MERCURY

Fisheries & Aquaculture Management

22 – 26 August 2027
Cairo (Egypt)



Dubai - UAE: +971 4 450 5697
Istanbul - Türkiye: +90 539 599 1206
Amman - Jordan: +962 79 712 3347

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Fisheries & Aquaculture Management

Ref: 16400_1019114 **Date:** 22 – 26 August 2027 **Location:** Cairo (Egypt) **Fees:** 4000 Euro

Introduction:

This Fisheries and Aquaculture Management course provides participants with an in-depth understanding of the principles and practices essential for the sustainable management of aquatic resources. This course encompasses both theoretical knowledge and practical applications, focusing on the dynamics of fish populations, aquaculture systems, and marine ecosystems. Participants will explore various management strategies aimed at enhancing productivity while ensuring ecological balance.

This Fisheries and Aquaculture Management curriculum integrates interdisciplinary approaches, combining aspects of biology, economics, and environmental science. Through case studies and scenario analyses, learners will develop critical thinking and problem-solving skills pertinent to real-world challenges in fisheries and aquaculture. Participants will contribute effectively to the sustainable management of aquatic resources.

Targeted Groups:

This Fisheries and Aquaculture Management training targets professionals seeking specialized knowledge and skills:

- Fisheries Managers aim to enhance resource sustainability.
- Aquaculture Technicians seeking advanced operational techniques.
- Environmental Consultants focusing on aquatic ecosystems.
- Policy Makers involved in aquatic resource governance.
- Researchers exploring innovations in aquatic sciences.
- NGO Professionals working on community-based aquatic projects.
- Marine Biologists are interested in applied fisheries management.
- Educators teaching aquatic science disciplines.

Course Objectives:

Participants will achieve the following objectives by completing the Fisheries and Aquaculture Management course:

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- Understand the fundamental principles of fisheries and aquaculture management.
- Analyze the ecological and economic factors influencing aquatic resource utilization.
- Evaluate various management strategies for sustainable fisheries and aquaculture practices.
- Apply quantitative methods to assess fish populations and aquaculture systems.
- Design and implement effective monitoring and evaluation frameworks.
- Develop skills in stakeholder engagement and participatory management approaches.
- Critically assess policy frameworks and their impact on aquatic resource management.
- Integrate interdisciplinary knowledge to address complex aquatic management issues.
- Foster innovation and adaptability in the face of emerging challenges.
- Communicate findings and recommendations effectively to diverse audiences.

Targeted Competencies:

Participants will gain the following competencies during the Fisheries and Aquaculture Management program:

- Proficiency in sustainable fisheries and aquaculture management practices.
- Ability to assess and monitor aquatic ecosystems effectively.
- Skills in data analysis and interpretation related to aquatic resources.
- Competence in stakeholder communication and conflict resolution.
- Knowledge of policy development and its application in aquatic resource management.
- Capacity to design and implement research projects in aquatic sciences.
- Understanding of the socio-economic aspects of fisheries and aquaculture.
- Awareness of global trends and challenges in aquatic resource management.
- Commitment to ethical practices and sustainability in aquatic industries.
- Adaptability to evolving technologies and methodologies in the field.

Studying Scenarios:

In this Fisheries and Aquaculture Management training, participants will develop their skills through the analysis of the following scenarios:

- Assessing the impact of overfishing on local fish populations.
- Evaluating the effectiveness of aquaculture biosecurity measures.
- Designing community-based fisheries management plans.
- Analyzing the economic viability of integrated aquaculture systems.
- Implementing water quality monitoring in aquaculture ponds.
- Developing policies for sustainable coastal fisheries.
- Addressing challenges in invasive species management.
- Planning restoration projects for degraded aquatic habitats.
- Managing conflicts between commercial and artisanal fishing.
- Adapting to the impacts of climate change on aquatic resources.

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Course Content:

Unit 1: Introduction to Fisheries & Aquaculture Management:

- Overview of global fisheries and aquaculture sectors.
- Historical development and evolution of aquatic resource management.
- Key concepts in sustainable fishing and aquaculture.
- Principles of ecosystem-based management.
- Legal and institutional frameworks governing aquatic resources.
- Ethical considerations in fisheries and aquaculture practices.
- Global challenges and opportunities in aquatic resource management.
- Introduction to international conventions and agreements.

Unit 2: Fish Biology and Aquatic Ecosystems:

- Fundamentals of fish physiology and behavior.
- Ecological roles of fish in aquatic ecosystems.
- Interactions between aquatic organisms and their environment.
- Aquatic food webs and energy flow.
- Impact of Environmental Factors on Fish Populations.
- Fish migration patterns and habitat utilization.
- Conservation of aquatic biodiversity.
- Restoration of degraded aquatic habitats.

Unit 3: Fisheries Management Strategies:

- Stock assessment techniques and methodologies.
- Harvest control rules and regulations.
- Marine protected areas and their role in conservation.
- Community-based fisheries management approaches.
- Co-management models and stakeholder involvement.
- Conflict resolution in fisheries management.
- Adaptive management in response to ecological changes.
- Monitoring and evaluation of management effectiveness.

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Unit 4: Aquaculture Systems and Practices:

- Overview of aquaculture systems e.g., pond, cage, recirculating.
- Selection of species for aquaculture.
- Water quality management in aquaculture systems.
- Feed formulation and nutrition.
- Disease prevention and biosecurity measures.
- Harvesting and post-harvest handling techniques.
- Economic aspects of aquaculture production.
- Sustainable aquaculture practices.

Unit 5: Policy, Governance, and Future Directions:

- National and international policies affecting fisheries and aquaculture.
- Governance structures and their impact on resource management.
- Role of research and innovation in shaping policies.
- Public-private partnerships in aquatic resource management.
- Climate change and its implications for aquatic resources.
- Emerging technologies in fisheries and aquaculture.
- Future Trends and Challenges in the Sector
- Strategies for capacity building and education.

Final Insights & Key Takeaways:

This course provides a comprehensive foundation in fisheries and aquaculture management, equipping participants with the knowledge and skills to address contemporary challenges in the field. Through a blend of theoretical learning and practical application, learners will contribute effectively to the sustainable management of aquatic resources.