



# NATIONAL OCCUPATIONAL STANDARD FOR FISHERIES EXTENSION PROVIDER

NOS.FEO.01  
First Edition

## APPROVING AUTHORITY

This National Occupational Standard has been prepared and published under the authority of the Zambia Qualifications Authority Board on 19<sup>th</sup> May 2022.

## ZAMBIA QUALIFICATIONS AUTHORITY

The Zambia Qualifications Authority Act No. 13 of 2011 was enacted by the Government of the Republic of Zambia to ***“provide for the development and implementation of a national qualifications framework; establish the Zambia Qualifications Authority; provide measures to ensure that standards and registered qualifications are internationally comparable; and provide for matters connected with, or incidental to the foregoing”***. Among other functions, ZAQA is responsible for ***determining national standards for any occupation***, through various sector specific National Occupational Standards Development Teams (NOSDTs).

## REVISION OF NATIONAL OCCUPATIONAL STANDARDS

National Occupational Standards shall be revised after every **5 years**, or whenever necessary, by the issue of either amendments or of revised editions. It is important that users of National Occupational Standards (NOS) ascertain that they are in possession of the latest amendments or editions.

## NOS DEVELOPMENT TEAM RESPONSIBLE

This National Occupational Standard was prepared by the Agriculture National Occupational Standards Development Team, upon which the following organisations were represented:

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2. Aquaculture Development Association of Zambia (ADAZ)
3. Crop Life Zambia
4. Ministry of Fisheries and Livestock (Department of Fisheries)
5. Golden Valley Agriculture Research Trust (GART)
6. Katete College of Agricultural Marketing
7. Ministry of Agriculture (Department of Agriculture)
8. Mulungushi University (MU)
9. Natural Resources Development College (NRDC)
10. University of Zambia (UNZA)
11. Veterinary Council of Zambia
12. Zambia Agriculture Research Institute (ZARI)
13. Zambia National Farmers Union (ZNFU)
14. Zambia Seed Trade Association (ZASTA)
15. Zambia Qualifications Authority (ZAQA)

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## TABLE OF CONTENTS

FOREWORD .....	v
JUSTIFICATION .....	v
ACRONYMS AND ABBREVIATIONS .....	vi
GLOSSARY OF TERMS .....	vii
1. SCOPE.....	2
2. PERSONAL ATTRIBUTES (VALUES, ETHICS AND ATTITUDES) .....	2
3. UNITS AND ELEMENTS.....	2
4. EQUIPMENT, TOOLS AND CONSUMABLE MATERIALS.....	23
5. DILEMMAS/CHALLENGES AND COMPLEXITIES FOR A JOB HOLDER.....	23
6. WORKING CONDITIONS/ENVIRONMENT .....	23
7. PARTIES INVOLVED/INTERACTING WITH THE JOB HOLDER OR TRAINEE .....	23
8. PHYSICAL DEMANDS ON THE BODY.....	24
ANNEX A.....	25
ANNEX B.....	26

## FOREWORD

The Zambia Qualifications Authority (ZAQA) is a statutory body under the Ministry of Education established by ZAQA Act No. 13 of 2011 to “**provide for the development and implementation of a national qualifications framework; provide measures to ensure that standards and registered qualifications are internationally comparable; and provide for matters connected with, or incidental to the foregoing**”.

Among other functions, ZAQA is responsible for “**determining national standards for any occupation**”, through various sector specific National Occupational Standards Development Teams (NOSDTs) of experts composed of representation from appropriate authorities, government departments, industry, academia, regulators, consumer associations and non-governmental organizations, etc.

This National Occupational Standard (NOS) has been developed by the Agriculture National Occupational Standards Development Team in accordance with the procedures and guidelines of ZAQA. All users should ensure that they have the latest edition of this publication as National Occupational Standards are revised from time to time.

This NOS shall be used by among others industry, employers, quality assurance bodies, awarding and professional bodies and education and training institutions, as a benchmark to identify training needs, develop job profiles/descriptions, develop curricula and learning programmes, in various sectors where the occupation exists. In the Agriculture sector, demonstration of competence against this NOS may be required in order to run a business or practice a craft or profession.

## JUSTIFICATION

A Fisheries Extension Provider is needed in the sector because he/she is an intermediary between research and fish farmers/fishers. They operate as facilitators and communicators, helping fishers and fish farmers in their decision making and ensuring that appropriate knowledge is implemented to obtain the best results with regards to sustainable production and general rural development.

They also play an important role in assisting the community in the fishing industry through educational procedures, in improving fishing and fish processing methods, increasing production efficiency thereby improving their social economic standards.

## ACRONYMS AND ABBREVIATIONS

FEP	Fisheries Extension Provider
CS	Core Skill
NOS	National Occupational Standard
NOSDT	National Occupational Standards Development Team
OK	Organizational Knowledge
PC	Performance Criteria
PS	Professional Skill
RK	Regulatory Knowledge
RPL	Recognition of Prior Learning
TK	Technical Knowledge
ZAQA	Zambia Qualifications Authority
ZQF	Zambia Qualifications Framework

## GLOSSARY OF TERMS

For the purposes of these NOS, the following terms and definitions shall apply:

**Core Skills/Generic Skills:** are a group of skills that are key to learning and working in today's world. These skills are typically needed in any work environment. In the context of the NOS, these include communication related skills that are applicable to most job roles.

**Function:** is an activity necessary for achieving the key purpose of the sector, occupation, or area of work, which can be carried out by a person or a group of persons. Functions are identified through functional analysis and form the basis of NOS.

**Job Title:** defines a unique set of functions that together form a unique employment opportunity in an organization.

**Knowledge and Understanding:** are statements which together specify the technical, generic, professional and organizational specific knowledge that an individual needs in order to perform to the required standard.

**National Occupational Standards (NOS):** are statements of the standards of performance individuals must achieve when carrying out functions in the workplace, together with specifications of the underpinning knowledge and understanding. They are precise descriptions of what an individual is expected to be able to do in his/her work role.

**National Occupational Standards (NOS) Code:** is a unique reference code that identifies a NOS.

**National Occupational Standards Development Team (NOSDT):** means an established group of national stakeholders/experts responsible for the development of National Occupational Standards within a specific economic sector or occupation.

**Occupation:** is a set of job roles, which perform similar/related set of functions in an industry.

**Organizational Context:** includes the way the organization is structured and how it operates, including the extent of operative knowledge that managers have in their relevant areas of responsibility.

**Performance Criteria:** are statements that together specify the standard of performance required when carrying out a task.

**Scope:** is the set of statements specifying the range of variables that an individual may have to deal with in carrying out the function which have a critical impact on the quality of performance required.

**Sector:** is a conglomeration of different business operations having similar businesses and interests. It may also be defined as a distinct subset of the economy whose components share similar characteristics and interests.

**Sub Sector:** is derived from a further breakdown based on the characteristics and interests of its components.

**Technical Knowledge:** is the specific knowledge needed to accomplish specific designated responsibilities.

**Unit Title:** gives a clear overall statement about what the incumbent should be able to do.



## OVERVIEW

This is an introductory section providing a brief summary and specific information or commentary about the content of the NOS for a fisheries specialist and the targeted sector and occupation to help the user judge whether it is relevant to them.

<b>NOS Code</b>	NOS.FEP.01
<b>Occupation</b>	Fisheries Extension Provider
<b>Job Title</b>	Fisheries Extension Provider
<b>Job Description</b>	This job role is responsible for the provision of fisheries extension services to the fisher folks and aquaculture extension services to fish farmers ranging from site selection to harvest. The Fisheries Extension Provider is also responsible for timely enforcement of regulations in order to conserve fish resources, licensing of fisher folks and registration of fishers, in order to attain the objectives of the section
<b>Job Purpose</b>	To effectively carry out fishery surveys and fisheries extension programs in order to ensure rational exploitation of Fisheries resources
<b>ZQF Level</b>	6
<b>Sector</b>	Agriculture
<b>Sub sector</b>	Fisheries and Aquaculture
<b>Other Economic Sector(s) in which the Occupation is Practiced</b>	Education Wild life and natural resource
<b>Other Similar Jobs that can be performed by a Fisheries Extension Provider</b>	Fisheries technologists Fisheries Technician Aquaculture Technician Fisheries Technical Officer
<b>Minimum Educational Job Entry Qualification(s)</b>	Diploma
<b>Practicing License Requirements (if any)</b>	N/A
<b>Training/RPL</b>	Prior work in Fisheries and aquaculture sciences
<b>Minimum Job Entry Age</b>	20 years
<b>Prior Experience</b>	Nil
<b>Performance Criteria</b>	As described in the Units under Section 4

## **1. SCOPE**

This National Occupational Standard specifies the fundamental knowledge and understanding, skills and competences that a Fisheries Extension Provider must possess to be successful in his/her job role. It is applicable to Fisheries Extension Providers working in public or private organizations or self-employed.

## **2. PERSONAL ATTRIBUTES (VALUES, ETHICS AND ATTITUDES)**

This job requires an individual to possess:

- Creativity
- Problem solving skills
- Analytical skills
- Mathematics skills
- Integrity and respect for confidentiality
- Interpersonal skills
- Commercial Awareness
- Attention to details
- Ability to communicate effectively and clearly
- Self-motivated and team worker
- Ability to plan and prioritize,
- Quality consciousness
- Occupational health and safety oriented

## **3. UNITS AND ELEMENTS**

This National Occupational Standard is divided into six (6) units representing the tasks that a job holder should undertake in his/her day to day work. Each unit is further broken down into elements depicting the number of activities to be carried out for the successful execution of a particular task.

**UNIT 1** [This unit is about the Fisheries Extension Provider planning for the extension services to be delivered to the community].

<b>Unit No.</b>	<b>01</b>
<b>Unit Title</b>	<b>Plan for the extension services</b>
<b>Description</b>	This unit is about planning for Fisheries Extension services to the fisher folks in order to control fishing and aquaculture extension services to fish farmers
<b>Scope</b>	This unit covers the following: <ul style="list-style-type: none"> <li>• Preparing for providing extension &amp; advisory services</li> <li>• Organising logistics and providing assistance to the community during the training</li> <li>• Demonstrating and Introducing new technology and monitoring adoption</li> <li>• Preparing the action plan</li> </ul>
<b>Performance Criteria (PC) w.r.t. the Scope</b>	
<b>Element</b>	<b>Performance Criteria (PC)</b>
<b>Preparing for providing extension and advisory services</b>	To be competent, the individual must be able to: <p>PC1. Take internal training from subject matter specialists to prepare for providing extension services to fisher folks and fish farmers.</p> <p>PC2. Conduct timely demonstrations and training in order to ensure effective delivery of appropriate information on technology</p> <p>PC3. Use appropriate tools and equipment for extension services</p> <p>PC4. Interact with the community in the area chosen</p> <p>PC5. Understand the socio-economic aspects of the area chosen</p> <p>PC6. Understand the climatic condition of the area chosen</p>
<b>Organising logistics and providing assistance to the community during the training</b>	To be competent, the individual must be able to: <p>PC7. Provide assistance during the training as guided by the trainer</p> <p>PC8. Use of right tools and equipment for extension services</p> <p>PC9. Keep records of the training process and ensure the training proceeds smoothly</p>
<b>Demonstrating and Introducing new technology and monitoring adoption</b>	To be competent, the individual must be able to: <p>PC 10. Conduct timely demonstrations and training of the community in order to ensure effective delivery of appropriate information on latest technology</p> <p>PC11. Monitor adoption rates of new technologies</p> <p>PC12. Assess impact of new technology</p>
<b>Preparing the action plan</b>	To be competent, the individual must be able to: <p>PC13. Ensure timely development of individual and work plans in order to monitor and evaluate performance</p> <p>PC14. Outline the action plan consisting of shortlisted technologies, tools and equipment, training methodologies according to seasonal activities etc.</p>

	PC15. Decide the date and time when the groups need to be met in their respective areas.
<b>Knowledge and Understanding (K)</b>	
<b>A. Organisational Context (Knowledge of the company/ organisation and its processes)</b>	<p>The individual on the job must demonstrate knowledge and understanding of:</p> <ul style="list-style-type: none"> <li>OK1. Relevant legislation, standards, policies, and procedures in work</li> <li>OK2. Relevant health and safety requirements applicable in the work environment</li> <li>OK3. Own job role and responsibilities and sources for information pertaining to work</li> <li>OK4. Who to approach for support in order to obtain work related information, clarifications and support</li> <li>OK5. Importance of following health, hygiene, safety and quality standards and the impact of not following the standards on consumers and the business</li> <li>OK6. Documentation and related procedures applicable in the context of work</li> </ul>
<b>B. Technical Knowledge</b>	<p>The individual on the job must demonstrate knowledge and understanding of:</p> <ul style="list-style-type: none"> <li>TK1. Various scientific methods and technologies for increasing fish production, productivity and income</li> <li>TK2. Tools and techniques of community mobilization and organization</li> <li>TK3. Sequence of arrangement of training tools and techniques</li> <li>TK4. Dynamics of the fishing community in terms of individuals and groups</li> <li>TK5. Constraints of time when fishermen are ashore</li> <li>TK6. Daily routine of fishermen and the community</li> <li>TK7. Effective means of disseminating information about training and its efficacy</li> <li>TK8. Factors to consider when choosing netting materials</li> <li>TK9. Fishing gear to use</li> <li>TK10. Fishing methods to use</li> <li>TK11. Factors to consider when selecting the site for the fish farm</li> <li>TK12. How to maintain the bloom of phytoplankton at the fish farm at the desired level as indicated by transparency of water</li> <li>TK13. Fish management practices/Best aquaculture practices</li> <li>TK14. Harvesting procedures of cultured aquatic organisms</li> </ul>
<b>Skills (S)</b>	
<b>A. Core Skills/ Generic Skills</b>	<b>Reading Skills</b>
	<p>The individual on the job must be able to:</p> <ul style="list-style-type: none"> <li>CS1. Update oneself about latest technologies by reading research articles, attending seminars, conferences etc.</li> <li>CS2. Keep abreast with the latest knowledge by reading brochures, pamphlets, product information sheets etc.</li> </ul>

	CS3. Read relevant newspapers/booklets etc.
	<b>Writing Skills</b>
	The individual on the job must be able to: CS4. Fill work related forms and documents clearly CS5. Write down the plan for field visits CS6. Prepare reports for review by supervisors
	<b>Oral Communication (Listening and Speaking skills)</b>
<b>B. Professional Skills</b>	The individual on the job must be able to: CS7. Maintain effective relationships with senior officers and specialists CS8. Communicate clearly and effectively with seniors CS9. Understand information and grasp its meaning CS10. Communicate precisely CS11. Discuss issues, clarify doubts and seek solutions
	<b>Decision Making Skills</b>
	The individual on the job must be able to: PS1. Make decisions pertaining to the concerned area of work PS2. Identify problems that may arise in carrying out tasks and take preventive action following workplace procedures
	<b>Plan and Organise</b>
	The individual on the job must be able to: PS3. Plan and organise improved technologies to be demonstrated PS4. Organise meetings of stakeholders PS5. Organise meetings of farmer groups
	<b>Customer Centricity</b>
	The individual on the job must be able to: PS6. Develop a rapport with senior officers and specialists PS7. Listen carefully and interpret the information given by the seniors PS8. Discuss possible solutions PS9. Make use of exposure visits to model farms PS10. Participate in exhibitions/seminars/workshops which provide information on new technologies in agriculture and allied sectors
	<b>Problem Solving Skills</b>
	The individual on the job must be able to: PS11. Think through the problem, evaluate the possible solutions and take up optimum/best solutions PS12. Identify economically viable and operationally feasible solutions which meet farmer needs in collaboration with supervisors.
	<b>Analytical Thinking</b>
	The individual on the job must be able to: PS13. Analyse the information received from officers and specialists PS14. Think analytically to come up with solutions

	<p>PS15. Apply, analyse and evaluate the information gathered from trainings</p> <p>PS16. Improving/adapting the technologies based on results as guided by supervising officers.</p>
	<p><b>Critical Thinking</b></p>
	<p>The individual on the job must be able to:</p> <p>PS17. Take up his/her own working and learning</p> <p>PS18. Apply, analyse, and evaluate the information gathered from observation, experience, reasoning, or communication, as a guide to thought and action</p>

**UNIT 2** [This unit is about all the activities of fish farming from site selection to harvest].

<b>Unit No.</b>	<b>02</b>
<b>Unit Title</b>	<b>Implementing fish farming practices from site selection to harvesting/marketing</b>
<b>Description</b>	<p>This Unit is about enabling fish farmers acquire knowledge on how to manage fish farms for optimum fish production and productivity. The job holder will be responsible for ensuring the following are implemented correctly; site selection, fish pond construction, fish stocking, fish pond management, harvesting, communication skills and broad range of relevant skills.</p>
<b>Scope</b>	<p>This Unit covers the following:</p> <ul style="list-style-type: none"> <li>• Site selection</li> <li>• Fish pond construction</li> <li>• Factors to consider when selecting fish for culture</li> <li>• Fish stocking</li> <li>• Fish feeding practices and techniques</li> <li>• Fish feed formulation</li> <li>• Fish post harvest losses</li> <li>• Fish pond management</li> <li>• Factors affecting fish growth</li> <li>• Fingerling production</li> <li>• Fish diseases</li> <li>• Harvesting methods and marketing</li> </ul>
<b>Performance Criteria (PC) w.r.t. the Scope</b>	
<b>Element</b>	<b>Performance Criteria (PC)</b>
<b>Site selection</b>	<p>To be competent, the individual must be able to:</p> <p>PC1. Assess the water quality and quantity of perennial water source from a stream, spring and/or dambo that is desirable for pond supply</p>

	<p>PC2. Identify the soil quality/type that holds water well preferably. loamy clay must be chosen because of its better water retention capacity and suitability for dike making</p> <p>PC3. Assess the topography of the site</p> <p>PC4. Consider access to the site, e.g. security, labour, inputs and market availability</p>
<b>Fish Pond construction</b>	<p>To be competent, the individual must be able to:</p> <p>PC5. Determine the exact location for the pond.</p> <p>PC6. Prepare the site, by removing all organic materials from the surface of the site.</p> <p>PC7. Mark the pond and dikes with stakes</p> <p>PC8. Dig out the pond bottom</p> <p>PC9. Building the dikes</p> <p>PC10. Install the inlet and outlet</p> <p>PC11. Protect the pond dikes by planting grass</p> <p>PC12. Fill the pond with water</p> <p>PC13. Fence the pond whenever possible</p>
<b>Factors to consider when selecting fish for culture</b>	<p>To be competent, the individual must be able to:</p> <p>PC14. Investigate consumer preference</p> <p>PC15. Determine availability of the possible and preferred inputs</p> <p>PC16. Analyse any questions or concerns about the species.</p> <p>PC17. Evaluate the availability or the source of the species Seed or breeding stock</p>
<b>Fish stocking</b>	<p>To be competent, the individual must be able to:</p> <p>PC18. Analyse the level of management</p> <p>PC19. Determine facility type and size</p> <p>PC20. Determine the intended harvest size of the fish.</p>
<b>fish feeding practices and techniques</b>	<p>To be competent, the individual must be able to:</p> <p>PC21. Give feed of the correct nutritional quality for the specified age of fish</p> <p>PC22. Feed the right feed size for easy consumption</p> <p>PC23. Feed the correct amount</p> <p>PC24. Feed at the right time(s) each day</p>
<b>Fish feed formulation</b>	<p>To be competent, the individual must be able to:</p> <p>PC25. Identify nutrients requirements of the species cultivated.</p> <p>PC26. Determine the feeding habits of the species</p> <p>PC27. Analyse local availability, cost and nutrients composition of ingredients</p> <p>PC28. Evaluate expected feed consumption</p> <p>PC29. Evaluate feed additives needed</p> <p>PC30. Investigate type of feed desired</p> <p>PC31. Identify data collection procedure for monitoring of results</p> <p>PC32. Determine financial capacity to acquire the ingredients</p> <p>PC33. Type of equipment machinery for making feed.</p> <p>PC34. Analyse the actual feed formulation</p> <p>PC35. Analyse Sex reversal feed preparation</p>

<p><b>Fish post harvest losses</b></p>	<p>To be competent, the individual must be able to:</p> <p>PC36. Identify the critical factors that contribute to post-harvest loss</p> <p>PC37. Determine technologies and practices for reducing post-harvest loss</p> <p>PC38. Examine and describe the characteristics of the specimens' appearance, odor and texture</p> <p>PC39. Evaluate the quality of each specimen and describe the method used</p> <p>PC40. Describe other methods that can be applied to evaluate the freshness of the same specimen</p> <p>PC41. Assess the impact of post-harvest loss technologies</p> <p>PC42. Determine the factors that contribute to fish spoilage</p>
<p><b>Fish pond management</b></p>	<p>To be competent, the individual must be able to:</p> <p>PC43. Identify the water source, quality and quantity</p> <p>PC44. Analyse the feeding behaviour of the fish and recommend the appropriate number of times to feed the fish per day.</p> <p>PC45. Identify appropriate fish sampling techniques to use</p> <p>PC46. Enforce efficient plankton bloom in the pond</p> <p>PC47. Identify appropriate feeding method to use</p> <p>PC48. Develop the daily, weekly and monthly management plan of fish pond management and ensure it is implemented</p> <p>PC49. Facilitate efficient utilisation of the fish feed given to fish</p> <p>PC50. Facilitate maintenance and management of the fish pond</p>
<p><b>Factors affecting fish growth</b></p>	<p>To be competent, the individual must be able to:</p> <p>PC51. Guide on Water temperature where the growth and activity of fish depend on its body temperature.</p> <p>PC52. Give guidance on pH (Hydrogen concentration) where water may be acidic, alkaline or neutral</p> <p>PC53. Give guidance on Dissolved Oxygen (DO) which it is essential for respiration in fish, other living organisms and it is necessary for decomposition of organic matter</p> <p>PC54. Give guidance on the source of common turbidity in fish ponds</p> <p>PC55. Give guidance on stress and diseases, which act on the fish physiology</p>
<p><b>Fingerling production</b></p>	<p>To be competent, the individual must be able to:</p> <p>PC56. Give guidance on basic requirements for producing fingerlings culture facilities require sufficient good quality water free of harmful chemicals</p> <p>PC57. Ensure all facilities are cleaned and maintained on a routine basis. Hapas require periodic scrubs to remove organisms and debris which clog the netting and prevent water circulation</p> <p>PC58. Ensure that Ponds and tanks are built where they will not flood. Pond inlet and outlets should be screened to keep out predators.</p> <p>PC59. Ensure that Ponds are exposed to sunlight so that adequate plankton can be produced as natural food.</p>



	PC60. Ensure that ponds and tanks for commercial fingerling production should be completely drained and have catch basins
<b>Fish diseases</b>	To be competent, the individual must be able to:  PC61. Identify the occurrence of disease outbreaks in fish farming PC62. Assess disease threats for an aquaculture facility that vary with the type of production operation PC63. Analyse poor handling of fish on both parasitic and bacterial infections. PC64. Investigate diseases that can be enhanced during transportation of fingerling/fry from different hatcheries. PC65. Assess pollution of high levels of ammonia that predisposes fish to succumb to large numbers of parasites
<b>Harvesting methods and marketing</b>	To be competent, the individual must be able to:  PC66. Identify when the fish reaches its physiological maturity. PC67. Employ appropriate methods of harvesting PC68. Analyse the market
<b>Knowledge and Understanding (K)</b>	
<b>A. Organisational Context (Knowledge of the company/organisation and its processes)</b>	The individual on the job must demonstrate knowledge and understanding of:  OK1. Relevant legislation, standards, policies, and procedures in work OK2. Relevant health and safety requirements applicable in the work environment OK3. Job role and responsibilities and sources for information pertaining to work OK4. Who to approach for support in order to obtain work related information, clarifications and support OK5. The health, hygiene, safety and quality standards and the impact of not following the standards on consumers and the business OK6. Documentation and related procedures applicable in the context of work
<b>B. Technical Knowledge</b>	The individual on the job must demonstrate knowledge and understanding of:  TK1. Fisheries and aquaculture are essential for food and nutrition security, employment, income generation and improved livelihoods TK2. Record keeping of all inputs and equipment, their status and competing needs TK3. Sources of common turbidity in fishponds <ul style="list-style-type: none"> <li>○ Phytoplankton bloom</li> <li>○ Clay particles</li> <li>○ Rusty soil</li> <li>○ Runoff from rain water</li> <li>○ Fish behavior (Carp fish digging embankments)</li> </ul>

	<p>TK4. Soil and plant health (knowledge of various available forms of chemical elements)</p> <p>TK5. Labour requirements and management (Man days required per unit area of production, labour laws, working hours and labour costs)</p> <p>TK6. Sustainable fish farming methods</p> <p>TK7. Integrating trees into agriculture to promote sustainable crop production</p> <p>TK8. Production systems of fish farming</p> <p>TK9. Common weeds, their effect on crop production and control</p> <p>TK10. Common pests and diseases that attack various plants or crop of interest and management or control methods to use</p> <p>TK11. Aquaculture best practices</p>
<b>Skills (S)</b>	
<b>A. Core Skills/ Generic Skills</b>	<b>Reading Skills</b>
	<p>The individual on the job must be able to:</p> <p>CS1. Read internal information documents sent by internal teams/ supervisor</p> <p>CS2. Update one-self about latest technologies by reading research articles, attending seminars, workshops, etc.</p> <p>CS3. Read equipment manuals and process documents to understand the equipment operation and process requirement</p> <p>CS4. Read and understand the labels</p>
	<b>Writing Skills</b>
	<p>The individual on the job must be able to:</p> <p>CS5. Record and maintain all the information regarding crop husbandry practices</p> <p>CS6. Write reports</p>
	<b>Oral Communication (Listening and Speaking skills)</b>
	<p>The individual on the job must be able to:</p> <p>CS7. Effectively communicate with the staff, colleagues and relevant stakeholders</p> <p>CS8. Display polite and courteous behaviour under all circumstances</p>
<b>B. Professional Skills</b>	<b>Decision Making Skills</b>
	<p>The individual on the job must be able to:</p> <p>PS1. Solve problems relating to crop/ plant husbandry practices</p> <p>PS2. Provide Leadership to his/ her subordinates</p> <p>PS3. Show reasoning, intuition, emotional intelligence, teamwork, creativity and time management skills</p>
	<b>Plan and Organise</b>

	<p>The individual on the job must be able to:</p> <p>PS4. Plan and organise the work order and jobs received from the supervisor</p> <p>PS5. Plan and prioritise the work based on the instructions received from the supervisor</p> <p>PS6. Plan to utilise time and equipment effectively</p>
	<p><b>Customer Centricity</b></p>
	<p>The individual on the job must be able to:</p> <p>PS7. Manage good relationships with the manager and colleagues</p>
	<p><b>Problem Solving Skills</b></p>
	<p>The individual on the job must be able to:</p> <p>PS8. Study the problem and provide a best solution</p> <p>PS9. Quickly identify problems and solve them immediately</p>
	<p><b>Analytical Thinking</b></p>
	<p>The individual on the job must be able to:</p> <p>PS10. Analyse the information received from officers and specialists</p> <p>PS11. Think analytically to come up with solutions</p>
	<p><b>Critical Thinking</b></p>
	<p>The individual on the job must be able to:</p> <p>PS12. Determine how to improve productivity and production</p> <p>PS13. Find innovative solution for promoting agricultural technology</p>

**UNIT 3**[This unit is about Fish Conservation and Management]

<b>Unit No.</b>	<b>03</b>
<b>Unit Title</b>	<b>Fish Conservation and Management</b>
<b>Description</b>	This unit is about supervising timely enforcement of regulations in order to conserve fish resources and helps to maintain the balance of ecosystem
<b>Scope</b>	This unit covers the following <ul style="list-style-type: none"> <li>• Monitoring control and Surveillance</li> <li>• Fisheries management</li> <li>• Registration and licensing of fisher folks</li> </ul>
<b>Performance Criteria (PC) w.r.t. the Scope</b>	
<b>Element</b>	<b>Performance Criteria (PC)</b>
<b>Monitoring control and Surveillance</b>	To be competent, the user/ individual must be able to: PC1. Control on the types of fishing gear to use PC2. Allow fishers to use sustainable fishing methods PC3. Enforcing and monitoring fishing regulations PC4. Confiscate illegal fishing gear and methods PC5. Initiate court proceedings PC6. Conduct patrols and monitor compliance PC7. Read, interpret and implement national fisheries regulations.
<b>Fisheries management</b>	To be competent, the user/ individual must be able to: PC8. Collect data and analyse them in order to provide information PC9. Conduct annual fishing ban which is observed in many Fisheries in Zambia from 1 <sup>st</sup> December to end of February each year to allow fish to breed PC10.Restrict access to selected breeding areas (completely closed off to fishing) PC11.Involve other players/stakeholderseg. Fishers, government, boat owners, fish traders, boat builders, business people etc and external agents e.g. ((NGOs), academic and research to take part in the management of fisheries. PC12. Promote sustainable management of fisheries resources PC13. Conduct patrols and monitor compliance
<b>Registration and licensing of fisher folks</b>	To be competent, the user/ individual must be able to: PC14. Issue fishing licenses to fisher folk PC15. Read, interpret and implement policies regarding licensing of fishers folks, boats and movement of fish. PC16. Update fishers register yearly
<b>Knowledge and Understanding (K)</b>	

<b>A. Organisational Context (Knowledge of the company/ organisation and its processes)</b>	<p>The individual on the job must demonstrate knowledge and understanding of:</p> <ul style="list-style-type: none"> <li>OK1. The concept of fisheries management plan, measures and strategies</li> <li>OK2. The procedures to follow when preparing the court order for disposal</li> <li>OK3. The rules and regulations to follow according to fisheries regulation</li> </ul>
<b>B. Technical Knowledge</b>	<p>The individual on the job must demonstrate knowledge and understanding of:</p> <ul style="list-style-type: none"> <li>TK1. The. Degree and types of observations required to maintain compliance with the regulatory controls imposed on fishing activities</li> <li>TK2. The co-management, the partners that are actively contribute and work together on fisheries management</li> <li>TK3. Making maximum use of indigenous knowledge and expertise to provide information on the resource base and to complement scientific information for management.</li> <li>TK4. Registration and licensing of fisher folks and boats in order to control fishing</li> <li>TK5. Legal minimum mesh size to use and type of fishing gear</li> <li>TK6. Legal fishing methods to use</li> </ul>
<b>C. Regulatory context (Knowledge of Rules and Regulations)</b>	<p>The individual on the job must demonstrate knowledge and understanding of :</p> <ul style="list-style-type: none"> <li>RK1. Fishing authorizations</li> <li>RK2. Fishing licensing conditions</li> <li>RK3. Protected fishing areas</li> </ul>
<b>Skills (S)</b>	
<b>A. Core Skills/ Generic Skills</b>	<b>Writing Skills</b>
	<p>The individual on the job must be able to:</p> <ul style="list-style-type: none"> <li>CS1. Write in English and give simple concise instructions.</li> <li>CS2. Write simple letters of invitation and other purposes to community leaders</li> <li>CS3. Write departmental reports</li> <li>CS4. Write down the plan for field visits</li> <li>CS5. Prepare reports for review by supervisors</li> </ul>
	<b>Reading Skills</b>
	<p>The individual on the job must be able to:</p> <ul style="list-style-type: none"> <li>CS6. Read and interpret internal/external documents.</li> <li>CS7. Read and understand manuals, health and safety instructions, memos, other company documents.</li> <li>CS8. Read from different sources- books, screens in machines and signage.</li> <li>CS9. Read procedure and any material that may be required to be read while carrying out training activities</li> <li>CS10. Update oneself about latest technologies by reading research articles, attending seminars, conferences etc.</li> <li>CS11. Keep abreast with the latest knowledge by reading brochures, pamphlets, relevant newspapers/booklets etc.</li> </ul>

	<p><b>Oral Communication (Listening and Speaking skills)</b></p> <p>The individual on the job must be able to :</p> <p>CS12. Express statements or information clearly so that others can hear and understand.</p> <p>CS13. Participate in and understand the main points of simple discussions.</p> <p>CS14. Respond appropriately to any queries.</p> <p>CS15. Interact positively with members of the community</p>
<p><b>B. Professional Skills</b></p>	<p><b>Decision Making</b></p> <p>The individual on the job must be able to:</p> <p>PS1. Follow organization rule-based decision-making process.</p> <p>PS2. Take decision with systematic course of actions and/or response.</p> <p>PS3. Assist in deciding target group for training and choose participants as indicated by the training organization</p> <p>PS4. Monitor compliance</p>
	<p><b>Plan and Organise</b></p> <p>The individual on the job must be able to:</p> <p>PS5. Plan and organise work to meet deadlines.</p> <p>PS6. Work constructively and collaboratively with others.</p> <p>PS7. Plan and organize trainings well ahead keeping in mind participants' schedules and holidays</p>
	<p><b>Customer Centricity</b></p> <p>The individual on the job must be able to:</p> <p>PS8. Follow code of conduct.</p> <p>PS9. Manage relationships with customers with intent on satisfying its requirements for service delivery.</p> <p>PS10. Maintain good relationships and politeness with fisher folk and encourage them to attend meetings</p>
	<p><b>Problem Solving and Decision Making</b></p> <p>The individual on the job must be able to:</p> <p>PS11. Recognize problems and search for solutions.</p> <p>PS12. Choose best methods to complete assigned tasks.</p> <p>PS13. Approach relevant authority when required.</p> <p>PS14. Judiciously use common sense in day to day activities</p> <p>PS15. Assist in solving problems that may occur at any stage during the course of the programme</p>
	<p><b>Analytical Thinking</b></p> <p>The individual on the job must be able to:</p> <p>PS16. Apply domain knowledge, observations and data to select course of action to perform tasks</p> <p>PS17. Apply domain information about the community so as to mobilise them effectively for meetings</p>
	<p><b>Critical Thinking</b></p> <p>The individual on the job must be able to:</p> <p>PS18. Critically evaluate information obtained from customers, supervisor and co-workers to perform day to day activities.</p> <p>PS19. Ask relevant questions for better understanding.</p>

	<p>PS20. Use common sense and make judgments on day to day basis</p> <p>PS21. Use reasoning skills to identify and resolve basic problems</p> <p>PS22. understand and analyze dynamics of the community</p>
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**UNIT 4** [This unit is about developing innovative research based techniques in fisheries and aquaculture].

<b>Unit No.</b>	<b>04</b>
<b>Unit Title</b>	<b>Developing innovative research based techniques in fisheries and aquaculture</b>
<b>Description</b>	This Unit is about identifying the knowledge gaps, fisheries and aquaculture challenges and carrying out research. The job holder will be responsible for identifying research needs, writing protocols to respond to the needs, setting up the experiments, collecting data, analyzing the data and publishing the findings with minimal supervision. The Fisheries Extension Provider should have basic knowledge of the fish stock, fish processing, fishing gear and methods, cultured fish species, fish post-harvest losses, fisheries management, best aquaculture measures, communication skills and broad range of relevant skills.
<b>Scope</b>	<p>This Unit covers the following:</p> <ul style="list-style-type: none"> <li>• Problem identification</li> <li>• Developing appropriate research protocols</li> <li>• Setting up the experiment</li> <li>• Data collection</li> <li>• Analysing and interpreting the results</li> <li>• Collaborating with key scientists</li> <li>• Disseminating innovative findings through reports, manuals and publications</li> </ul>
<b>Performance Criteria (PC) w.r.t. the Scope</b>	
<b>Element</b>	<b>Performance Criteria (PC)</b>
<b>Problem identification</b>	<p>To be competent, the individual must be able to:</p> <p>PC1. Outline the fishers/fish farmers needs or community challenges.</p> <p>PC2. Identify clearly the knowledge gap</p> <p>PC3: Develop a detailed problem statement that includes the problem's effect.</p>
<b>Developing appropriate research protocols</b>	<p>To be competent, the individual must be able to:</p> <p>PC4. Describe the subject matter</p> <p>PC5. Design the protocol format specific to the funding organisation or institution</p>



	PC6. Write a research protocol singularly or in collaboration with other scientists
<b>Setting up the experiment</b>	To be competent, the individual must be able to: PC7. Select suitable site (s) for the experiment PC8. Identify the appropriate experimental design to use in the study. PC9. Successfully setup the research experiment based on the identified design.
<b>Data collection</b>	To be competent, the individual must be able to: PC10. Use appropriate data collection tools PC11. Plan for the whole process PC12. Ensure correct data collection methods and procedures are done at the right time. PC13. Keep data safe and easily accessible to team members PC14. Demonstrate the ethics of data collection
<b>Analysing and interpreting results</b>	To be competent, the individual must be able to: PC15. Analyse the collected data using appropriate software PC 16. Interpret results and prepare a report
<b>Disseminating innovative findings</b>	To be competent, the individual must be able to: PC17. Write reports PC18. Publish using electronic media PC19. Present research findings to the public PC20 Demonstrate and organise field days/ fairs/ expos
<b>Collaborating with key scientists</b>	To be competent, the individual must be able to: PC21. Identify potential customers and strategic partners within and outside the country PC22. Liaise with public and private sector partners in the design and implementation of trials as well as demonstrations PC23. Manage fisher folks/ fish farmers and the community relationships
<b>Knowledge and Understanding (K)</b>	
<b>A. Organisational Context (Knowledge of the company/ organisation and its processes)</b>	The individual on the job must demonstrate knowledge and understanding of: OK1. Relevant legislation, standards, policies, and procedures in work OK2. Relevant health and safety requirements applicable in the work environment OK3. Job roles and responsibilities and sources for information pertaining to work OK4. Who to approach for support in order to obtain work related information, clarifications and support OK5. The health, hygiene, safety and quality standards and the impact of not following the standards on consumers and the business OK6. Documentation and related procedures applicable in the context of work



<p><b>B. Technical Knowledge</b></p>	<p>The individual on the job must demonstrate knowledge and understanding of:</p> <ul style="list-style-type: none"> <li>TK1. Setting up experiments, data collection and analysis</li> <li>TK2. Best aquaculture practices requirements</li> <li>TK3. Sustainable fish farming and fisheries methods</li> <li>TK4. Fish stock assessment</li> <li>TK5. Fisheries management</li> <li>TK6. Fisheries and aquaculture extension methods</li> <li>TK7. Fish pond management</li> <li>TK8. Common pests and diseases that attack various fish species of interest and management or control methods to use</li> <li>TK9. Equipment available at the station, their operation and maintenance</li> </ul>
<p><b>Skills (S)</b></p>	
<p><b>A. Core Skills/ Generic Skills</b></p>	<p><b>Reading Skills</b></p>
	<p>The individual on the job must be able to:</p> <ul style="list-style-type: none"> <li>CS1. Read internal information documents sent by internal teams/ supervisor</li> <li>CS2. Update one-self about latest technologies by reading research articles, attending seminars, workshops, etc.</li> <li>CS3. Read equipment manuals and process documents to understand the equipment operation and process requirement</li> </ul>
	<p><b>Writing Skills</b></p>
	<p>The individual on the job must be able to:</p> <ul style="list-style-type: none"> <li>CS4. Record and maintain all the information regarding agricultural research</li> <li>CS5. Write and publish in scientific journals</li> <li>CS6. Summarise the work in power point presentation</li> <li>CS7. Develop manuals and posters</li> </ul>
	<p><b>Oral Communication (Listening and Speaking skills)</b></p>
<p>The individual on the job must be able to:</p> <ul style="list-style-type: none"> <li>CS8. Effectively communicate with the staff, colleagues and relevant stakeholders</li> <li>CS9. Present the findings using electronic means</li> <li>CS10. Apply skills of being polite and courteous under all circumstances.</li> <li>CS11. Defend his/ her findings effectively</li> <li>CS12. Train effectively</li> </ul>	
<p><b>B. Professional Skills</b></p>	<p><b>Decision Making Skills</b></p> <p>The individual on the job must be able to:</p> <ul style="list-style-type: none"> <li>PS1. Devise the correct methods for fisheries and aquaculture experimentation (in cases of unforeseen circumstances)</li> </ul>

	<b>Plan and Organise</b>
	The individual on the job must be able to: PS2. Plan and organise the work order and jobs received from the supervisor and or collaborating institutions PS3. Plan and prioritise the work based on the instructions received from the supervisor and or collaborating institutions PS4. Plan to utilise time and equipment effectively
	<b>Customer Centricity</b>
	The individual on the job must be able to: PS5. Manage good relationships with farmers and collaborators
	<b>Problem Solving Skills</b>
	The individual on the job must be able to: PS6. Quickly identify problems and solve them immediately
	<b>Analytical Thinking</b>
	The individual on the job must be able to: PS7. Rearrange noisy data and information into action PS8. Analyse the information received from officers and specialists PS9. Think analytically to come up with solutions PS10. Develop mind-set growth and informed decision making among team members.
	<b>Critical Thinking</b>
	The individual on the job must be able to: PS11. Identify the problem or question PS12. Gather data, opinions and arguments PS13. Analyse and evaluate the data PS14. Identify the assumptions PS15. Measure significance PS16. Make a decision/ reach a conclusion

**UNIT 5** [This unit is about the Fisheries Extension Provider planning for demonstrations to establish the potential of improved fisheries and aquaculture technology both on water and land].

<b>Unit No.</b>	<b>05</b>
<b>Unit Title</b>	<b>Demonstrations</b>
<b>Description</b>	This unit is about the Fisheries Extension Provider planning for demonstrations to establish the potential of improved fisheries and aquaculture technology.
<b>Scope</b>	This unit covers the following: <ul style="list-style-type: none"> <li>• Preparing for demonstrations</li> <li>• Conducting demonstrations</li> <li>• Record keeping</li> </ul>
<b>Performance Criteria (PC) w.r.t. the Scope</b>	
<b>Element</b>	<b>Performance Criteria (PC)</b>
<b>Preparing for demonstrations</b>	To be competent, the individual on the job must be able to: <ul style="list-style-type: none"> <li>PC1. Select suitable site for demonstrations</li> <li>PC2. Conduct timely demonstrations and best practices for the fisher folks and fish farmers in order to ensure effective delivery of appropriate technologies</li> <li>PC3. Select a group of fish farmers/fisher folks who are willing to host the demonstration plots</li> <li>PC4. Prepare for demonstrations by arranging critical inputs to be used for the demonstrations</li> </ul>
<b>Conducting demonstrations</b>	To be competent, the individual on the job must be able to: <ul style="list-style-type: none"> <li>PC5. Guide and assist fish farmers/fishers in laying out the demonstrations.</li> <li>PC6. Hold training for the fish farmers/fishers in managing demonstrations.</li> <li>PC7. Be present at the time of crucial operations</li> <li>PC8. Encourage questions at each stage of the operations</li> <li>PC9. Arrange a field day for a large manageable group of interested fish farmers/fishers and other stake holders</li> </ul>
<b>Record keeping</b>	To be competent, the individual on the job must be able to: <ul style="list-style-type: none"> <li>PC10. Maintain records for each demonstration</li> <li>PC11. Maintain an information card with basic information of the demonstration site and detailed information of the demonstration</li> <li>PC12. Maintain technical report containing information on cost-benefit ratio of the demonstration to help work out the economic returns</li> </ul>
<b>Knowledge and Understanding (K)</b>	
<b>A. Organisational Context (Knowledge of the company/ organisation and its processes)</b>	The individual on the job must demonstrate knowledge and understanding of: <ul style="list-style-type: none"> <li>OK1. Relevant legislation, standards, policies, and procedures in work</li> <li>OK2. Relevant health and safety requirements applicable in the work environment</li> <li>OK3. Documentation and related procedures applicable in the context of work</li> </ul>

<b>B. Technical Knowledge</b>	<p>The individual on the job must demonstrate knowledge and understanding of:</p> <ul style="list-style-type: none"> <li>TK1. Uses and harmful effects of various chemicals</li> <li>TK2. Safe methods of handling the pesticides</li> <li>TK3. First aid for the exposure of humans to harmful effects of pesticides</li> <li>TK4. Use of tools for making demonstrations</li> <li>TK5. Appropriate handling of tools</li> <li>TK6. Safety measures to be adopted for using tools</li> </ul>
<b>Skills (S)</b>	
<b>A. Core Skills/ Generic Skills</b>	<b>Writing Skills</b>
	<p>The individual on the job must be able to</p> <ul style="list-style-type: none"> <li>CS1. Maintain records</li> <li>CS2. Report and document the results collected from field demonstrations</li> </ul>
	<b>Reading Skills</b>
	<p>The individual on the job must be able to</p> <ul style="list-style-type: none"> <li>CS3. Update oneself about latest technologies by reading research articles, attending seminars, conferences etc.</li> <li>CS4. Keep abreast with the latest knowledge by reading brochures, pamphlets, product information sheets etc.</li> <li>CS5. Read relevant newspapers/booklets etc.</li> </ul>
<b>B. Professional Skills</b>	<b>Oral Communication (Listening and Speaking skills)</b>
	<p>The individual on the job must be able to:</p> <ul style="list-style-type: none"> <li>CS6. Maintain effective relationships with senior officers and specialists</li> <li>CS7. Communicate clearly and effectively with seniors</li> <li>CS8. Understand information and grasp its meaning</li> <li>CS9. Communicate precisely</li> <li>CS10. Discuss issues, clarify doubts and seek solutions</li> </ul>
	<b>Decision Making Skills</b>
	<p>The individual on the job must be able to:</p> <ul style="list-style-type: none"> <li>PS1. Make decisions pertaining to the concerned area of work</li> <li>PS2. Identify problems that may arise in carrying out tasks and take preventive action following workplace procedures</li> </ul>
	<b>Plan and Organise</b>
	<p>The individual on the job must be able to</p> <ul style="list-style-type: none"> <li>PS3. Plan and organise field demonstrations</li> <li>PS4. Organise meetings of representative group of farmers for field demonstrations</li> </ul>
	<b>Customer Centricity</b>
	<p>The individual on the job must be able to</p> <ul style="list-style-type: none"> <li>PS5. Develop a rapport with senior officers and specialists</li> <li>PS6. Listen carefully and interpret the information given by the seniors</li> <li>PS7. Discuss possible solutions</li> <li>PS8. Make use of exposure visits to model farms</li> <li>PS9. Participate in exhibitions/seminars/workshops which provide information on new technologies in agriculture and allied sectors</li> </ul>

**UNIT 6** [This unit is about health, safety and environment].

<b>Unit No.</b>	<b>06</b>
<b>Unit Title</b>	<b>Safety, health and environmental management</b>
<b>Description</b>	This unit is about maintaining safety, health and environmental protection for the individual and the aquatic living organisms.
<b>Scope</b>	This unit covers the following: <ul style="list-style-type: none"> <li>• Health &amp; safety regulations</li> <li>• Environmental protection.</li> </ul>
<b>Performance Criteria (PC) w.r.t. the Scope</b>	
<b>Element</b>	<b>Performance Criteria (PC)</b>
<b>Health &amp; safety regulations</b>	To be competent, the individual must be able to: PC1.Read, interpret and implement national and organizational safety and health policies and regulations. PC2.Assess risks and possible safety hazards of all aspects of operations
<b>Environmental protection.</b>	To be competent, the individual must be able to: PC3.Read, interpret and implement the environmental policies for the organisation PC4.Read, interpret and implement environmental standard operating procedures and policies of the organisation PC5.Read, interpret and implement national and global environmental regulations.
<b>Knowledge and Understanding (K)</b>	
<b>A. Organisational Context (Knowledge of the company/organisation and its processes)</b>	The individual on the job must demonstrate knowledge and understanding of:  OK1. Company Quality, health and safety policies OK2.Company environmental policies OK3.Company regulations and global best practices
<b>B. Technical Knowledge</b>	The individual on the job must demonstrate knowledge and understanding of: TK1. Safety and health risk assessment TK2. Environmental Risk assessment TK3.Toolbox talk
<b>C. Regulatory context (Knowledge of Rules and Regulations)</b>	The individual on the job must demonstrate knowledge and understanding of : RK1. Government regulatory agency requirements for health & safety
<b>Skills (S)</b>	
	<b>Writing Skills</b>

<b>A. Core Skills/ Generic Skills</b>	The individual on the job must be able to: CS1. Write in English and give simple concise instructions.
	<b>Reading Skills</b>
	The individual on the job must be able to: CS2. Read and interpret internal/external documents. CS3. Read and understand manuals, health and safety instructions, memos, other company documents. CS4. Demonstrate the ability to read from different sources- books, screens in machines and signage. CS5. Understand the various colour codes, nomenclature and acronyms related to the profession.
	<b>Oral Communication (Listening and Speaking skills)</b>
	The individual on the job must be able to : CS6. Express statements or information clearly so that others can hear and understand. CS7. Participate in and understand the main points of simple discussions. CS8. Respond appropriately to any queries.
<b>B. Professional Skills</b>	<b>Decision Making</b>
	The individual on the job must be able to: PS1. Follow organization rule-based decision-making process. PS2. Take decision with systematic course of actions and/or response.
	<b>Plan and Organise</b>
	The individual on the job must be able to: PS3. Plan and organise work to meet deadlines. PS4. Work constructively and collaboratively with others.
	<b>Customer Centricity</b>
	The individual on the job must be able to: PS5. Follow code of conduct. PS6. Manage relationships with customers with intent on satisfying its requirements for service delivery.
	<b>Problem Solving and Decision Making</b>
	The individual on the job must be able to: PS7. Recognize problems and search for solutions. PS8. Choose best methods to complete assigned tasks. PS9. Approach relevant authority when required. PS10. Judiciously use common sense in day to day activities
	<b>Analytical Thinking</b>
	The individual on the job must be able to: PS11. Apply domain knowledge, observations and data to select course of action to perform tasks
<b>Critical Thinking</b>	
The individual on the job must be able to: PS12. Critically evaluate information obtained from customers, supervisor and co-workers to perform day to day activities. PS13. Examine relevant questions for better understanding.	

## **4. EQUIPMENT, TOOLS AND CONSUMABLE MATERIALS**

Computer, Printer and relevant Software programs, Personal protective equipment (PPE).Water checker/parameters kit, line level, measuring tape, life jackets, scooping nets, harvesting nets, dumpy level, soil sampler, balanced scale, outboard engine, speed boat, hoes, slashers, mattock, axes, wheelbarrows, water source, boats and docks, submersible cages and nets/hooks, aerators and diffusers, filters and tanks, skimmers and smokers, fish feed, chemicals, fish storage facilities, note pads and pens, projector, laptop markers, cardboards, flipchart/board.

## **5. DILEMMAS/CHALLENGES AND COMPLEXITIES FOR A JOB HOLDER**

### **.5.1 Alternative Choices (Solutions) to Dilemmas and Complexities**

Dilemmas associated with the job of a fisheries extension provider include long working hours, exposure to chemical, physical and biological hazards, time pressure to complete tasks, working in extreme weather such as hot and cold conditions, working in noisy, wet and dusty environments, pressure from fish farmers/fishermen and supervisors, language barriers, working in extreme weather, having to overstate points, resistance by fish farmers/fishermen to adopt new fish farming/fishing techniques etc.

carrying out risk assessment and implementing appropriate control measures, ensuring good time management and planning, participating in workplace safety sensitization and awareness, supporting capacity building through training, managing work stress, adhering to company's safety and standard operating procedures at all times, paying attention to detail, consulting extensively within and outside one's department/team on safety and other issues.

## **6. WORKING CONDITIONS/ENVIRONMENT**

Working conditions include working in cold, hot and wet conditions, working at heights, stand/walk for long hours, working in laboratory environment, working in shifts, areas that are noisy and dusty.

## **7. PARTIES INVOLVED/INTERACTING WITH THE JOB HOLDER OR TRAINEE**

### **7.1 Internal/Within the Organization**

Parties involved/interacting with the job holder who are internal to the organization include supervisors, subordinates, and other employees.

### **7.2 External/Outside the Organization**

Parties involved/interacting with the job holder who are external include customers/clients, government regulators, trainers, suppliers of equipment/tools/consumables, occupational health and safety associations, Academia etc.

## **8. PHYSICAL DEMANDS ON THE BODY**

- Physique to sustain strenuous conditions;
- Be able to walk and stand for long periods of time;
- Bend, stretch, twist, or reach out;
- Be able to lift relatively heavy materials, tools and equipment;
- Be able to use fingers, hands and feet with ease to complete the assigned task (dexterity);
- Etc.



## **ANNEX A**

### **Criteria for Assessments based on this NOS**

#### **A.1 Guidelines for Assessment**

**A.1.1** Criteria for assessment for curricula and learning programmes based on this NOS will be created by curricula and programmes developers. Each Performance Criteria (PC) will be assigned marks proportional to its importance in the NOS. Curricula and programmes developers will also lay down proportion of marks for theory and practical skills for each performance criteria, giving more weight to practical skills.

There shall be allocated the 'Total Mark', which will be the sum of all marks in each Unit, distributed across the number of PCs in that particular Unit. The 'out of' mark will be the mark allocated to each PC, which will be shared between theory and skills practical assessments.

**A.1.2** Awarding/assessment bodies or institutions and other users of the NOS will create unique question papers for the theory part and evaluations for skill practical part for their respective candidates.

## ANNEX B NOS Version Control

This Annex gives details necessary for the tracking of the NOS versions based on the number of revisions.

<b>NOS Code</b>	NOS.FEP.01		
<b>ZQF Level</b>	6	<b>Version Number</b>	01
<b>Sector</b>	Agriculture	<b>Date of Approval</b>	19 <sup>th</sup> May 2022
<b>Sub Sector</b>	Aquaculture	<b>Date of Last Review</b>	N/A
<b>Occupation</b>	Fisheries Extension Provider	<b>Date of Next Review</b>	May 2027

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