



Maldives National Skills Development Authority



National Competency Standard for Marine Biology

Standard Code: FNA-15L5-V1-25

Qualification Name: National Diploma in Marine Biology

FOREWORD

The pivotal role of the Maldives National Skills Development Authority (MNSDA) in meticulously implementing and expanding Technical and Vocational Education & Training (TVET) exemplifies the steadfast commitment of the Maldives to build a skilled and resilient workforce. This commitment is evident from the strategic formulation of National Standards and the establishment of a comprehensive framework for training and certification.

Under the Higher Education and Training Act 7/2021, the MNSDA assumes an instrumental role, reflecting the government's unwavering dedication to streamlining TVET policies and procedures. This includes the establishment of a robust system for accrediting and registering both Institution Based Training (IBT) and Employer Based Training (EBT) providers. The MNSDA's active involvement in conducting the National Apprenticeship Program (NAP), National Trade Testing and Certification (NTTC), and the issuance of National Certificates reflects a comprehensive approach to ensure elevated quality standards and competency within the workforce.

The National Competency Standards (NCS) revised through the Maldives Enhancing Employability and Resilience of Youth (MEERY) project accentuates the commitment to updating and sustaining contemporary skill sets aligned precisely with industry demands. Deliberate efforts to revise existing NCS, coupled with the development of curriculum, teaching materials, resource books, and logbooks, attest to our dedication to ensuring the ongoing relevance and currency of the TVET system in the Maldives.

The active engagement of Technical Panels and Employment Sector Councils in the NCS development and approval process, coupled with alignment to the Maldives National Qualification Framework (MNQF) and accreditation by the Maldives Qualifications Authority (MQA), certifies that the TVET system not only remains highly responsive but also ensures the quality standards demanded by industries. This approach enables the system to effectively meet the diverse needs of industries and adapt to the evolving economic landscape.

The collaborative development of the National Diploma in Marine Biology by the MNSDA, MEERY, and the Maldives Institute of Technology exemplifies the practical implementation of TVET initiatives. This training package represents a critical stride towards addressing the requisite skills while fostering opportunities to integrate sustainable economic development within the TVET framework.




Dr. Zahra Mohamed

Chief Executive Officer

Maldives National Skills Development Authority

EMPLOYMENT SECTOR COUNCILS			
#	Name	Designation	Organisation
01	Dr.Hussain Sinan	Director	Ministry of Fisheries and Ocean Resources
02	Ali Amir	Director	Ministry of Agriculture and Animal Welfare
03	Musthafa Abdul Gafoor	Senior Policy Officer	Ministry of Economic Development & Trade
04	Mifrah Naseem	General Manager- Sales and Marketing	MIFCO
05	Dr. Ahmed Riyaz Jauhary	Dean	College of Fisheries and Ocean Sciences
06	Adnan Ali	Board Director / Advisor	Horizon Fisheries
07	Maizan Ahmed Manik	Chairman	Maizan Electronics
08	Aishath Shazleena	HR Manager	Agro National Corporation Ltd (AgroNat)
09	Shakeeba Ali	Director General	Maldives National Skills Development Authority

National Occupational Standard has been endorsed by:



Dr. Ahmed Riyaz Jauhary
Chair Person
Fisheries and Agriculture Council

Maldives National Skills Development Authority
Umar Zahir Office Building, 5th Floor,
Orchid Ma higuren, HulhuMale' , Republic of Maldives.

Date of Endorsement: 21/01/2025

TECHNICAL SUPPORT			
#	Name	Designation	Organisation
01			
02			

TECHNICAL PANEL MEMBERS			
#	Name	Designation	Organisation
01	Aminath Lubna	-	-
02	Aleef Abdhulla Naseem	Marine biologist	Water Solutions
03	Shafiya Naeem	Director General	Maldives Marine Reseach Institute
04	Mohamed Ahusan	Senior Research Officer	Maldives Marine Reseach Institute

VERSION	DEVELOPER	DATE	STANDARD CODE
V1	Maldives Insitute of Technology	15/02/2024	FNA-15L5-V1-25

Standard Development Process

The development of the “National Diploma in Marine Biology” Standard involved a comprehensive study of Marine Biology occupations in Maldivian workplaces, with a focus on marine enterprises. Job descriptions and international occupational trends were analysed to draft an initial Occupational Standard. This draft will undergo further refinement through a Technical Panel (TP) from Maldivian workplaces, ensuring incorporation of competencies and edits. The TP will provide technical input, suggesting changes to the standard, until a final draft is agreed upon. The approved Final Draft will then be submitted to the Fisheries and Agriculture Employment Sector Council for endorsement and validation. A brief report detailing the compilation process will accompany the Standard for the Council's review, and any recommended changes will be addressed before final endorsement.

With the endorsement from the Tourism Employment Sector Council, the finalised National Occupational Standard for Marine Biology will be submitted to the Maldives Qualification Authority (MQA) for final approval. Upon receiving MQA approval, the standard will be officially published on the Maldives National Skills Development Authority (MNSDA) website. This publication will enable training providers in the Maldives to utilise the standard for delivering the Marine Biology program, ensuring its widespread implementation across the country

Description of “Marine Biology”

The "National Diploma in Marine Biology" standard is a comprehensive program tailored to develop expertise in marine science and conservation practices. Participants will delve into the intricate ecosystems of the oceans, exploring biodiversity, ecological dynamics, and conservation strategies vital for sustaining marine life.

The certification serves as a significant milestone for individuals pursuing careers in marine biology, or those who want to advance to a degree program in a similar field, providing a solid foundation in the principles and practices essential for safeguarding marine environments

Proposed Qualification Titles

Following are the recommended titles by the selected internal expert team of MIT for the National Diploma in Marine Biology.

1. *Nil-*

Job opportunities upon completion of “National Diploma in Marine Biology”

Upon successful completion of the National Diploma in Marine Biology, students can work in the related field:

1. *Research Assistant*
2. *Dive/Snorkel Guide*

KEY FOR CODING

Coding Competency Standards and Related Materials

DESCRIPTION	REPRESENTED BY
Industry Sector as per ESC (Three letters)	Construction Sector (CON) Fisheries and Agriculture (FNA) Information, Communication and Technology (ICT) Transport Sector (TRN) Tourism Sector(TOU) Social Sector (SOC) Foundation (FOU)
Standard Number - Occupation with in an industry sector	Two digits 01-99
Common Competency	CM
Core Competency	CC
Unit Number - Occupation with in an Standard	Three digits 01-99
MNQF level of qualification	L1, L2, L3, L4 etc.
Version Number	V1, V2 etc.
Separator	-
Year of Last Review of standard, qualification	Two digits responding to the year of last review, example 23 for the year 2023
Qualification Code	Refers to Standard code in cover page

1. Endorsement Application for Qualification 01		
2. NATIONAL DIPLOMA IN MARINE BIOLOGY		
3. Qualification code: FNA-15L5-V1-25		Total Number of Credits: 125
4. Purpose of the qualification The purpose of the National Diploma in Marine Biology is to provide individuals with an extensive understanding of marine ecosystems and the skills necessary for effective conservation and management practices.		
5. Regulations for the qualification		National Diploma in Marine Biology will be awarded to those who are competent in units 1+2+3+4+5+6+7+8+9+10+11+12+13+14+15+16
6. Schedule of Units		
Unit No.	Unit Title	Code
Common Competencies		
01	Demonstrate leadership and management skills	FNA-15-CM01-V1-25
Core Competencies		
02	Develop scientific writing, research methods and data management skills	FNA-15-CC01-V1-25
03	Understand basic knowledge of biological and environmental statistics	FNA-15-CC02-V1-25
04	Understand the principles of marine biology	FNA-15-CC03-V1-25
05	Understand marine biogeography and oceanography	FNA-15-CC04-V1-25
06	Identify marine fauna of the Maldives	FNA-15-CC05-V1-25
07	Identify marine flora of the Maldives	FNA-15-CC06-V1-25
08	Understand coral biology and conservation principles	FNA-15-CC07-V1-25
09	Understand the principles of marine ecology and biodiversity	FNA-15-CC08-V1-25
10	Understand the principles of marine conservation	FNA-15-CC09-V1-25
11	Develop knowledge on food web interactions	FNA-15-CC10-V1-25
12	Understand climate patterns and their effects	FNA-15-CC11-V1-25
13	Address marine pollution and remediation	FNA-15-CC12-V1-25
14	Practice marine research techniques	FNA-15-CC13-V1-25
15	Conduct marine environmental monitoring	FNA-15-CC14-V1-25
16	Understand marine policies and legislation	FNA-15-CC15-V1-25
7. Accreditation requirements		The training provider should have a real workplace or similar training facility to provide the trainees

	with the required hands-on experience related to the competencies taught in this qualification.
8. Recommended sequencing of units	As appearing under the section 06

Unit Details

Unit No.	Unit Title	Code	Level	No. of credits	Credit hours	Contact hours
01	Demonstrate leadership and management skills	FNA-15-CM01-V1-25	V	10	100	50
02	Develop scientific writing, research methods and data management skills	FNA-15-CC01-V1-25	V	05	50	25
03	Understand basic knowledge of biological and environmental statistics	FNA-15-CC02-V1-25	V	10	100	50
04	Understand the principles of marine biology	FNA-15-CC03-V1-25	V	06	60	30
05	Understand marine biogeography and oceanography	FNA-15-CC04-V1-25	V	08	80	40
06	Identify marine fauna of the Maldives	FNA-15-CC05-V1-25	V	08	80	40
07	Identify marine flora of the Maldives	FNA-15-CC06-V1-25	V	08	80	40
08	Understand coral biology and conservation principles	FNA-15-CC07-V1-25	V	06	60	30
09	Understand the principles of marine ecology and biodiversity	FNA-15-CC08-V1-25	V	06	60	30
10	Understand the principles of marine conservation	FNA-15-CC09-V1-25	V	06	60	30
11	Develop knowledge on food web interactions	FNA-15-CC10-V1-25	V	08	80	40
12	Understand climate patterns and their effects	FNA-15-CC11-V1-25	V	10	100	50
13	Address marine pollution and remediation	FNA-15-CC12-V1-25	V	08	80	40
14	Practice marine research techniques	FNA-15-CC13-V1-25	V	10	100	50
15	Conduct marine environmental monitoring	FNA-15-CC14-V1-25	V	10	100	50
16	Understand marine policies and legislation	FNA-15-CC15-V1-25	V	06	60	30
Total				125	1250	625

Packaging of National Qualifications:

National Diploma in Marine Biology will be awarded to those who are competent in units
1+2+3+4+5+6+7+8+9+10+11+12+13+14+15+16

Qualification Code: FNA-15L5-V1-25

COMPETENCY BASED ASSESSMENT

The final assessment of the National Competency-Based Programmes conducted by the Maldives National Skills Development Authority (MNSDA) is a competency-based assessment.

The Competency-Based Assessment ensures that the students' performance meets the requirements specified in the National Competency Standards (NCS). This assessment approach is designed to verify that graduates are job-ready and meet established occupational competency requirements within their respective fields.

Eligibility for Final Assessment

To be eligible for the final Competency-Based Assessment, students must fulfil the following conditions:

- achieve a **minimum of 80%** attendance
- deemed competent in each of the units of the programme in the pre-assessment

Competency-Based Assessment Process

Upon submission of the Pre-assessment report by the training provider, MNSDA will check for all the necessary supporting documents and conduct Competency-Based Assessment through a National Assessor registered with MNSDA. It is important to note that any trainer involved in the training process is **not permitted** to conduct the assessment to maintain impartiality and integrity of the process.

The final Competency-Based Assessment conducted by MNSDA includes both:

- **Theory:** Evaluating students' knowledge and understanding of key theoretical aspects of the competency.
- **Practical:** Assessing hands-on skills and application of knowledge in real-world or simulated environments.

Once the assessment is completed, the National Assessor will send the Competency-Based Assessment Report to MNSDA.

Competency Status Requirement

For certification to be granted, the student must be officially declared "**Competent**" in each of the units of the programme by the National Assessor.

Conclusion

Competency-Based Assessment is a critical component in ensuring the quality and credibility of technical and vocational skills-based training. By adhering to the outlined procedure, MNSDA upholds the standards required to certify students who are fully prepared to meet industry demands.