

Semester	7		
Course Code:	ENCM 41802		
Course Name:	Environmental Management in Fisheries and Aquaculture		
Credit Value:	2		
Status	for BSc Honours in ENCM degree		
Pre-requisites	ENCM 12592		
Co-requisites	None		
Hourly Breakdown	Theory	Practical	Independent Learning
	25	15	60
Intended Learning Outcomes:			
After completion of this course unit, the student will be able to;			
<ol style="list-style-type: none"> 1. describe the main international fisheries resources and the level of exploitation, 2. identify the factors affecting national and international fisheries resources, 3. describe the fishing methods and explain environmental impacts, 4. describe the social and environmental considerations in aquaculture and, 5. demonstrate skills in environmental management in relation to fisheries and aquaculture. 			
Course Content:			
<p>International fisheries resources, Factors affecting international fisheries resources, Characteristics of fisheries, Illegal, Unreported and Unregulated (IUU) fishing, Fish discards, bycatch, Fishing down the food web, Fishing gear: Methods and their impacts on the marine environment. Fish aggregating devices. Maximum sustainable yield, Catch per unit effort, Responsible and safe fisheries operations Regulation of fisheries practices, Marine protected areas, National and international organizations involved in fisheries management, International conventions on responsible fisheries and their implementation.</p> <p>FAO code of conduct for responsible fisheries and aquaculture, Ecosystem approach to aquaculture (EAA), Better management practices for aquaculture, Aquaculture, Intensive operations, Extensive operations, Cultured Fish and invertebrates, Species and System Selection for Sustainable Aquaculture, open water IMTA, Social aspects, Environmental impacts, The competition for natural resources and the impact of direct organic pollution, Impacts of nutrient enrichment on effluent receiving water bodies, The impact of intensive aquaculture on wild fish populations, including the transfer of disease and parasites (sea lice), The impact of escaped fish, and the threats and benefits of GM fish, Habitat destruction, Sourcing of feeds, Antibiotic use, Introduced species, Importance of Polyculture and Integrated aquaculture methods.</p>			
Teaching /Learning Methods:			
A combination of lectures, field practical sessions, computer based learning, self-studies, field based assignments and group discussions. Student seminar. Supplementary Lecture Support Materials are distributed through Learning Management System (LMS).			
Assessment Strategy:			
Continuous assessment and end of semester examination. Percentage given for each sub component indicates the percent contribution to the final marks.			
Continuous Assessment 40 %		Final Assessment 60 %	

Details:		Theory	Practical	Other
Quizzes	10		-	-
Assignments	10	60		
Student seminar	10			
Field reports	10			

Recommended Readings:

1. FAO. (1995) Code of Conduct for Responsible Fisheries, Rome, FAO.
2. King, M. (2007). Fisheries Biology, Assessment and Management, Fishing News Books, Oxford.
3. Hart, P. J. B. & J. D. Reynolds (2002). Handbook of Fish Biology and Fisheries: 2 Volume Set. John Wiley and Sons.
4. Pillay, T.V.R. (1990). Aquaculture: Principles and Practices. Fishing News Books, Oxford
5. Staples, D. & Funge-Smith, S. (2009). Ecosystem approach to fisheries and aquaculture: Implementing the FAO Code of Conduct for Responsible Fisheries. FAO Regional Office for Asia and the Pacific, Bangkok, Thailand.
6. <https://www.fisheriesdept.gov.lk>