



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.

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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.

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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.

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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]

