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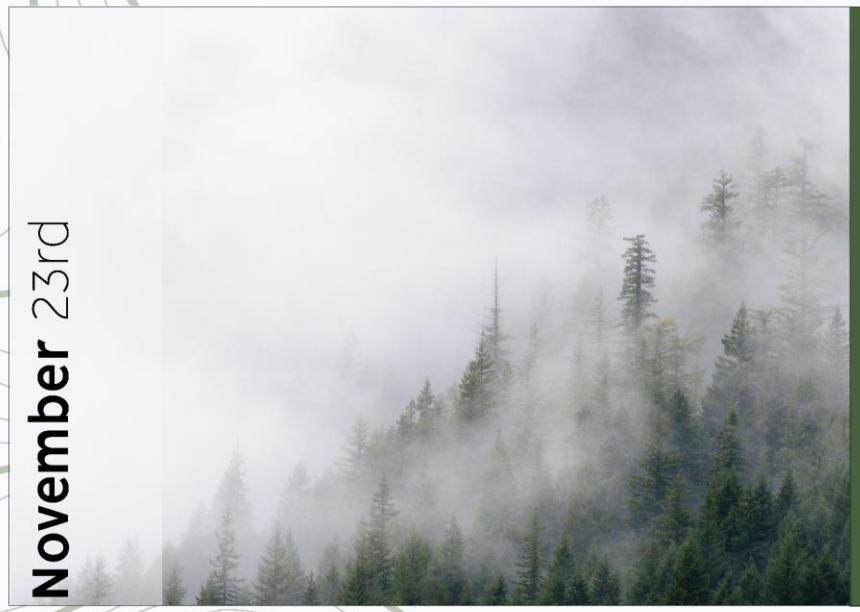


# The Role of Climate-Smart Forestry

*Addressing Changes and Solutions in Environmental Policy For Sustainable, Climate-Neutral Economic Development*

Ajdin Starčević

# Sustainability and Forestry

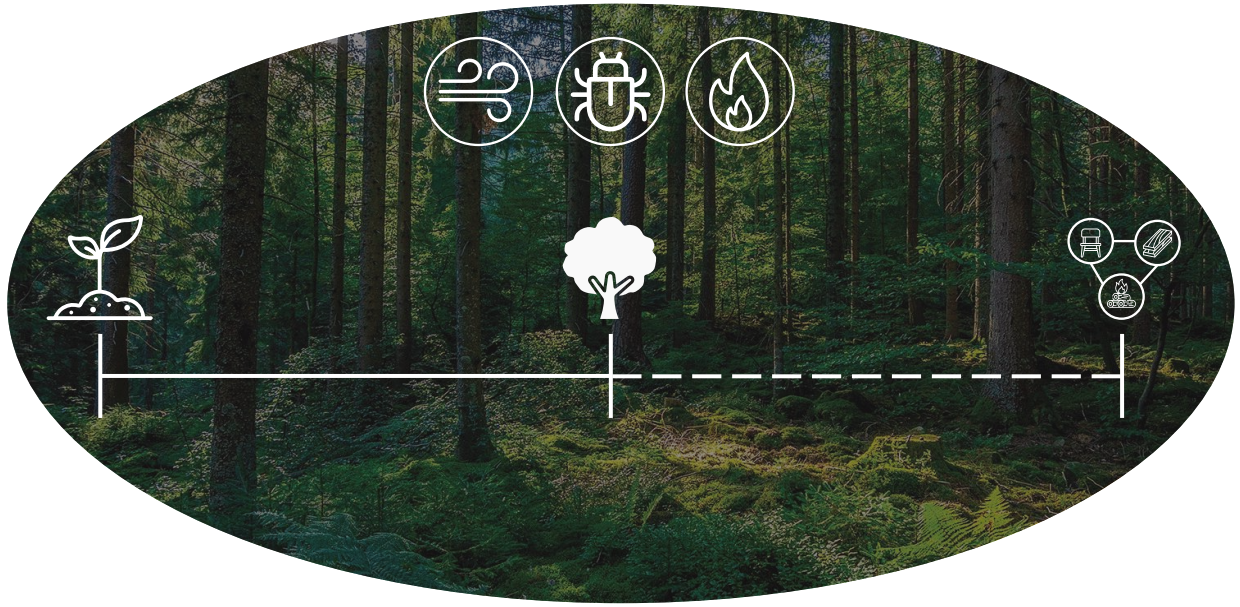
- First termed in **1713** in *Sylvicultura oeconomica*
- Used in many different connotations
- Defined forestry for the next 300 years

# Sustainability and Forestry

- First termed in **1713** in *Sylvicultura oeconomica*
- Used in many different connotations
- Defined forestry for the next 300 years
- Climate change induced need for a **paradigm shift**
- Forests becoming **carbon sources** in some areas
- **How** to **counteract**?

## Sustainable forest management

## Climate-smart forestry




Mitigation
Adaptation
CSF
Ecosystem Services

## Climate-Smart Forestry:

/ˈklaɪ.mət/-/smɑːt/ /ˈfɒr.ɪ.stri/

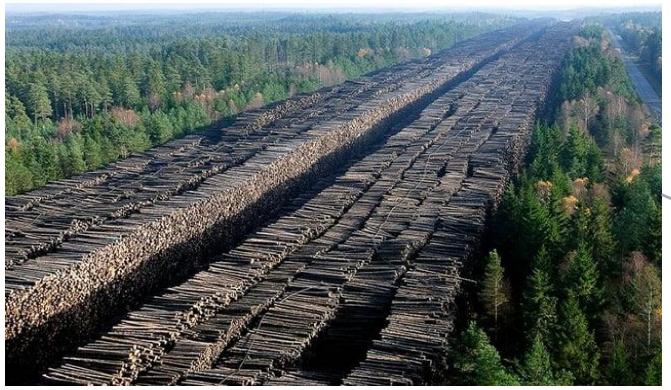
Climate-smart forestry (CSF) is an integrated forestry approach that encompasses the **entire forest value chain**, from forest management to the utilization of long-lived wood products and bioenergy. As a holistic approach it involves a diverse range of strategies aimed at incentivizing the **integration of climate-related objectives** within the forestry sector, while at the same time **ensuring the sustainable provision** of a wide spectrum of **ecosystem services**. CSF exhibits a high degree of **spatial and temporal adaptability**, allowing it to be fine-tuned to the specific conditions and requirements of various biogeographical areas **now and in the future**.


SYSTEM
OBJECTIVE
PRACTICE

# Management practices

| Practice | Region | Adaptation/Mitigation |
|---|---|---|
| **Forest not established** | | |
| Mechanical/manual soil preparation | Boreal forests | Mitigation |
| Fertilization | Temperate and boreal | Mitigation |
| Tree species selection: native | All | Mitigation |
| Tree species selection: native other provenance | All | Adaptation |
| Tree species selection: non-native | All | Adaptation |
| Can also be in established forests | | |
| Natural regeneration | All | Adaptation/Mitigation |
| Artificial regeneration with seeds | All | Adaptation |
| Artificial regeneration with sapplings | All | Adaptation |
| **Young forest** | | |
| Tending | All | Mitigation |
| Control of ungulates | Temperate and boreal | Adaptation |
| Thinnings | All | Adaptation |
| Prunning | Temperate | Mitigation |
| **Mature forest** | | |
| Prescribed burnings | Mediterranean & boreal | Adaptation |
| Single tree selection | All | Adaptation |
| Regeneration cuts | All | Adaptation |
| Intensive harvesting | Boreal forests, plantations | Mitigation |
| Increase in rotation age | All | Mitigation |
| Decrease in rotation age | Boreal forests, plantations | Adaptation |

# Management practices - examples

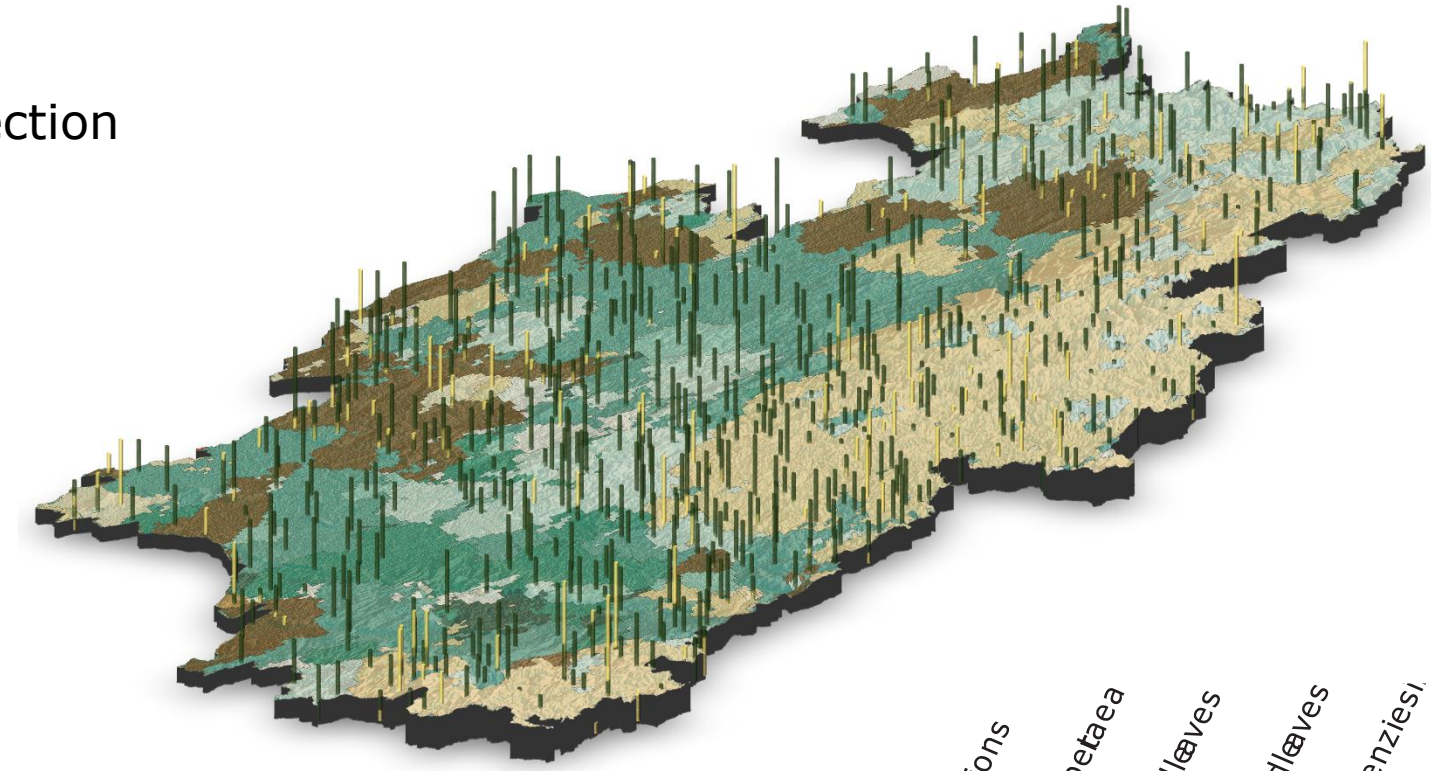


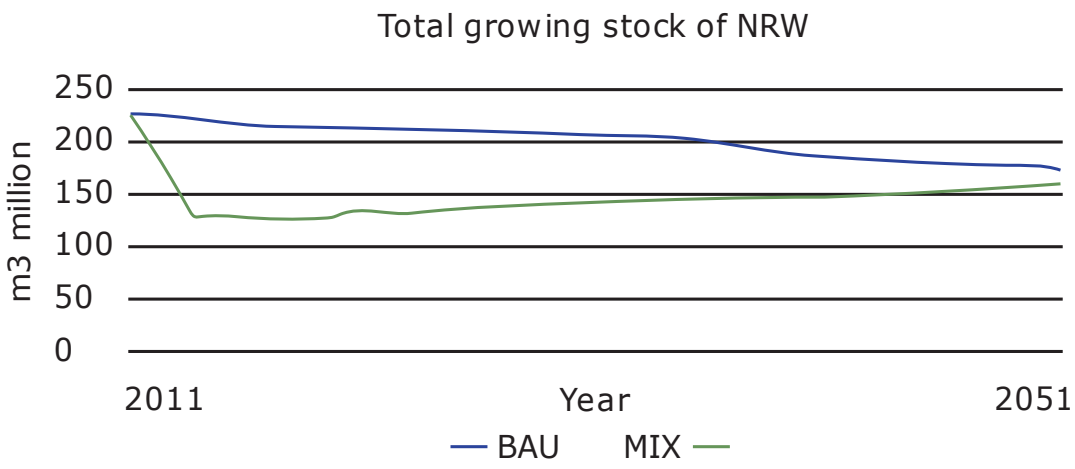
**Germany – NRW**
Reforestation of degraded spruce forests with site-adapted broadleaves

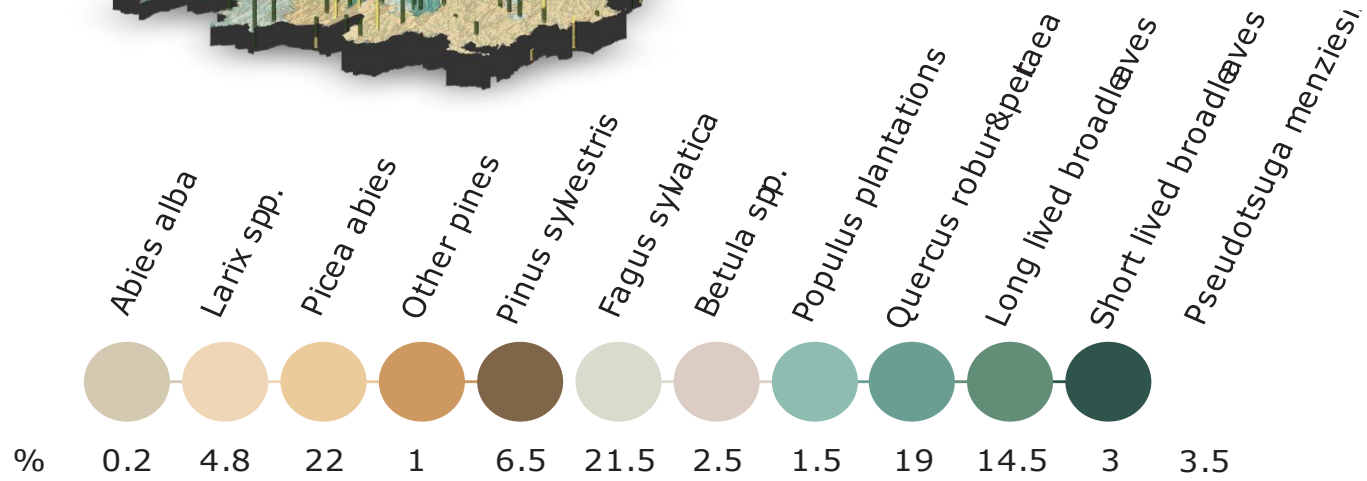
SUPERB
Upscaling Forest Restoration

# How to measure implementation success?

- Comparison between BAU and MIX projection scenarios
- MIX: diversifying species composition
- 40 year runs
- Restoration takes a lot of time!





# Concluding remarks

- Nothing changes if nothing changes
- There is no ***one-size-fits-all*** approach
- Importance of tailoring approaches to specific regions
- Imperative lies in pinpointing the optimal management practices in the right locations

# Thank you!

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