

Conserving aquatic systems
Soggy issues

Major issues in aquatic conservation
Habitat alteration
Invasive species
Overharvesting
Eutrophication
Other pollutants

Habitat alteration
Degradation of benthic habitats due to dredging and trawling
Shoreline development and riparian zone alteration
Dams

Trawling

Shoreline alteration

Riparian zone degradation
Nutrient filtration
Source of OM
Moderates thermal regimen

Dams
Breaking upstream-downstream linkages

Dam-Nation?
Only 42 free-flowing streams >200 km long remaining in lower 48

Major issues in aquatic conservation
Habitat alteration
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Invasive species

Phragmites australis

Zebra mussels

Northern snakehead fish

Flathead catfish

Disease organisms

Zebra mussels

Northern snakehead fish

Flathead catfish

Pylodictis olivaris

Voracious predator

Waccamaw R

Disease organisms

Harvesting

Over-harvesting

By-catch

Over-harvesting

Over-harvesting of coastal ocean vertebrates and invertebrates

By-catch

Eutrophication

Nutrient pollution leads to excessive primary production

Decomposition of dead primary producers reduces oxygen concentrations

Dead zones in river mouths

Some other pollutants
Sedimentation
Thermal
Pesticides
Endocrine disruptors

Thermal effluent

Pesticides

Endocrine disruptors (1)

Endocrine disruptors (2)

Ecoestrogens mimic estrogen, many compounds including DDT
May cause disruption in sex determination in animals: ♂ to ♀ characteristics
Can be bioconcentrated and passed to offspring

Some tools

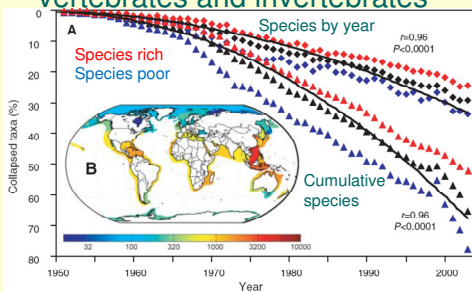
Marine sanctuaries
Wild and Scenic Rivers
Index of Biotic Integrity (IBI)

Marine sanctuaries

Wild and Scenic Rivers

IBI vs. Impervious for Fairfax Co, VA

Over-harvesting of coastal ocean vertebrates and invertebrates



Worm et al. (2006)