

The case study Augsburg Western Forests an introduction

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Case study area

Augsburg Western Forests

„Nature park“

53,000 ha forest area

Most important species

Norway spruce (60 %)

European beech (10 %)

Important in future?

Douglas fir (1 %)

Young stands underrepresented

Highly productive forest sites

Oceanic climate
Tertiary bedrock with loess cover

Long tradition: Profitable forestry with Norway spruce outside its natural range

Augsburg today

- Third-largest city in Bavaria (300,000 inh.)
- Economic hotspot (MAN, Airbus, Siemens, Fujitsu ...)
- „Most Sustainable Major City“ 2013
- Water management - UNESCO world heritage –2019

Case study area

Augsburg Western Forests

**Bavarian state forest (green),
Municipal forest (red):**

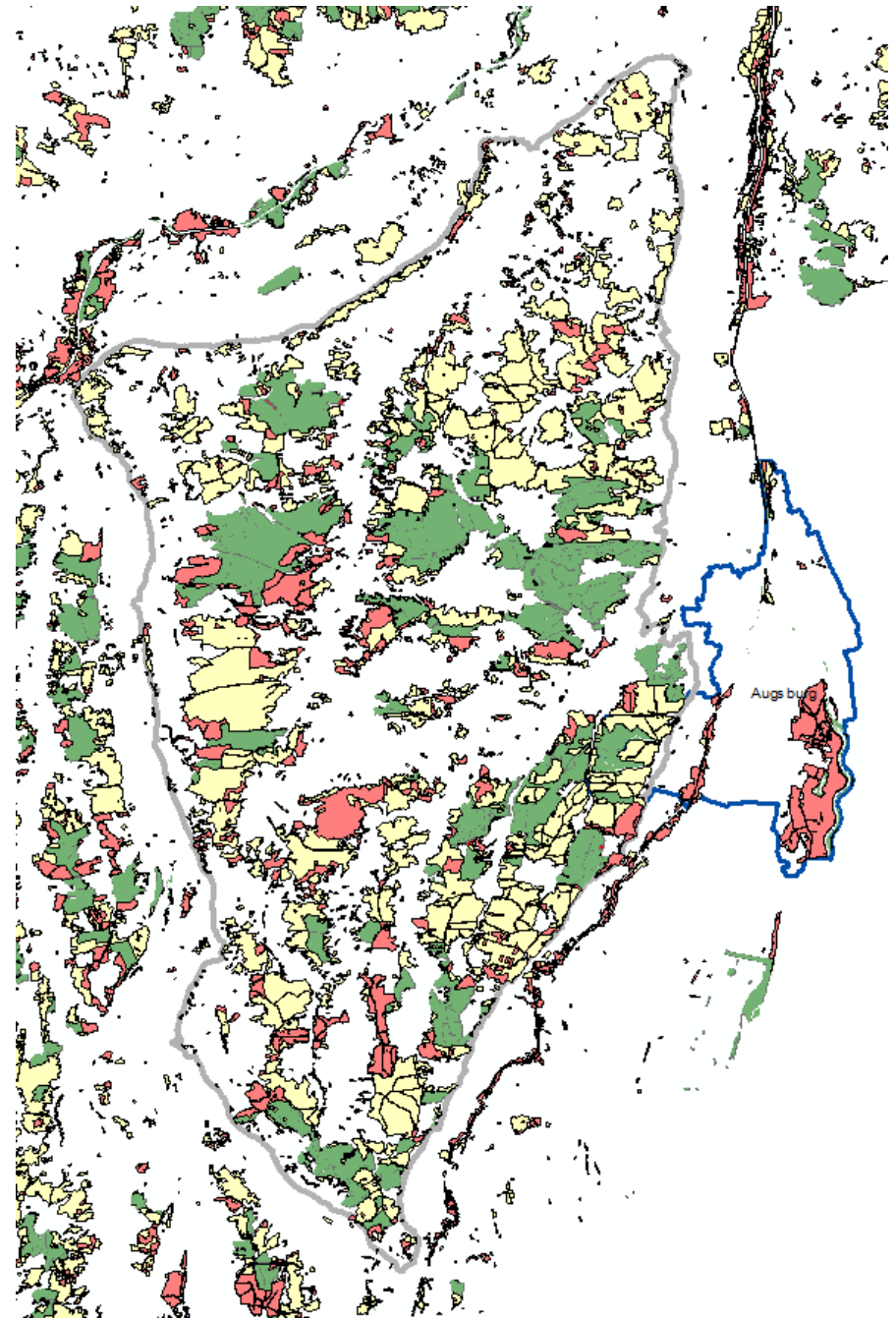
Goal: Provide a multitude of ecosystem services including income, reduce risk

Forest conversion into mixed, rich structured stands since ~20-30 years
Conifers ~ 55% of the area

Private forests (yellow):
Mostly large estates with own personnel

Goal: Generate income

Rely on conifers (77% of the area), typically age class forest



Allies and power resources for knowledge transfer within Augsburg region - based on the pre-analysis*

Interest in	Power resources		
	Means of coercion	Incentives	Dominant information
Forest management	+++	+	+++
Bying and processing timber	+	+++	++
Employment in forests	++	+	+
Renewable energy regeneration	+	+++	++
Recreation	++	+	++
Hunting	++	++	+
Certification	+	+++	++
Water provision	++	++	+
Nature conservation	++	++	+++

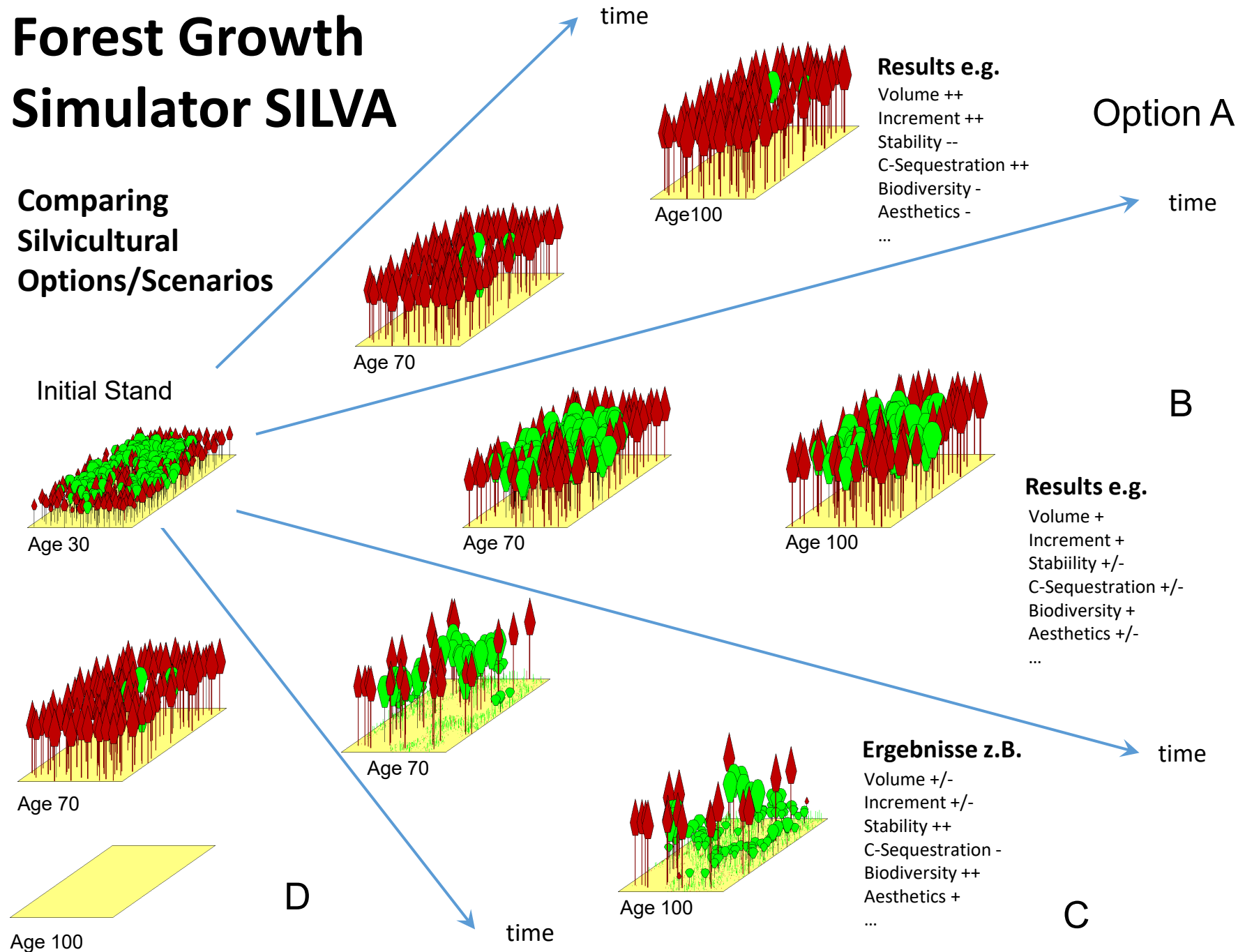
Multifunctional

Timber

Set aside

Forest Growth Simulator SILVA

Comparing Silvicultural Options/Scenarios



Case Augsburg – Silvicultural Scenarios on Landscape Level

Local Options
(Field Research UGOE)

Main Scenarios
on landscape level

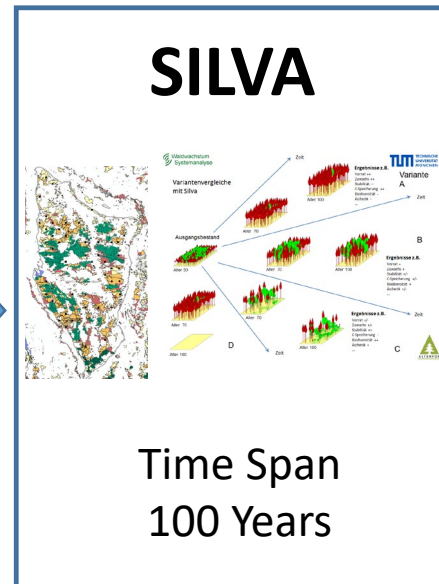
A) Production Forest

B) Multifunctional Forest

C) Setaside



Four Climate/Wood Demand Scenarios – only constant climate in this presentation



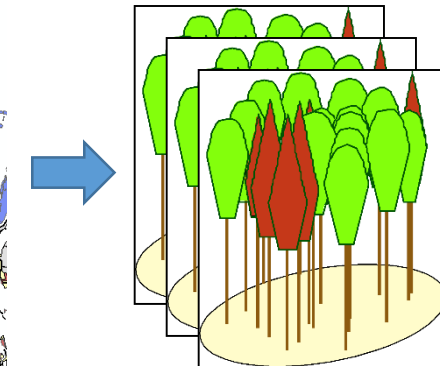
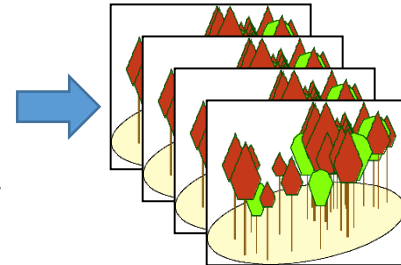
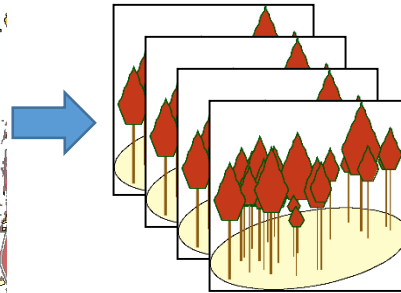
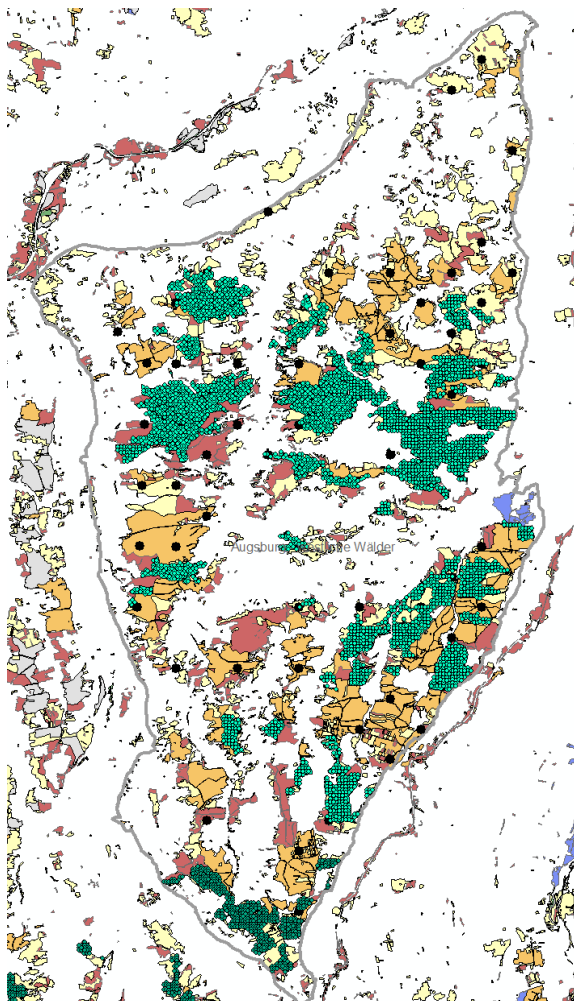
Each main scenario was calculated on the whole area

with the same initial situation

Emphasizes the contrasts

- A) Conifers promoted – short rotation – transformation into highly productive, even aged conifer forest
- B) Deciduous species promoted –frequent thinnings – target diameter system, transformation into rich structured, productive mixed forests
- C) Strict protection, no active silviculture

Reconstruction the current status from State Forest and National Inventory



Grouping the inventory points by
Stand Type – about 400 Types

Simulation by Stand Type
Area per Type is known
=> **Weighting by type**

Silviculture in the Model is defined
per Stand Type

Very broad range of possibilities