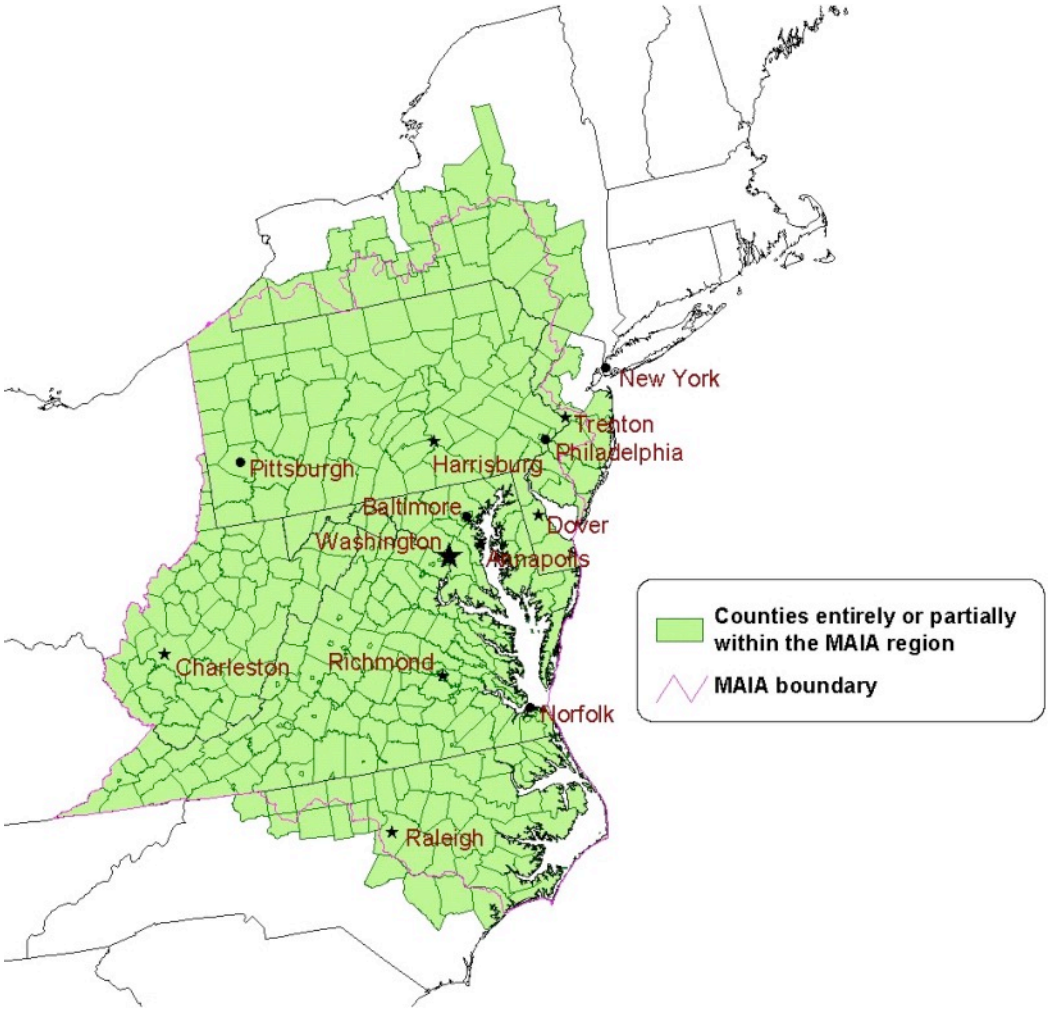
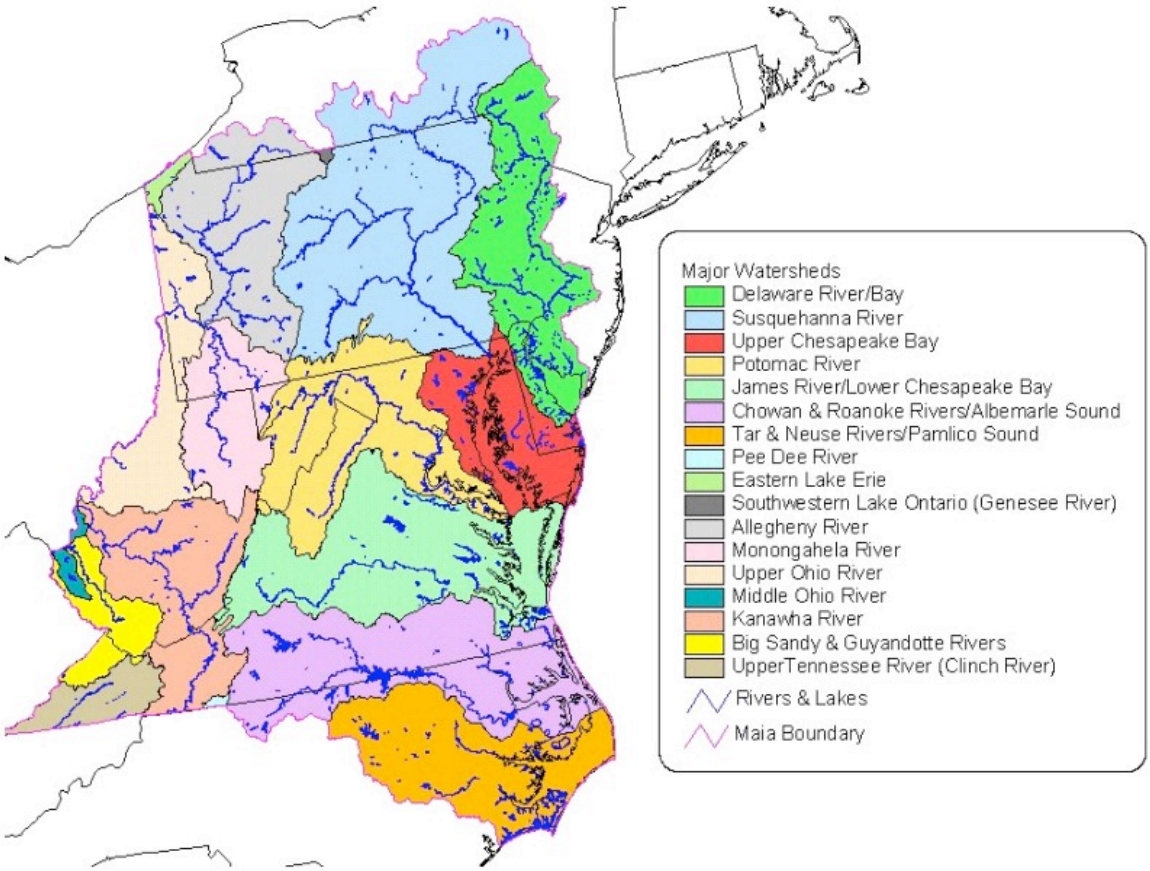
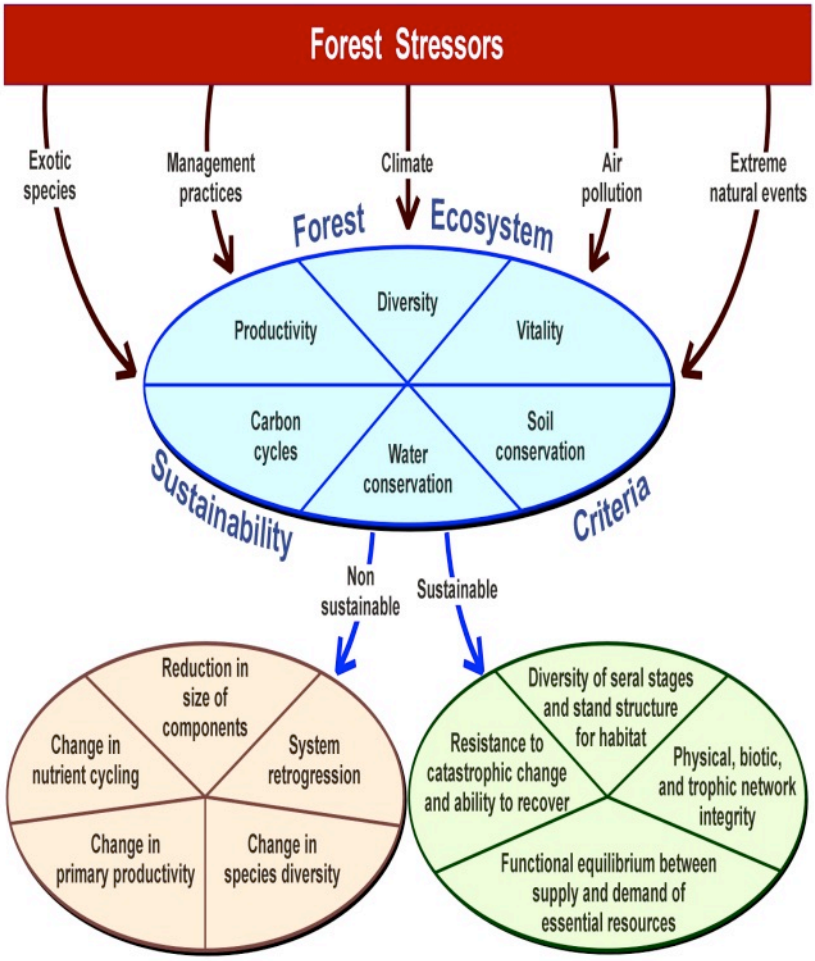
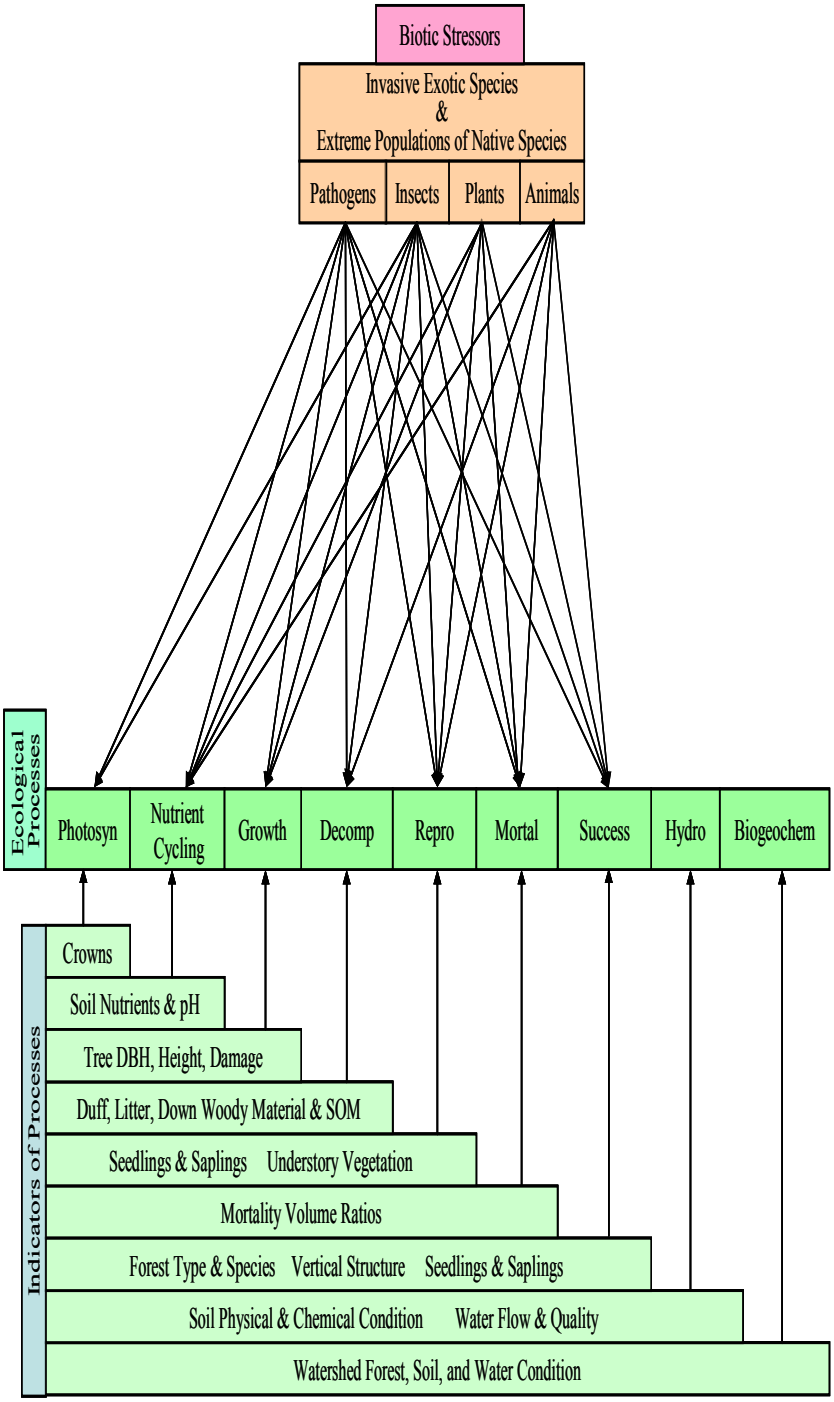
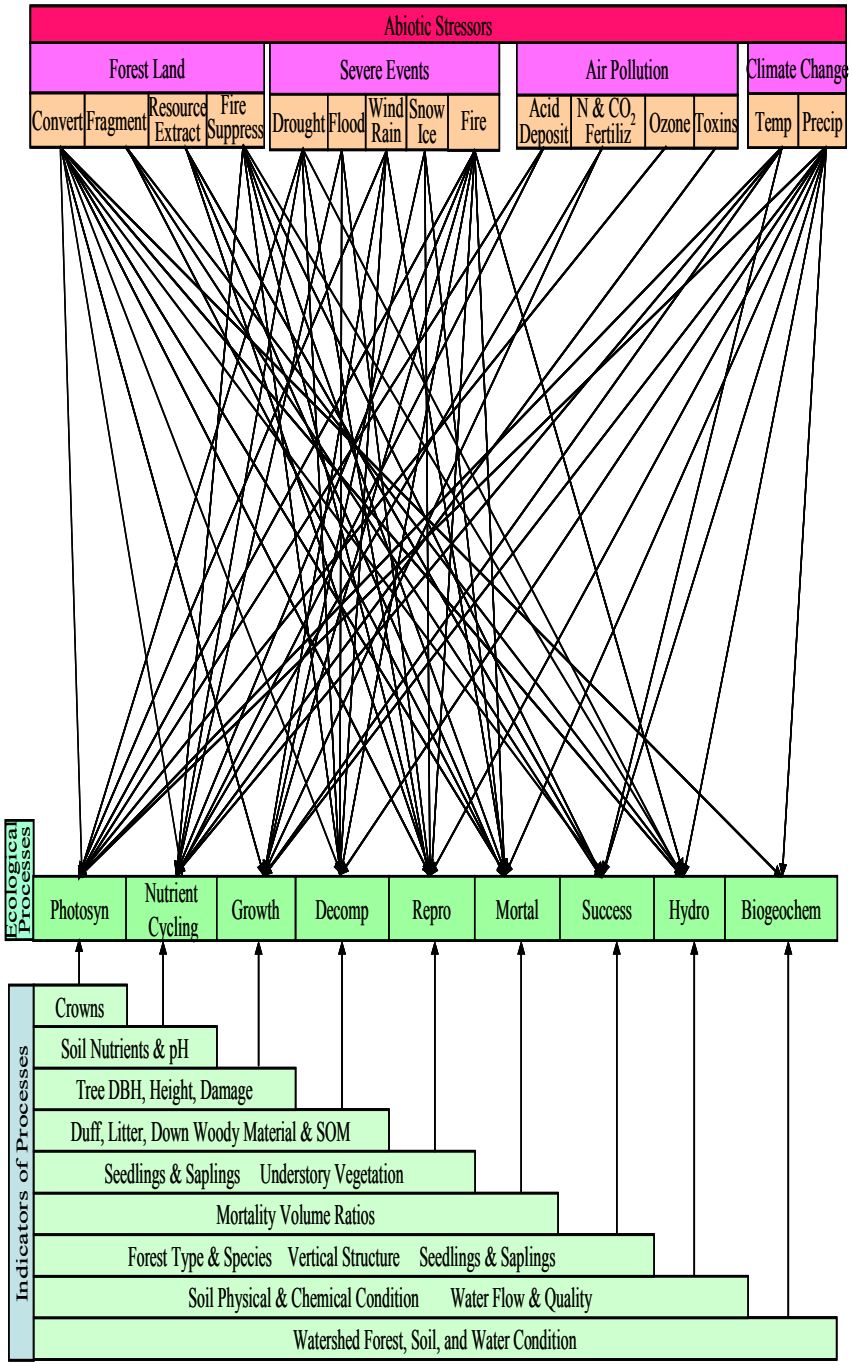

New York
Trenton
Philadelphia
Pittsburgh
Harrisburg
Baltimore
Dover
Washington
Annapolis
Charleston
Richmond
Norfolk
Raleigh
Counties entirely or partially within the MAIA region
MAIA boundary

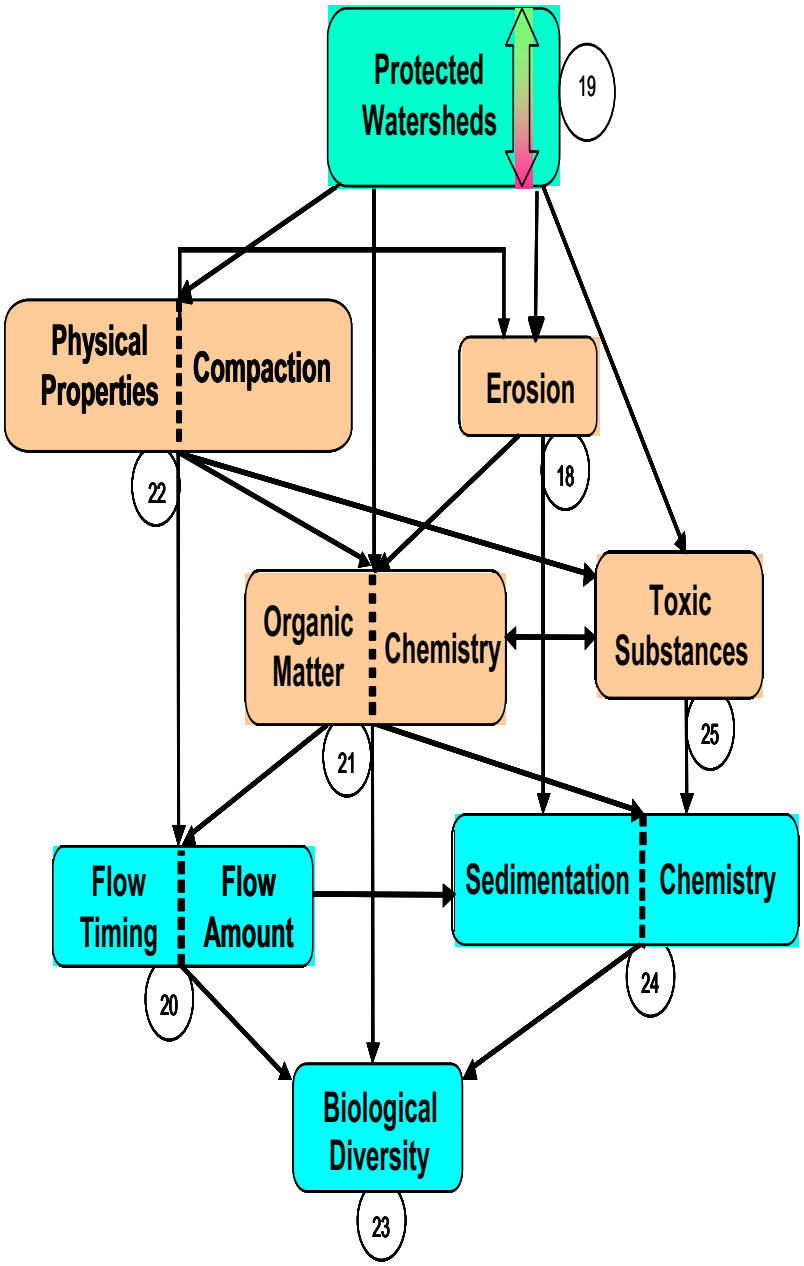

Major Watersheds
Delaware River/Bay
Susquehanna River
Upper Chesapeake Bay
Potomac River
James River/Lower Chesapeake Bay
Chowan & Roanoke Rivers/Albemarle Sound
Tar & Neuse Rivers/Pamlico Sound
Pee Dee River
Eastern Lake Erie
Southwestern Lake Ontario (Genesee River)
Allegheny River
Monongahela River
Upper Ohio River
Middle Ohio River
Kanawha River
Big Sandy & Guyandotte Rivers
UpperTennessee River (Clinch River)
Rivers & Lakes
Maia Boundary

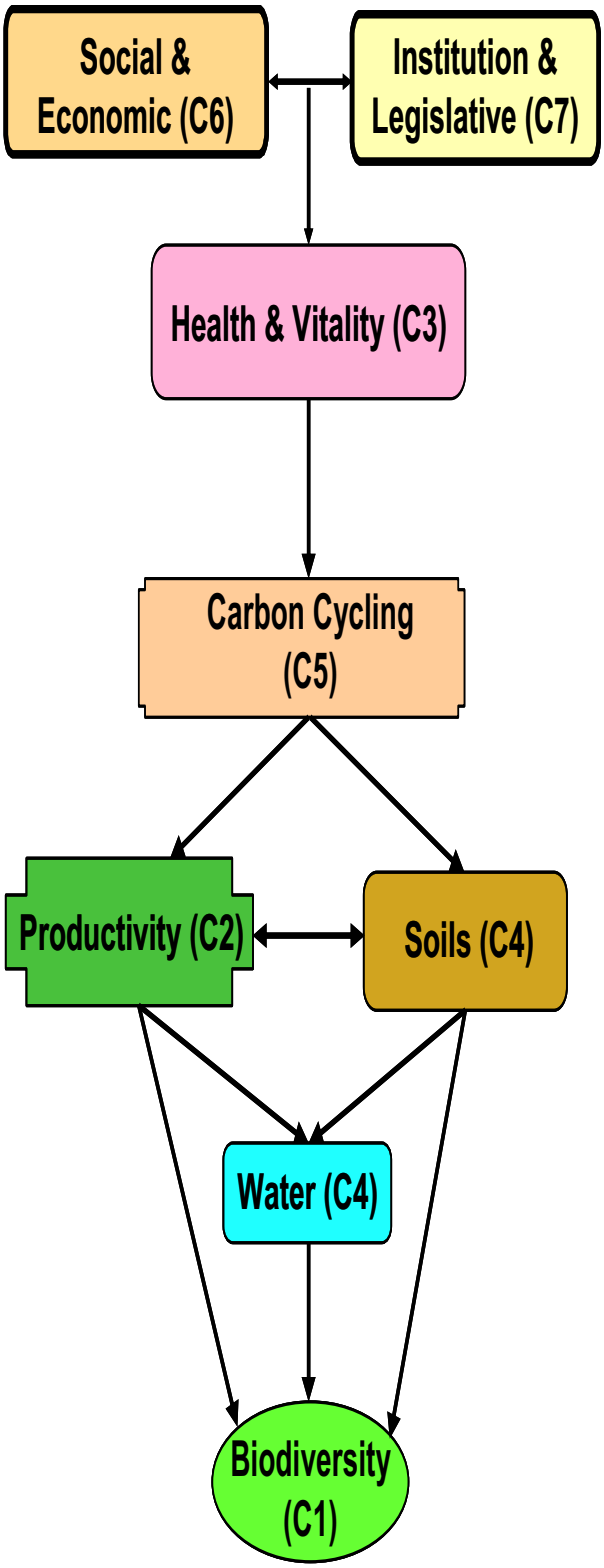
Category	Forest Assessment Issues[1]	Stakeholder Priority[2]
Forest Stressors		
Abiotic	*Air Pollution*	10
	Storms (hurricanes, etc.)	6.3
	Fire (lightning strikes, etc.)	6.3
Biotic	*Insects and Diseases*	9.5
	Animal Damage	
	Exotic Plants and Animals	8.3
Land Use and Management	*Urban Expansion*	
	Fire (human ignitions) and *Fire Suppression*	6.3
	Mining Activities	
	Timber Harvest	7.6
	Road Building	6.3
Forest Response		
Tree Vitality	*Crown Dieback*	5.9
	Tree Damage	6.3
	Tree Mortality	8.5
	Tree Regeneration	10
Forest Condition		
Productivity	*Timber Productivity*	7.6
	Non-Timber Productivity	5
	Game Species Productivity	7.5
Conservation of Soil Systems	Soil Erosion	8.3
	Soil Accumulation of Toxic Compounds	8.8
	Soil Nutrient Pools and Cycling	8.3
	Soil Compaction	5.5
Conservation of Aquatic Systems	*Sedimentation*	10
	Chemical Contamination	10
	Riparian Buffers	
Carbon Sequestration	*Soil Carbon*	8.3
	Above-ground trees	
	Above-ground plants	
Biological Diversity	*Plant Species Richness*	7.5
	Non-game Wildlife Species Richness	9
	Forest Birds Species Richness	9
	Habitat Suitability for T&E Species	9

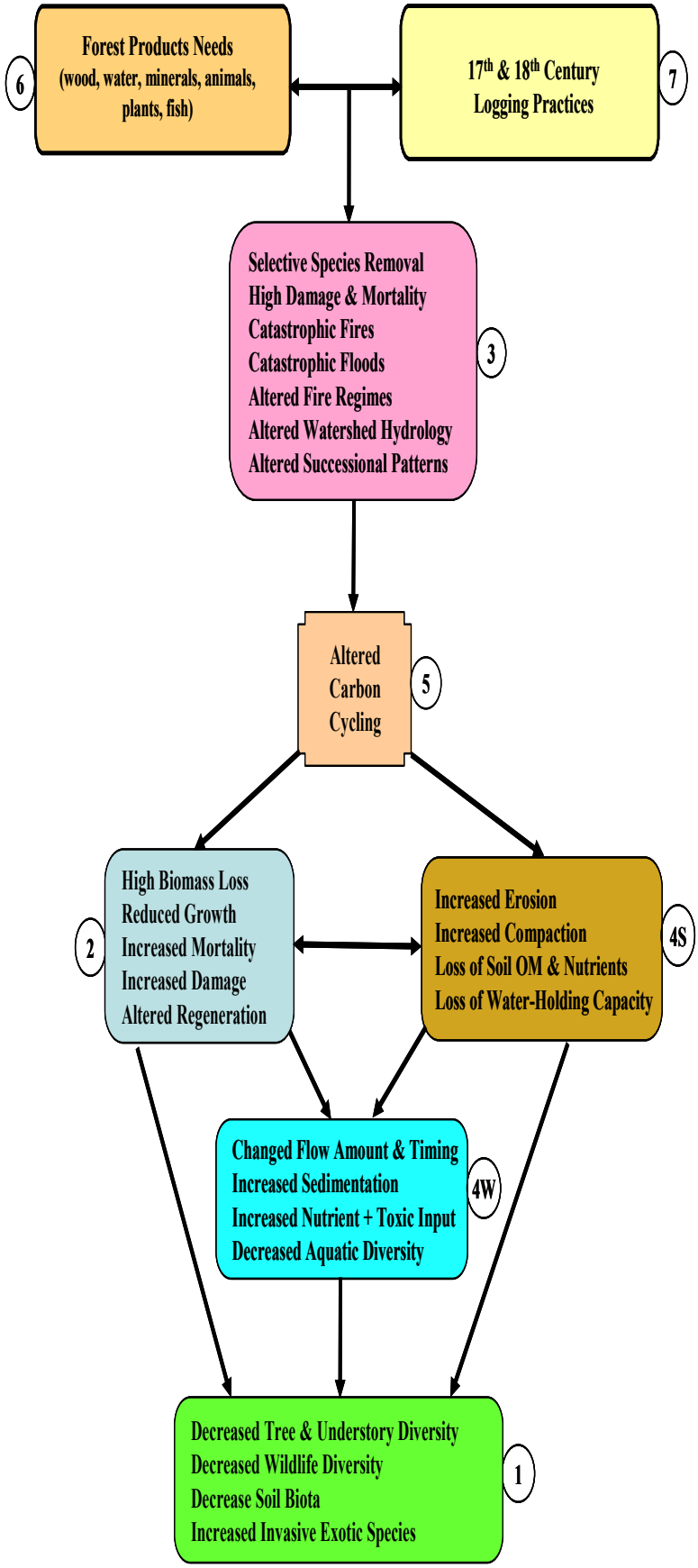

Forest Stressors
Exotic species
Management practices
Climate
Air pollution
Extreme natural events
Forest Ecosystem
Productivity
Diversity
Vitality
Carbon cycles
Water conservation
Soil conservation
Sustainability Criteria
Non sustainable
Sustainable
Reduction in size of components
Change in nutrient cycling
System retrogression
Change in primary productivity
Change in species diversity
Diversity of seral stages and stand structure for habitat
Resistance to catastrophic change and ability to recover
Physical, biotic, and trophic network integrity
Functional equilibrium between supply and demand of essential resources

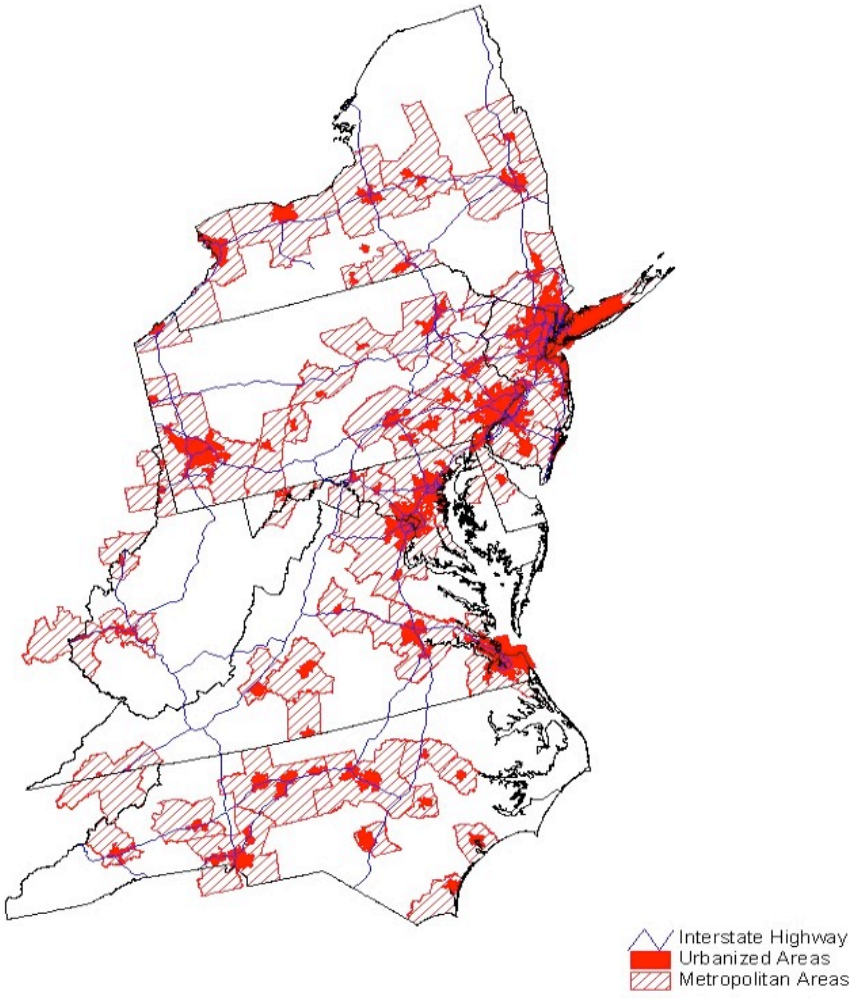

Biotic Stressors
Invasive Exotic Species
&
Extreme Populations of Native Species
Pathogens
Insects
Plants
Animals
Ecological Processes
Photosyn
Nutrient Cycling
Growth
Decomp
Repro
Mortal
Success
Hydro
Biogeochem
Indicators of Processes
Crowns
Soil Nutrients & pH
Tree DBH, Height, Damage
Duff, Litter, Down Woody Material & SOM
Seedlings & Saplings
Understory Vegetation
Mortality Volume Ratios
Forest Type & Species
Vertical Structure
Seedlings & Saplings
Soil Physical & Chemical Condition
Water Flow & Quality
Watershed Forest, Soil, and Water Condition

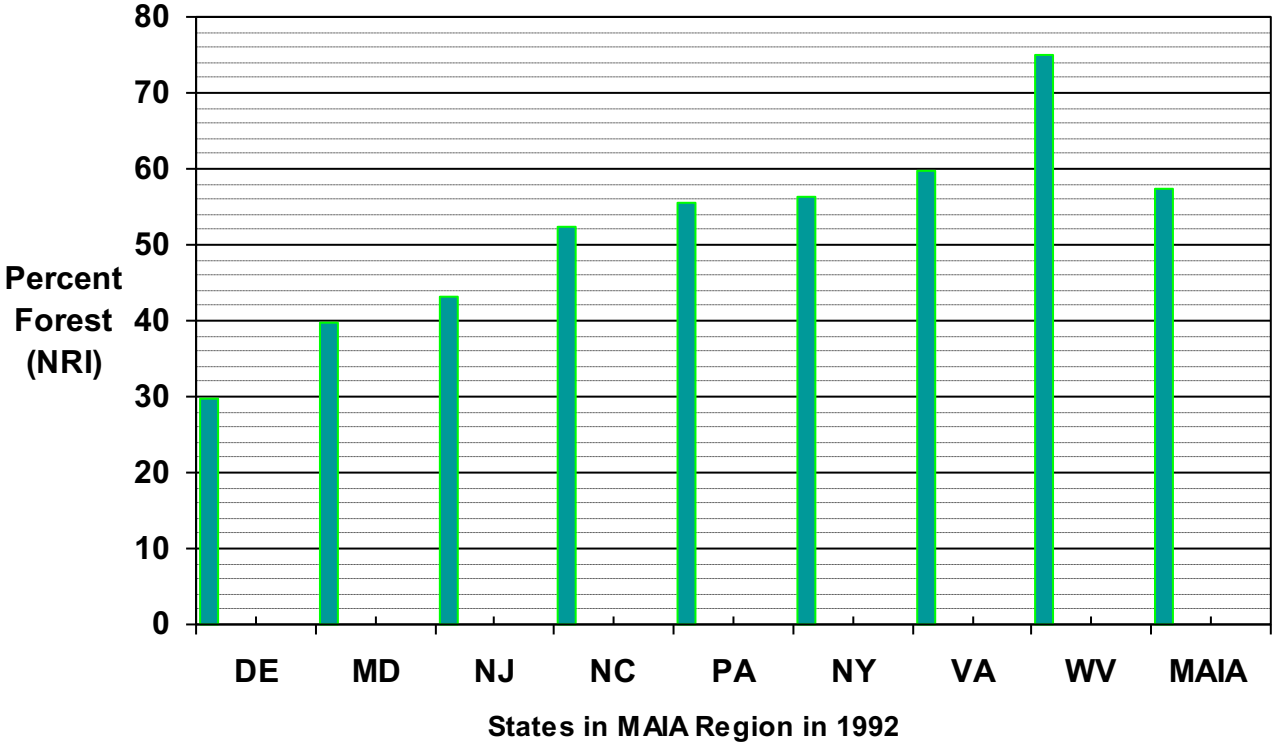

Abiotic Stressors
Forest Land
Convert
Fragment
Resource Extract
Fire Suppress
Severe Events
Drought
Flood
Wind Rain
Snow Ice
Fire
Air Pollution
Acid Deposit
N & CO_2 Fertiliz
Ozone
Toxins
Climate Change
Temp
Precip
Ecological Processes
Photosyn
Nutrient Cycling
Growth
Decomp
Repro
Mortal
Success
Hydro
Biogeochem
Indicators of Processes
Crowns
Soil Nutrients & pH
Tree DBH, Height, Damage
Duff, Litter, Down Woody Material & SOM
Seedlings & Saplings Understory Vegetation
Mortality Volume Ratios
Forest Type & Species Vertical Structure Seedlings & Saplings
Soil Physical & Chemical Condition Water Flow & Quality
Watershed Forest, Soil, and Water Condition


Protected Watersheds
19
Physical Properties
Compaction
Erosion
22
18
Organic Matter
Chemistry
Toxic Substances
25
21
Flow Timing
Flow Amount
Sedimentation
Chemistry
20
24
Biological Diversity
23

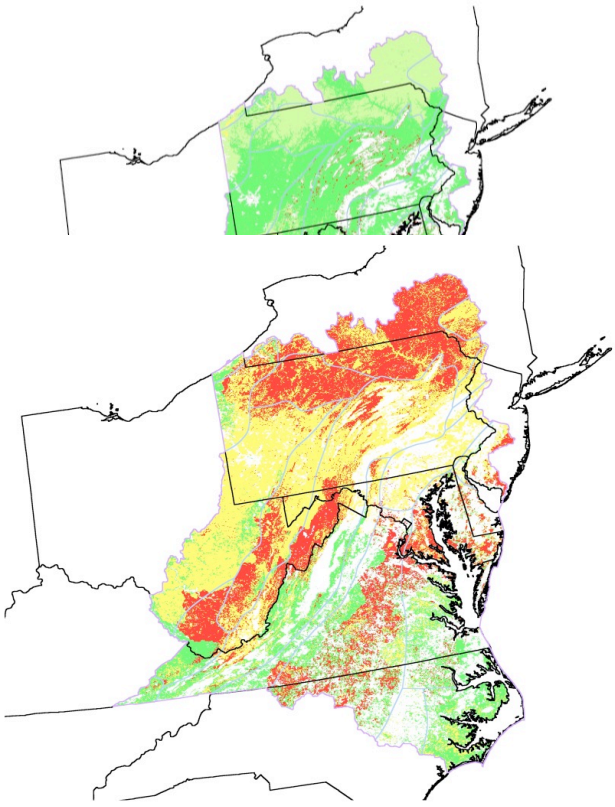

Social & Economic (C6)
Institution & Legislative (C7)
Health & Vitality (C3)
Carbon Cycling (C5)
Productivity (C2)
Soils (C4)
Water (C4)
Biodiversity (C1)

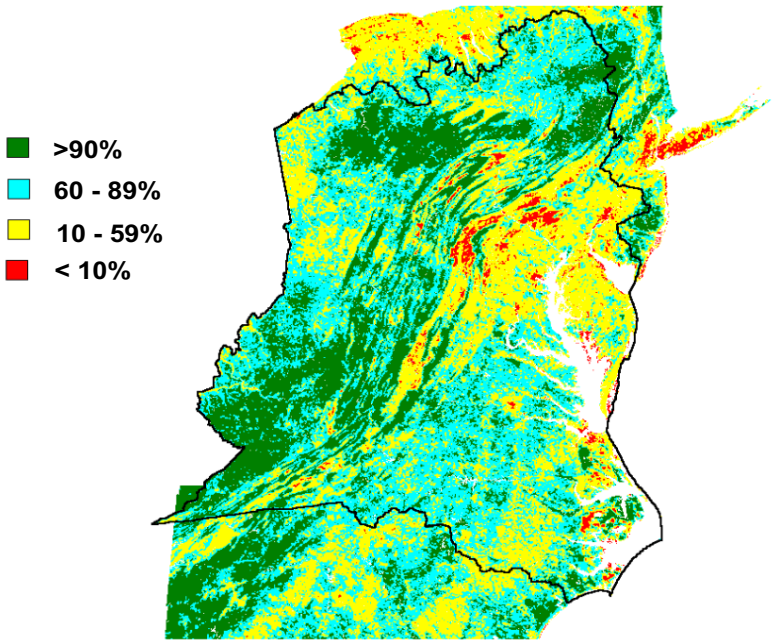

Forest Products Needs
(wood, water, minerals, animals, plants, fish)
6
17th & 18th Century Logging Practices
7
Selective Species Removal
High Damage & Mortality
Catastrophic Fires
Catastrophic Floods
Altered Fire Regimes
Altered Watershed Hydrology
Altered Successional Patterns
3
Altered Carbon Cycling
5
High Biomass Loss
Reduced Growth
Increased Mortality
Increased Damage
Altered Regeneration
2
Increased Erosion
Increased Compaction
Loss of Soil OM & Nutrients
Loss of Water-Holding Capacity
4S
Changed Flow Amount & Timing
Increased Sedimentation
Increased Nutrient + Toxic Input
Decreased Aquatic Diversity
4W
Decreased Tree & Understory Diversity
Decreased Wildlife Diversity
Decrease Soil Biota
Increased Invasive Exotic Species
1

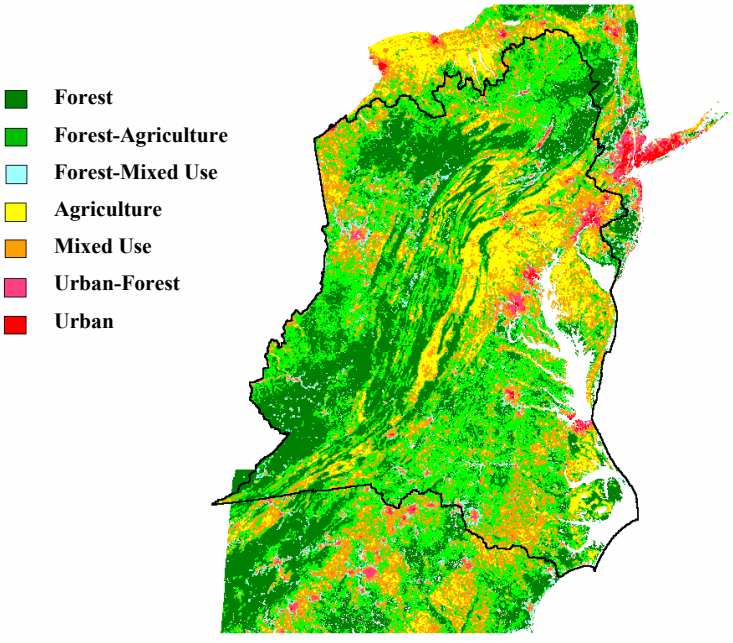

Interstate Highway
Urbanized Areas
Metropolitan Areas


80
70
60
50
40
30
20
10
0
Percent Forest (NRI)
DE
MD
NJ
NC
PA
NY
VA
WV
MAIA
States in MAIA Region in 1992

2002 1 18


MAIA Boundary
Ecoregion Sections
Forested Area Fire Condition Class
Agriculture
Condition Class 1
Condition Class 2
Condition Class 3
Non-Vegetation
Urban/Development/Ag
Water


>90%
60 - 89%
10 - 59%
< 10%


Forest
Forest-Agriculture
Forest-Mixed Use
Agriculture
Mixed Use
Urban-Forest
Urban