Storage Facilities for Equipment and Supplies	1
12.	Support Services	Maintenance and Repair Services for Equipment	optional
		Transportation Services for Field Trips and Practical Training	optional
		Catering Services (if required)	optional
		Health and Counseling Services for Students/staff	1
13.	Certification and Assessment Tools	Assessment Centers	1
		Examination Papers and Assessment Criteria	
		Certification Templates and Documentation	
		Quality Assurance Mechanisms	

LIST OF PARTICIPANTS

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