

# Approaches to Building Policy-Relevant Future Forest Scenarios

## *Experience from Indonesia*

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**China & Asia Pacific:  
Regional Network & Trade Scenarios Workshop  
Beijing, China  
June 4-6, 2005**



DEPARTEMEN KEHUTANAN  
REPUBLIK INDONESIA



**BAPPENAS**

# Possible Future Outcomes for Forests





# Outline

- **Indonesia Forest Future Scenarios Process**
  - What were we asked to do?
  - What did scenarios look like?
- **Understanding Scenarios**
  - Definitions, Principles, Examples
- **How Can Scenarios Be Used?**
- **Steps and Lessons**

# Indonesia Forest Futures: Purpose & Approach

## **Purpose**

- Produce analysis for nat'l debate on role & future of NR
- Build framework for analyzing implications of NR approaches
- Consider future trends of alternative scenarios, 20+ yrs
- Show ways to manage NR to maximize development potential
- Commissioned by GOI/National Planning Commission

## **Analytical Approach**

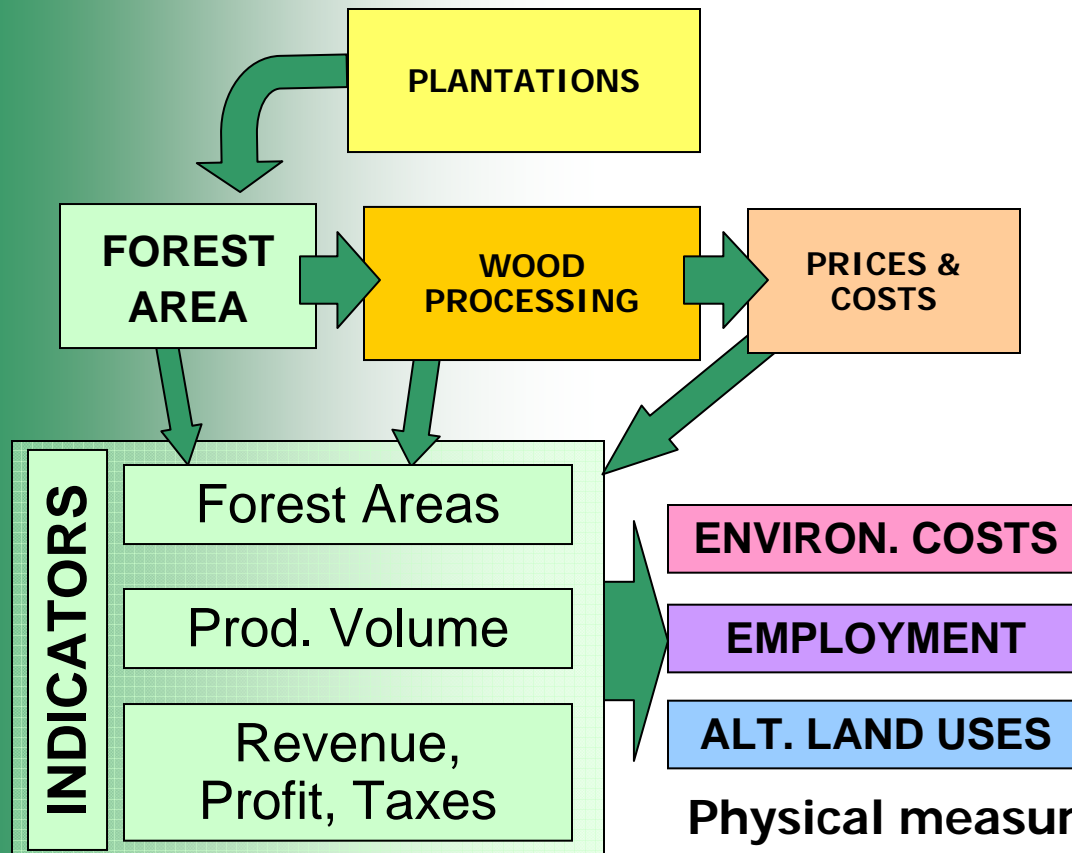
- General, consistent, interactive, simple, realistic framework
- Focus on a few key indicators, clear graphic comparison
- Compare “what if” scenarios for policy makers, provide menu
- Discuss & seek agreement with multiple groups

# Indonesia Forest Futures

## What we were trying to achieve – *and not*

- “What if” analysis of options,
  - ***not*** choice of “right” option
- Consistent projection of indicators for comparison,
  - ***not*** “true” predictions
- Menu of realistic policy choices,
  - ***not*** one final answer
- Quick acceptable assumptions,
  - ***not*** detailed primary research
- Reasonable sensitivity analysis,
  - ***not*** focus on every possibility

# Indonesia Forest Futures: Overview Of Framework, Data, Outputs



## Data Sources

- Neraca Sumber Daya Hutan
- Statistik Kehutan and BPS
- Respected published sources

## Value (monetized) measures

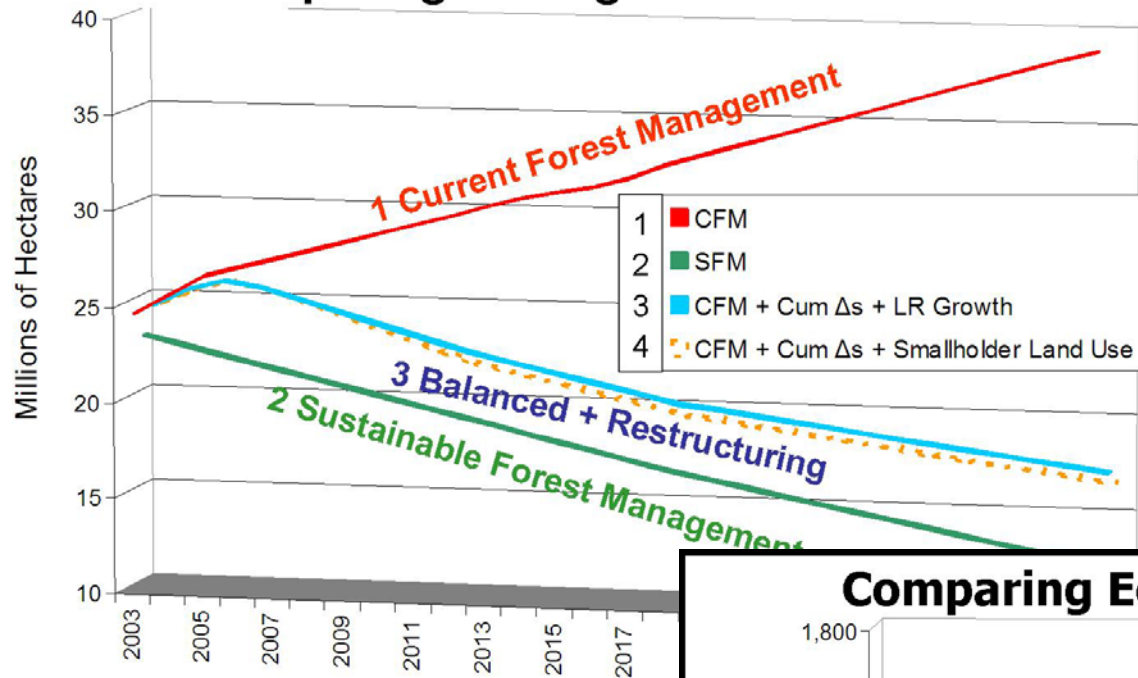
- Timber harvest & processing
- Environmental services lost
- Production on alt. land uses

## Physical measures

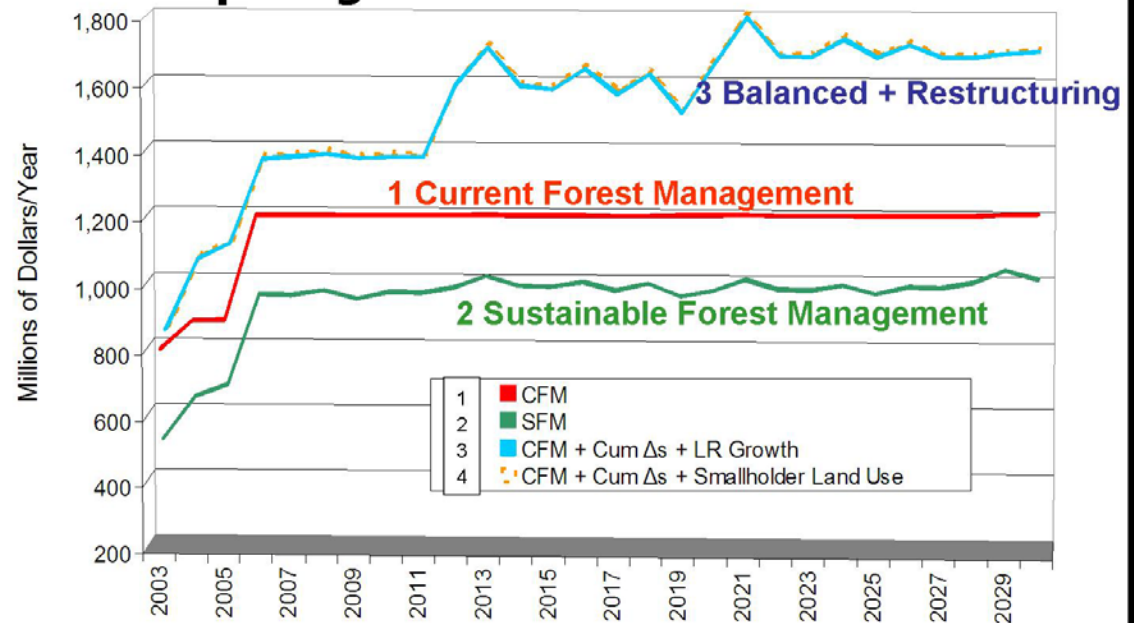
- Forest area & planting by forest type
- Timber harvest & volume of processed wood
- Gross revenue, tax revenue, profit
- Numbers of people employed
- Land area in alternative land uses

# Indonesia Forest Future Scenarios:

## Comparing Damaged Forest Area



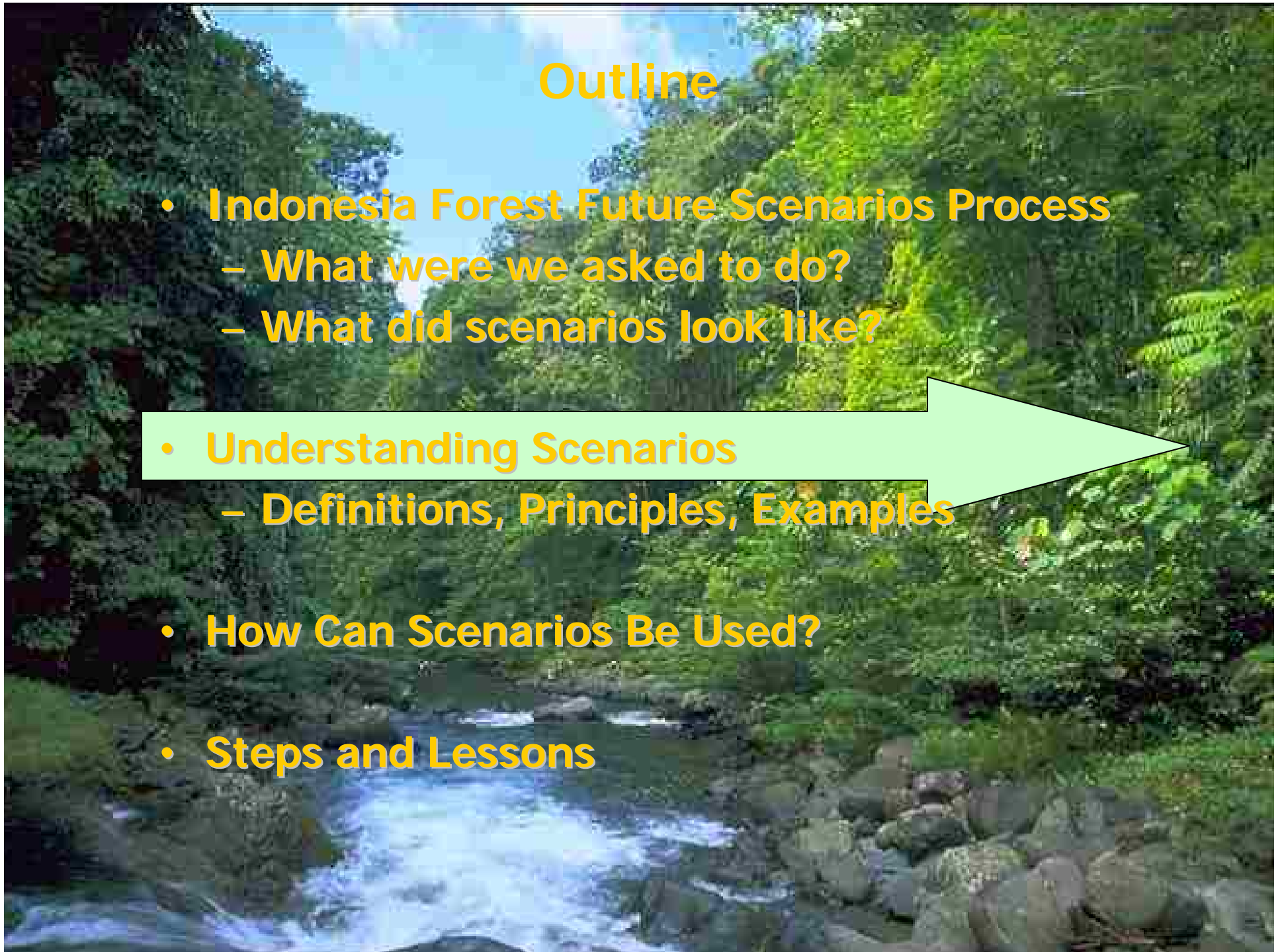
## Comparing Economic Value Over Time





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# What's a "Scenario"?

## **A possible future path or outcome:**

- Described by outcome indicators projected into future
- Based on a particular set of parameters & assumptions
- Consistent with an identifiable trend or policy path
- Based on an analytic framework (optional?)

## **A scenario is not:**

- A single trend or path: rather a package of outputs based on several variables
- Consistently positive or negative in direction: different outcome indicators will go in different directions

# Scenarios: Basic Principles

For policy relevance, alternative scenarios should be:

- Understandable
- Acceptable
- Accessible
- Changeable (responsive to discussion and feedback)

To support this, the analytical framework should be:

- General and interactive
- Able to consider alternative inputs from policy makers
- As simple as possible, but realistic -- not simple minded
- Able to produce future projections with clear graphics
- Make key points about future impacts on key indicators

## Distinctions and Definitions

**“Parameters”** = technical inputs that drive the calculations

- Ex: Timber prices, rate of planting, production costs

**“Assumptions”** = ranges of values for parameters/inputs

- Conservative, moderate, realistic, achievable?
- Optimistic, Pessimistic?
- Current trends, expectations?

**“Indicators”** – Outcome variables that we want to project

- Physical measures: Forest cover, Timber harvest, Jobs
- Value measures: Net revenue, Export earnings, Ave wage
- Qualitative measures: Impacts on poverty, social relations

# What Does a Scenario Look Like?

## Quantitative Presentation

- Snapshot of current situation, past trends
- Projected evolution of key indicators over time
- Underlying assumptions and policies required
- Graphic representations, highlighting trends
- Comparison, key differences among scenarios

## Qualitative Discussion

- Key concerns associated with each scenario
- Constraints, opportunities, and costs
- Institutions, policies, human resources
- Mitigating policies or approaches



# **Scenarios: Examples from Indonesia**

## **Current/Status Quo:**

- Projects implications of over-harvesting, under-planting
- Baseline (pessimistic?) for comparison

## **Ideal/Sustainable:**

- Assume sustainable harvest, compliance with law, etc.
- Baseline (optimistic?) for comparison; unrealistic?

## **Slow Intervention:**

- Gradual change in policies & practices over time

## **High Investment:**

- Active effort to change industry mix, establish plantations

## **Egalitarian/Reallocation – Pro Poor**

- Assumes greater role for small holders, land access

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# What Are Scenarios For?

## Scenarios can help:

- Describe/quantify future trends, probable outcomes based on assumed inputs (initial conditions, policies)
- Explain pros & cons associated with a particular path
- Clarify intended outcomes vs. unintended side effects
- Educate policy makers about development choices
- Determine the objectives of policy makers (based on choices among outcomes)

# How Should Scenarios be Presented?

Which indicators most interest policy makers?

- Revenue and jobs: usually key
- Physical / environmental measures?
- Economic / value based measures?

How do they receive and process information?

- Verbal or visual: text, graphs, tables
- Private meeting vs. Seminar?
- Big picture findings or technical details?
- Interactive, responsive vs. clear choices?

What's the right time frame?

- Short run, long run
- Immediate decisions vs. long run possibilities



# Considerations for Developing Scenarios

Three main directions: Status Quo, Optimistic, Pessimistic

- Variations can be explored for more realism, acceptability
- Many options can be analyzed
- Only a few can be reasonably presented
- Details can be grouped into policy packages
- Wildly optimistic or pessimistic options tend to be cut

How many?

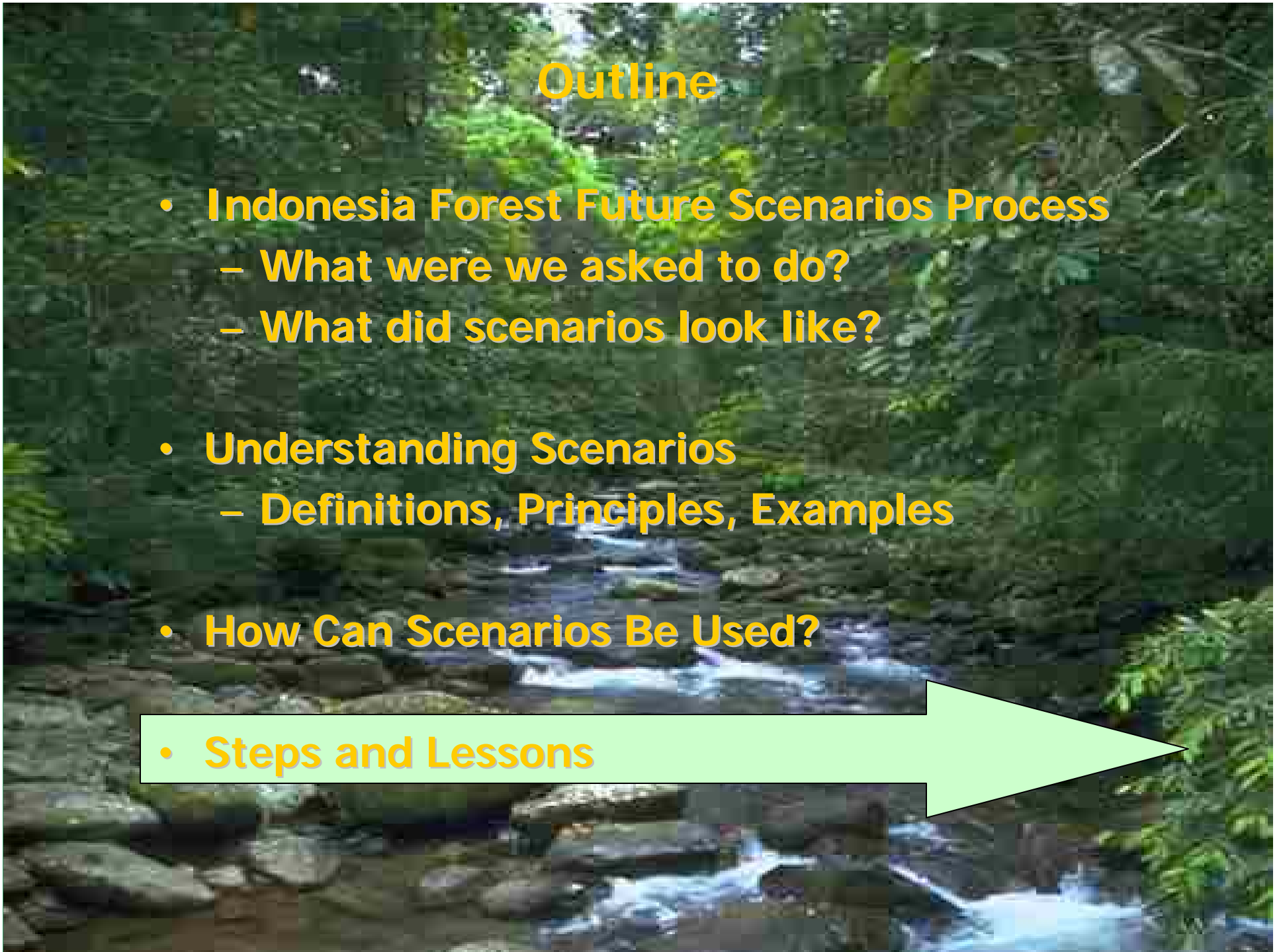
- Policy makers can only consider 3 or 4 options
- Too many options confuse practical choices
- Fewer options create clearer outcomes, policy relevance
- Best to limit to a few big picture trends at the outset.

## Choosing Scenarios: Optimistic or Pessimistic?

- Choosing a simple set of scenarios isn't simple
- "Optimistic" means different things to different people
- Industrial expansion:
  - Optimistic for industrialists & investors
  - But pessimistic for environmentalists
- 'Optimistic' assumptions for econ. growth can lead to 'pessimistic' projections for forest quality & env. services
- Scenario names can help describe the real underlying trend or outcome vision

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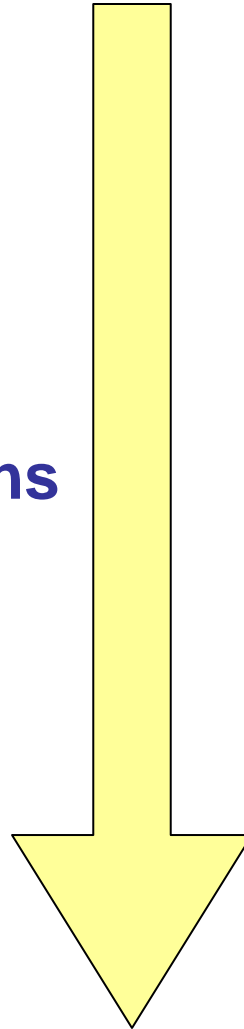
## Steps/Process for Developing Scenarios Need to Discuss, Clarify, & Agree

### Analytical Approach

- Basic analytical framework
- Key interactions & variables
- Technical assumptions
- Specifications for alternative policies
- Interim results & interpretations
- Specific outputs & formats

### Consultation Process

- Overall concept
- Critical indicators & outputs
- Basic alternative policy choices
- Future visions to be explored
- Interpretations for policy making
- Timing & key entry points



**Scenario Framework Supports  
Political Discussion**



## **Lessons Learned / Recommendations**

- Focus on the biggest picture possible
- Strive to get the attention of policy makers
- Focus on things that matter to them, not to you
- Timing is important: work to create opportunities
- Policy change is a long term process
- Policy analysis is not enough; presentation matters too
- Delivery matters, not just content: repetition
- Policy dialogue contributes, but it needs to converge

## Forest

*"It is always in one's power to cut a tree down, but time only can place them where one would have them, after the ground is stripped . . ."*

George Washington, letter to his manager, Jan. 25, 1795

As holds true today, much of the area surrounding Mount Vernon in Washington's time was woodland. Over half of his 8,000-acre estate was forested. Oak, pine and locust were harvested for the construction of buildings. Tremendous amounts of firewood fueled more than 30 fireplaces on the Mansion House Farm alone. Despite an apparent abundance of timber, Washington carefully managed its use. He repeatedly demanded that fallen trees be collected for firewood, and he planted live hedges of holly and cedar in hopes of replacing wooden fences.