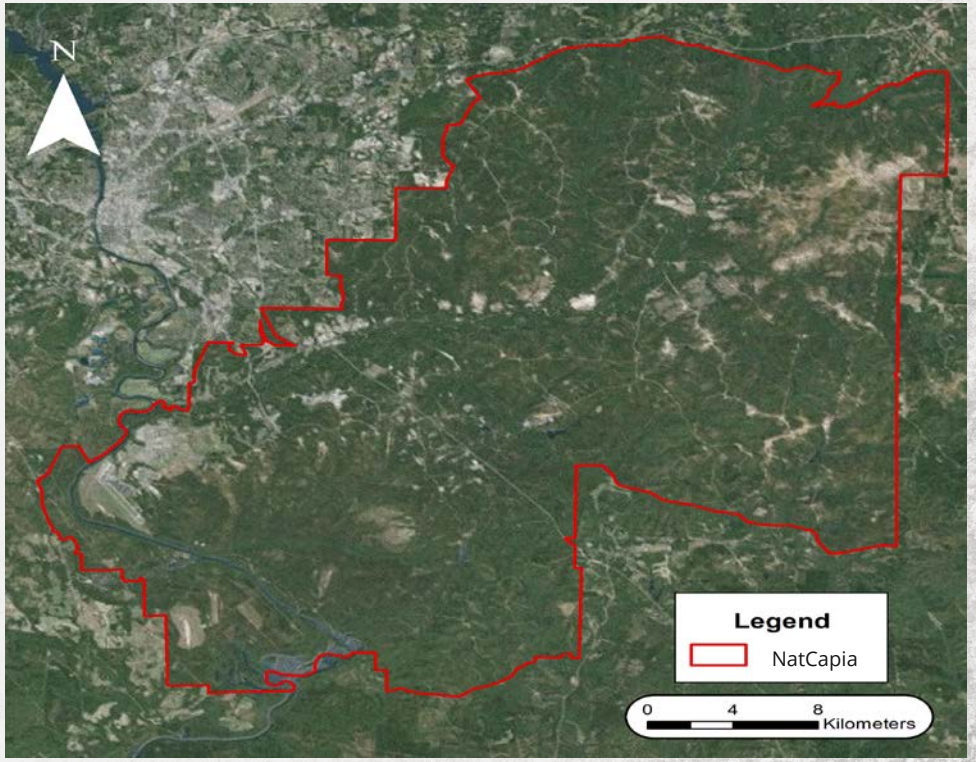
NatCapia Case Study

NATCAPIA

- ~74,000 hectares
- Soils are typically sandy
- Historic long-lived pine vs. conifer forest
- Supports ecotourism
- Habitat for endangered species

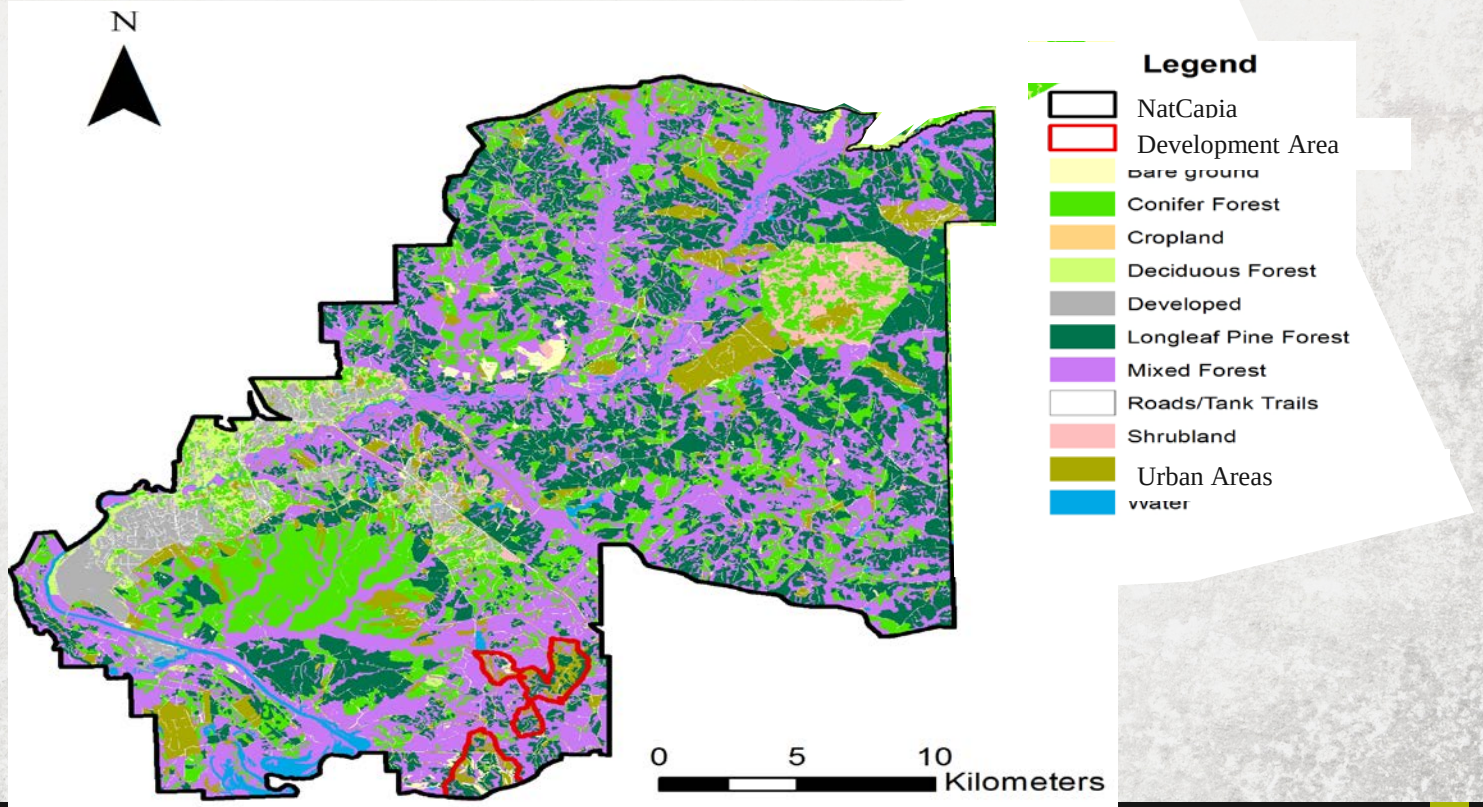


NATCAPIA DYNAMICS

- Expansion in urban areas
  - increased population
  - revenue through taxes
- NatCapia owl
- Forestry (conifer forest)
- Restoration of conifer forest to long-lived pine (ecological forestry)

SCENARIOS

2015 Baseline



SCENARIOS

2015 Baseline → Short-term (20yr) Concentrated Training (SCT)

LLP restoration; Forest aging/mortality; New BMPs; Urbanization

ASSUMPTIONS

LLP restoration – conifer mortality rate (1.7%/year) and stand basal area (BA), if BA falls below 30ft^2/ac then replanted as LLP the following year

Forests age 20 years

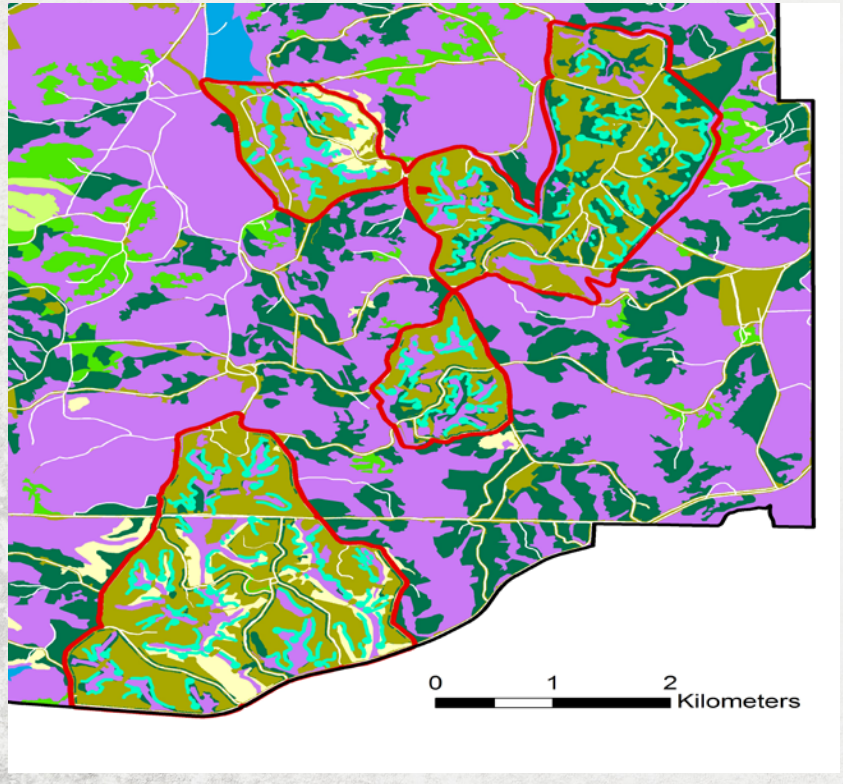
LLP reach 160 years, the age is reset to 100 years

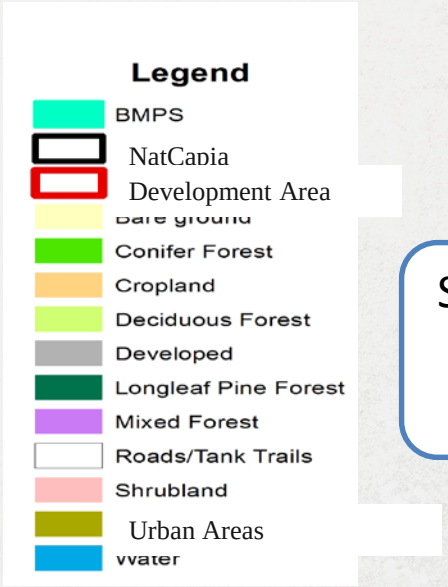
Mixed forests convert to hardwood forests after logging

Scenario development

Policy questions

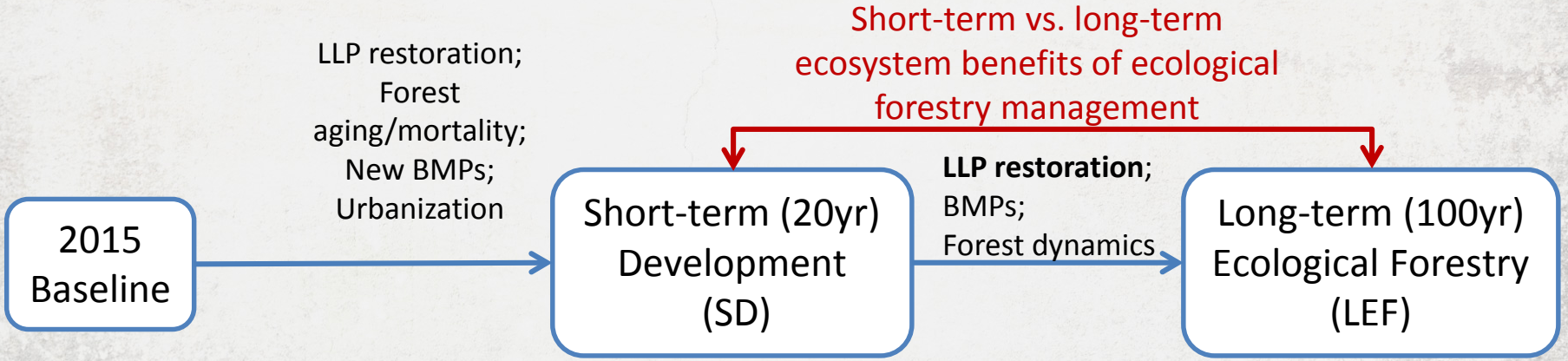
SCENARIOS





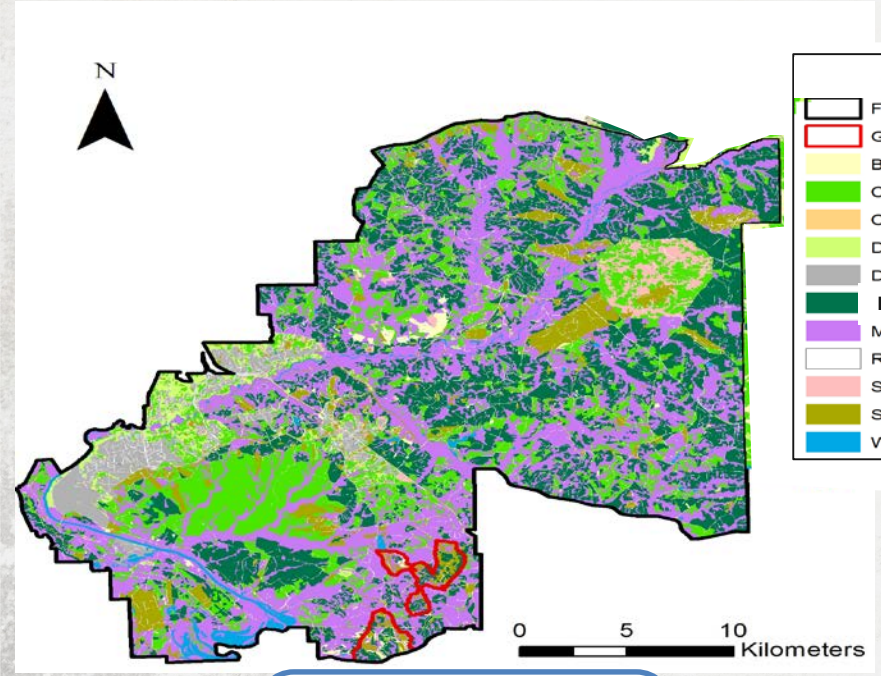
Short-term (20yr) Development (SD)

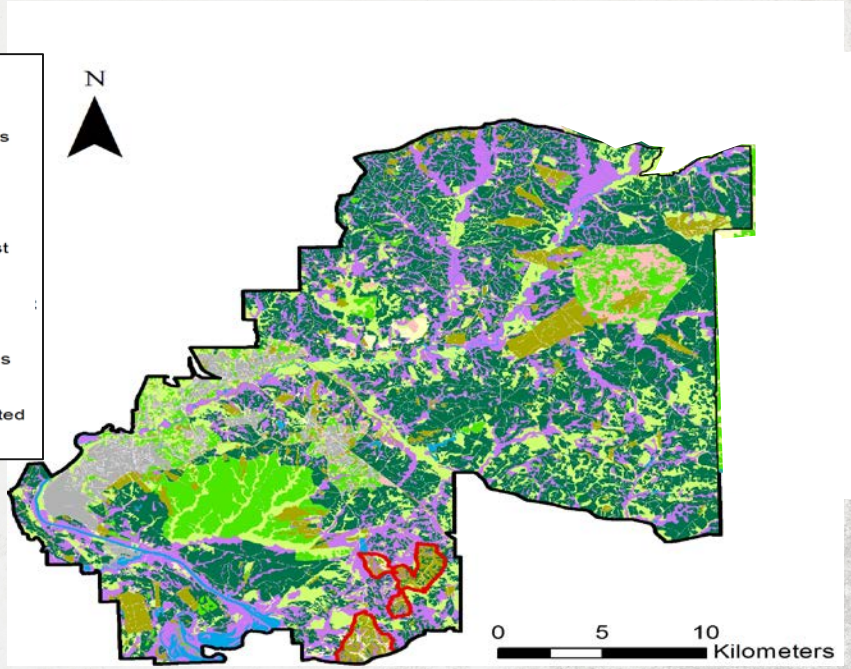
SCENARIOS



Scenario development
Policy questions

SCENARIOS

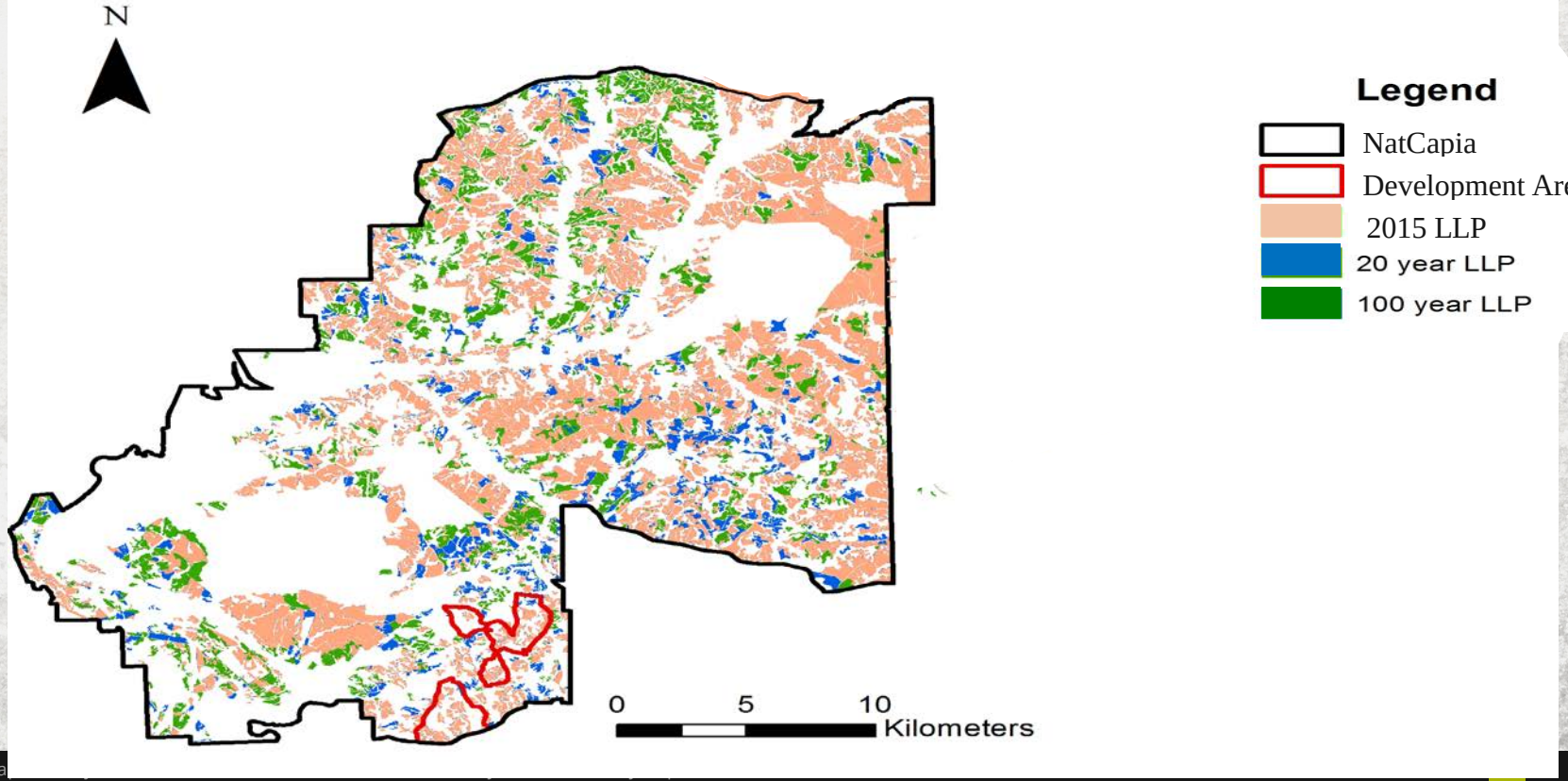




2015
Baseline

Long-term (100yr)
Ecological Forestry
(LEF)

SCENARIOS – LLP RESTORATION



SCENARIO CRITERIA

	Baseline	Short-term Development (SD)	Long-term Ecological Forestry (LEF)
Description	Current land use / management	Foreseeable land use/ management with urbanization	Foreseeable land use/ management in long term with ecological forestry management
Year/time scale	2015	20 year from baseline	100 year from baseline
Forestry Management	Long-lived (LLP) pine ~25K ac with active conversion of conifer to LLP	Convert ~1500 ac conifer plantation, clearcut ~700 ac forest to create urbanization	Gradually convert dead conifer stands to LLP
Soil and Water Management	Existing watershed management BMPs; additional voluntary buffer, 25feet regulatory buffer	Add enhanced BMPs to 2015 baseline, 25feet regulatory buffer	Improve retention efficiency of existing BMPs

ECOSYSTEM SERVICES AND MODELS

Carbon storage and sequestration

Timber

InVEST

integrated valuation of environmental services and tradeoffs

Sediment export and retention