

MANGALORE UNIVERSITY
MSc Geography

SOFT COURSE: GYS 505: Coastal Management

Course Learning Outcomes:

- CO1. Analyze critically the theories and models in the real world with different perspectives.
CO2. Analyze human interventions and effects in coastal area.
CO3. Apply conceptual and theoretical measures to coastal management
CO4. Apply basic techniques from global to regional level to identify the problems of coastal area

Unit 1: Coastal Management: Physical Aspects: Definition of coastal zone and related nomenclature. Coastal processes: Wave, tide and wind. Coastal currents and cells. Coastal morpho dynamics: Micro, macro and biogenic forms. Systems of change in coasts: cyclical and progressive. Classification of coasts based on processes and sediment characteristics.

-14

Unit 2: Coastal biogeography: Special reference to sea weeds, mangroves, dune vegetation and corals, their ecological and economic significance. Natural coastal hazards and their management: Sea level rise, erosion, sedimentation and tropical cyclones. Techniques of monitoring changes in coastal processes and landforms.

-14

Unit 3: Coastal Management: Human Aspects: Coastal regulations with special reference to India. Human utilization of coasts, environmental impacts and management: Navigation, mining, fishing and fish-processing, off-shore oil exploitation, reclamation and tourism. Coastal engineering and its impacts: Ports and harbors, measures for prevention of erosion and sedimentation.

-14

Reference:

1. Bird, E.C.F. 2000. An Introduction to Coastal Geomorphology, John Wiley and Sons Ltd. New York: 340 p. [Topics 2.3, 4.4]
2. Carter, R.W.G. 1988. Coastal Environments: An Introduction to the Physical, Ecological and Cultural Systems of Coastlines, Academic Press, London: 617p. [Topic 2.3]
3. Chow, V.T, Maidment, D.R. and Mays, L.W. 1988. Applied Hydrology, McGraw-Hill, New York: 572 p. [Topic 3.2]
4. Garrison, T. 1993. Oceanography: An Invitation to Marine Science, Wadsworth Pub. Co., Belmont: 540 p. [Topics 4.1, 4.2, 4.3]
5. Johnson, H.D. and Baldwin, C.T. 1996. 'Shallow clastic seas.' In Reading H.G. (editor): Sedimentary Environments: Processes, Facies and Stratigraphy, 3rd edition, Blackwell Science Ltd. Oxford: pp 232–280. [Topic 2.3]
6. Knighton, D. 1998: Fluvial Forms and Processes: A New Perspective, Arnold, London: 385p. [Topics 2.1, 2.2]
7. Morisawa, M. 1985. Rivers, Longman, London: 222p. [Topics 2.1, 2.2, 3.1]

8. Murthy, K.S. 1998. Watershed Management in India, 3rd edition, Wiley Eastern Ltd. / New Age International Ltd., New Delhi: 198p. [Topic 3.4]
9. Newson, M. 1992. Land Water and Development, River Basin Systems and their Sustainable Management, Routledge, London: 350p. [Topic 3.4]

