



Mangrove Priority Resource Conservation Targets and Metrics

Extent

- Acres/hectares
- Range shift/expansion
- Linear mangrove shoreline

Structure (canopy cover, basal area, height, diversity)

- Complexity index: # species x # stems x basal area x max height/1000
- Light penetration: percent?
- Light penetration: canopy cover

Habitat complexity (age structure, recruitment)

- Percent age classes
- Height

Floristics

- Abundance
- Density
- Species composition (incl. invasive species): percent cover
- Canopy height
- Canopy volume
- Basal area
- DBH
- Size frequency
- Leaf litter biomass

Water quality

- Salinity: ppt
- Turbidity: NTU
- Dissolved oxygen: mg/L, percent
- pH
- Total suspended solids (TSS)
- Colored dissolved organic matter (CDOM)
- Chlorophyll A: $\mu\text{g/L}$
- Nutrient load: NPK
- Bacterial load: cells/L

Hydrology

- Salinity: ppt
- Redox potential: pE
- Acres affected by barrier/impediments to flow
- Depth/duration



- Tidal amplitude/stage
- Flow level/speed/timing/volume
- Percent volume exchanged over time
- TSS

Stress, live vs dead (mangrove heart attack, monitoring of stressed area)

- Percent live/dead
- Extent of heart attack
- Number of heart attacks
- Height/time (growth rate, production)
- Leaf production/condition: percent
- Lateral branch density
- Abnormal root presence
- Abnormal root density
- Abnormal root abundance

Faunal assemblage (key indicators: mangrove tree crab, fiddler crabs, snails, insects; fish: mangrove snapper, snook, goliath grouper, roosting (wintering)/nesting birds, song birds: mangrove cuckoo, Cuban yellow warbler)

- Presence/absence
- Density
- Invertebrate diversity index
- Nest success
- Diversity
- Numbers

Macroinvertebrates (key indicators: periwinkle snail, mangrove tree crabs, coffee bean snail, butterflies)

- Number/m²
- Presence/absence
- Abundance

Fish and invertebrates (key indicators: mangrove rivulus, mangrove gambusia, killifishes, mangrove tree crab)

- Presence/absence
- Biomass: weight/area/time
- Species composition