

## Wetlands of the World (Ch.3)

### 1. Wetland Areas and Changes

- a. 7-9 million km<sup>2</sup> (4-6% land area)
- b. >50% loss (hard to determine)

Type of wetland	X 10 <sup>6</sup> km <sup>2</sup>
Polar/Boreal	2.7
Temperate	0.7
Subtropical/Tropical	1.9
Rice	1.5
<b>Totals</b>	<b>6.8</b>

Losses	
US	53%
Canada	65-80%
Australia	>50%
China	60%
Europe	>90%

#### c. Causes

- i. Direct - agriculture, channelization/dredging/flood control, filling (roads, development), mining, groundwater pumping, pollution, levees
- ii. Indirect – sediment retention by dams, land subsidence, hydrological alteration (roads)
- iii. Natural – subsidence, sea level rise, drought, hurricanes, erosion, biotic events (succession)

#### d. Terms - types

- i. Table 3-4: lots of names, no universal terminology
- ii. To name a few: billabong, bog, fen, mire, moor, slough, oxbow

### 2. Major Wetlands

#### a. Central/S. America

- i. Orinoco delta – mangroves
- ii. Llanos – Savannah grasslands – birds, fish
- iii. Pantanal – four times the size of the everglades, wet-dry cycles, 650-700 species of birds
- iv. Amazon – 5-15 m deep in wet season

#### b. Europe (90% gone)

- i. Saline deltas in the Mediterranean (tideless – low energy)
- ii. Rhone – Camarque
  1. Native horse – bull – rice
  2. halophytes – salt works
- iii. Rhine delta – Netherlands (see Figure 3-10)
- iv. Northern Europe – peatlands – (some forested) – 3.5 million km<sup>2</sup>

#### c. Africa

- i. See Figure 3 – 19: Northern oases, Nile, Nile delta, Sudd, Rift Valley, Saline Lakes (e.g. Naivasha), eastern and western coast mangroves, Lake Chad, Inner Niger Delta, Okavango Delta
    - ii. Invasive (elsewhere from Africa) – water hyacinth (*Eichornia crassipes*)
  - d. Australia/New Zealand
    - i. Billabongs – oxbows – at bends in rivers, backwaters
    - ii. Northern mangroves
    - iii. Murray, Darling River, Lake Eyre (salty)
  - e. Asia
    - i. Bi-Ob River Valley – Central Russia – largest breeding area for birds in the world
    - ii. S.E. Asia River Delta – mangroves
      - 1. Indonesia, China, India, Papua N.G., Bangladesh, Myanmar, Vietnam
      - 2. Urbanization, agriculture, pollution, dams, lakes
    - iii. China – 650,000 km<sup>2</sup>, 250,000 km<sup>2</sup> natural, rest is rice paddy, much degradation
    - iv. India – mostly converted