

Wetlands and Wild, Free-Flowing Rivers

What a contrast.

While the lower Danube River is a free-flowing, meandering river rich in wetlands and wildlife, the portion of the Danube that has 58 dams and vast stretches of concrete

channels is not so much a living river anymore as it is a slow moving series of lakes and reservoirs.

Fully 80% of the river's wetlands and



U. S. Geological Survey's South Florida Information Access (SOFIA)

floodplains have been lost,

according to a U.N. report, for with dams, there is far less water flowing downstream, overflowing into the wetlands. Furthermore, concrete channels and concrete banks restrain water from overflowing into wetlands in order to make the water deeper for shipping. And when waterways are dredged to make them deep enough for ships transporting goods through the river, the water in the wetlands drains inward, to the middle of the river.

This loss of wetlands from the engineering of rivers has been an ecological disaster causing fish populations to plummet and fishing to virtually disappear as an industry, for wetlands are critical habitat for a wide diversity of species. It's where vast flocks of waterfowl feed, rest and breed on their long flight south; where fish hide their eggs in the shallow water amidst the submerged aquatic vegetation; where soft-shelled turtles lay their eggs in the mud; where ducklings feed on mayflies and tiny plants that grow on the surface of the water; and where a diversity of other species feed, breed, build their nests, raise their young and seek refuge from predators. When a wetland is lost, nature is crippled.

Also, when wetlands are lost, far less water percolates into the ground, which means the recharge of groundwater is slowed, which then deteriorates into a stagnating, putrefying underground swamp that is losing oxygen, according to Bernd Loetsch, director of the Natural History Museum in Vienna, Austria. It is then "completely unusable as drinking water," he said.

The land is also more vulnerable to floods without wetlands.

Also significant, without wetlands, rivers are not as clean since a natural purification system is lost. As water flows through a wetland, its vegetation filters out pollutants such as pesticides, herbicides, nitrates, car exhaust and industrial waste. Particles are left behind on the plants. Wetland vegetation also filters

storm water that washes off roads and parking lots, bringing with it oil dripped from motors, toxic metals from the erosion of tires and toxic substances from the materials roads are made from. Wetlands also filter out sediments that can cover over the habitats of small invertebrates or block the sunshine, keeping submerged aquatic vegetation from growing.

Realizing the importance of meandering, free-flowing rivers, some governments and communities, especially in Germany and Switzerland, are removing dams and dykes.