Guest Lecture

ECODEVELOPMENT FOR BIODIVERSITY CONSERVATION
M.SC. FORESTRY, FRI DEEMED UNIVERSITY

WORK SCHEDULE (24.05.1999 TO 28.05.1999)

Day 1 (24.05.1999)

Session I
(1400 hrs – 1530 hrs)
Introduction : Workshop overview, objectives, methodology, Andragogy and small group norms. — AKB

Session II
(1540-1700 hrs)
Conservation History and factors, need for integrating conservation with development. — BKM

Day 2 (25.5.99)

Session III
(0930-1100 hrs)
Understanding what is integrated conservation and development (Ecodevelopment) — BKM

Session IV
(1105-1300 hrs)
If..... then (warm-up)
Conservation Development Linkages — AKB

Session V
(1430-1530 hrs)
Magic Box (Warm up)
Community Participation — RB

Session VI
(1540-1700 hrs.)
Stakeholders in Ecodevelopment — RB

Day 3 (26.5.99)

Session VII
(0930-1100 hrs)
Wildlife Habitat Studies and Management with special reference to Wetlands — BCC

Session VIII
(1110-1300 hrs)
Management of Habitats — GSR

Session IX
(1400-1500 hrs)
Animal Habitat Studies and Management with special reference to Arid and Semi-arid ecosystems — KS

Session X
(1510-1610 hrs)
Animal Habitat Studies and Management with special reference to Himalayan and Siwalik ecosystems — SSK

Session XI
(1615-1715 hrs.)
Defining community and community diversity — BKM

Day 4 (27.5.99)

Session XII
(0930-1130 hrs)
Introduction to Planning — AKB

Session XIII
(1140-1300 hrs.)
Macro and Micro Planning — AKB

Session XIV & XV
(1430-1700 hrs.)
Participatory Tool Shop — RB/BKM/AKB

Day 5 (28.5.99)

Session XVI
(0930-1130 hrs.)
Wildlife Behaviour — Faculty to be decided

Session XVII
(1140-1300 hrs.)
Ecodevelopment – A case study from Periyar Tiger Reserve — AKB

Session XVIII
(1430-1530 hrs.)
Ecodevelopment – Experience from Rajaji N.Park — RB

Session XIX
(1540-1700 hrs.)
Evaluation of workshop/sessions — AKB/RB/BKM

AKB – Shri Anil Kumar Bhardwaj; RB – Dr. Ruchi Badola; BKM – Dr. B.K. Mishra; KS – Dr. K. Sankar; SSK – Dr. S. Sathyakumar; BCC – Shri B.C. Choudhury; GSR – Dr. G.S. Rawat

WETLAND - BASICS - DOCUMENT A (2 Pages) A1

(FOR LECTURE & DISTRIBUTION)

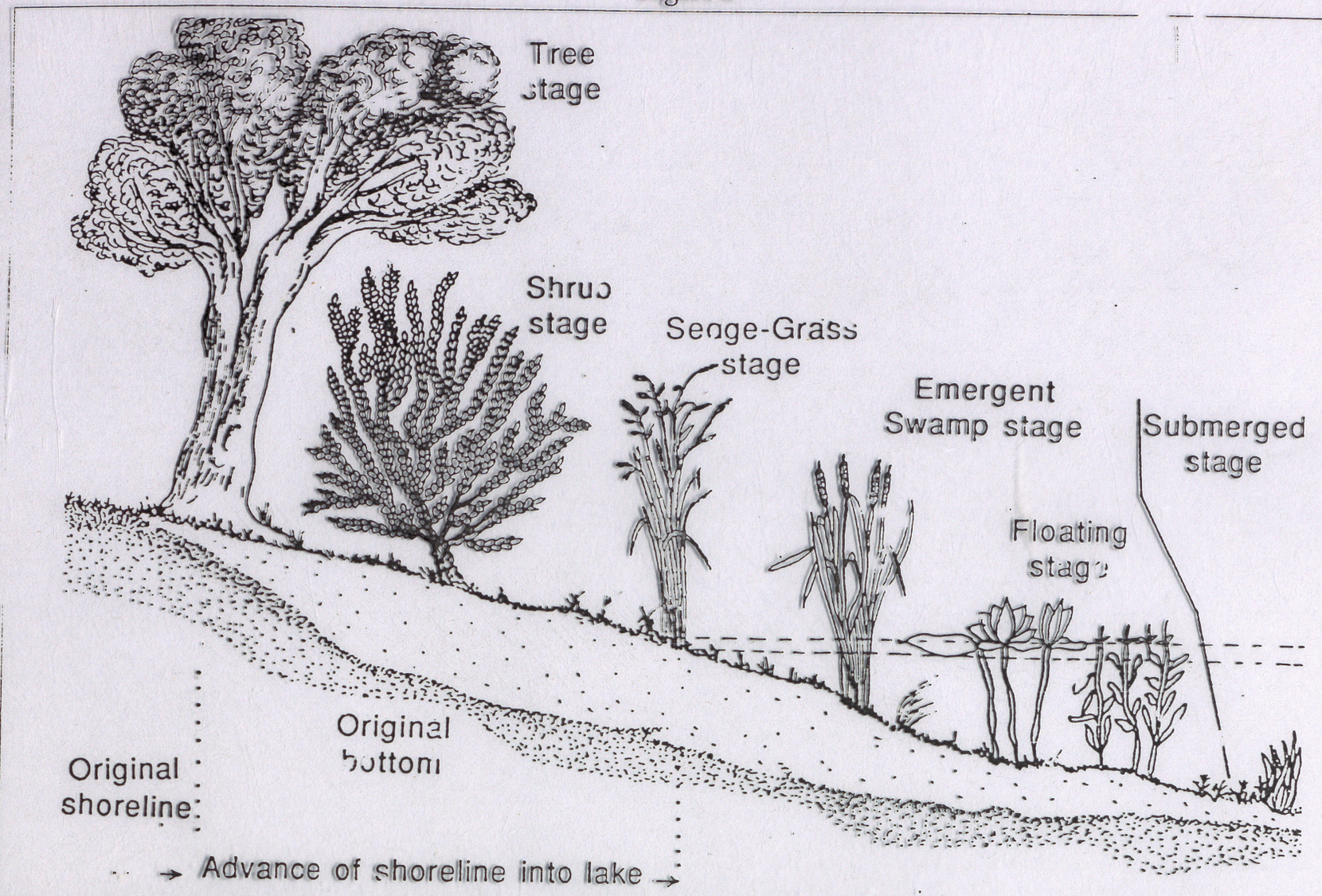
(B. C. Choudhury)

The term "wetlands" groups together a wide range of inland, coastal and marine habitats which share a number of common features. Indeed over fifty separate definitions of wetlands are currently in use, with the broadest, provided by the Ramsar Convention, defining wetlands as:

"areas of marsh, fen, peatland or water, whether natural or artificial, permanent or temporary, with water that is static or flowing, fresh, brackish or salt, including areas of marine water the depth of which at low tide does not exceed six metres."

ECOLOGICAL SUCCESSION IN THE WETLAND ECOSYSTEM

Figure 2



Wetlands change over time. Succession of one plant community by another produces distinct habitat zones around water bodies

I. Wetland Habitats

HOW DOES ONE IDENTIFY A WETLAND?

When an area is permanently or periodically inundated

Whatever its source, water must be present for at least seven successive days during the growing season.

When an area supports hydrophytic vegetation

At last for some part of the year, the habitat supports aquatic macrophytes that grow in water, soil, or some other substrate that is periodically deficient in oxygen due to waterlogging.

When an area has hydric soils

The substrate is predominantly hydric soils that are saturated or flooded for a sufficiently long period to become anaerobic (lacking in oxygen) in their upper layers.

Source: U.S. Fish and Wildlife Service.

The Causes of Wetland Loss

Human Actions	Estuaries	Open coasts	Floodplains	Freshwater marshes	Lakes	Peatlands	Swamp forest
Direct							
Drainage for agriculture, forestry, and mosquito control.	■	■	■	■	●	■	■
Dredging and stream channelization for navigation and flood protection.	■	○	○	●	○	○	○
Filling for solid waste disposal, roads, and commercial, residential and industrial development.	■	■	■	■	●	○	○
Conversion for aquaculture/mariculture	■	●	●	●	●	○	○
Construction of dykes, dams, levees, and seawalls for flood control, water supply, irrigation and storm protection.	■	■	■	■	●	○	○
Discharges of pesticides, herbicides, nutrients from domestic sewage and agricultural runoff, and sediment.	■	■	■	■	■	○	○
Mining of wetland soils for peat, coal, gravel, phosphate and other materials.	●	●	●	○	■	■	■
Groundwater abstraction	○	○	●	■	○	○	○
Indirect							
Sediment diversion by dams, deep channels and other structures.	■	■	■	■	○	○	○
Hydrological alterations by canals, roads and other structures.	■	■	■	■	■	○	○
Subsidence due to extraction of groundwater, oil, gas and other minerals.	■	●	■	■	○	○	○
Natural Causes							
Subsidence	●	●	○	○	●	●	●
Sea-level rise	■	■	○	○	○	○	■
Drought	■	■	■	■	●	●	●
Hurricanes and other storms	■	■	○	○	○	●	●
Erosion	■	■	●	○	○	●	○
Biotic effects	○	○	■	■	■	○	○

Key: ○ = Absent or exceptional; ● = present, but not a major cause of loss; ■ = common and important cause of wetland degradation and loss.

Figure 1. Representative life cycles of a salamander and of a frog. Adults move from the terrestrial to the aquatic environment to breed. In salamanders, mating follows a brief period of courtship; in frogs, a period of calling by the male is followed by amplexus. In both groups, eggs are laid in or near water and hatch into feeding, swimming larvae. Following a period of growth, the aquatic larvae undergo metamorphosis and move onto land, where they feed and mature, eventually repeating the cycle. Printed by permission of Paul C. Ustach.

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