

# Forest adaptation to climate change - best practices from state forest management organizations

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# Policy Context

## EU Green Deal (2019)

- » Climate crisis (Climate Law, 2030 Climate Target Plan, LULUCF review, RED II, EU Climate adaptation Strategy)
- » Biodiversity crisis
- » Sustainable resources consumption (circular bio-based economy)

## FOREST EUROPE (2021) - Bratislava Ministerial Declaration 'Adapting pan-European Forests to climate Change'

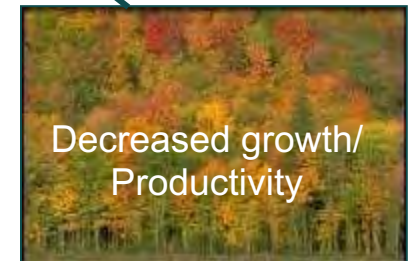
- » Strengthen national efforts
- » Improve international cooperation in the pan-European region
- » Work towards a coordinated pan-European forest risk knowledge mechanism

## European State Forests' response

- » Internal survey to diagnose a problem (2019)
- » Experience & know-how exchange on actions taken on the ground (2020)

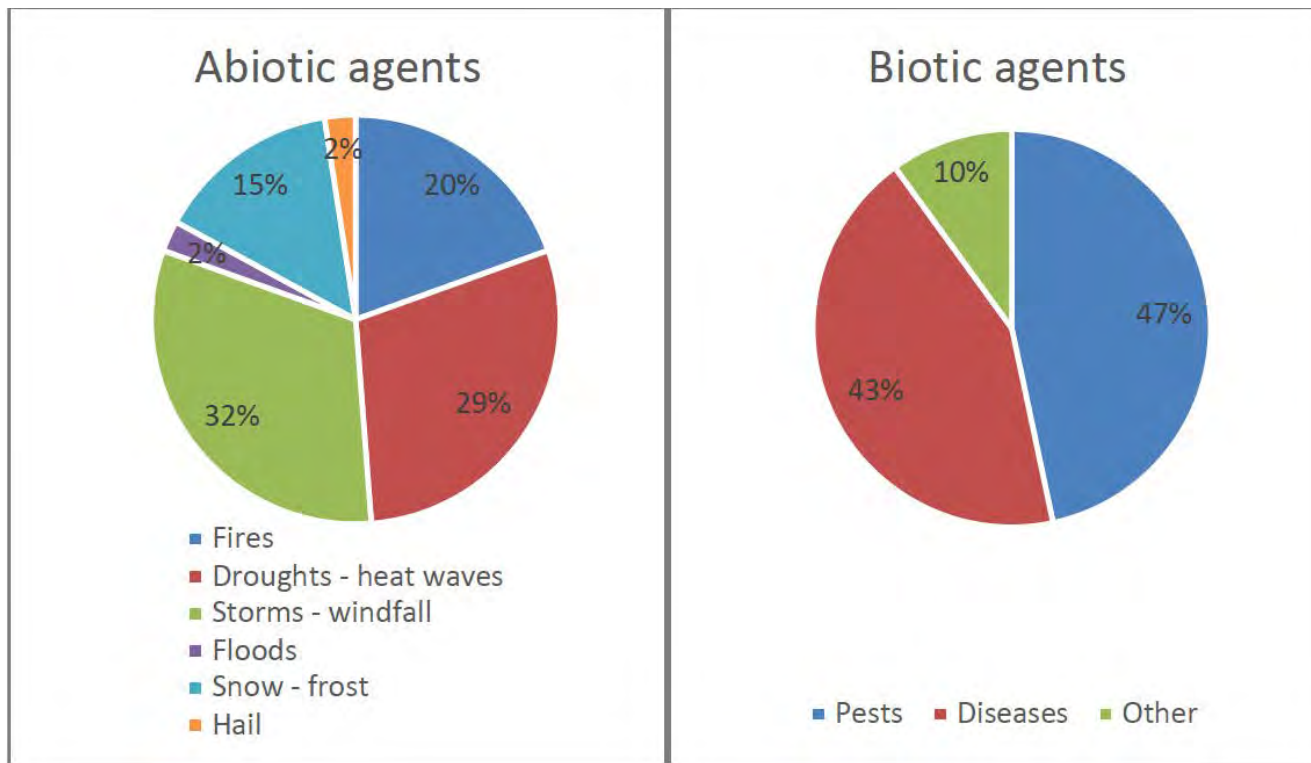


# Is there a problem with European forests?

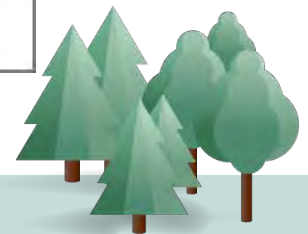


# Internal survey outcomes: damages in state forests

- » Results of an internal survey – reporting period 2018-2019\*
- » 52% of damages were caused by abiotic agents and 48% by biotic agents.



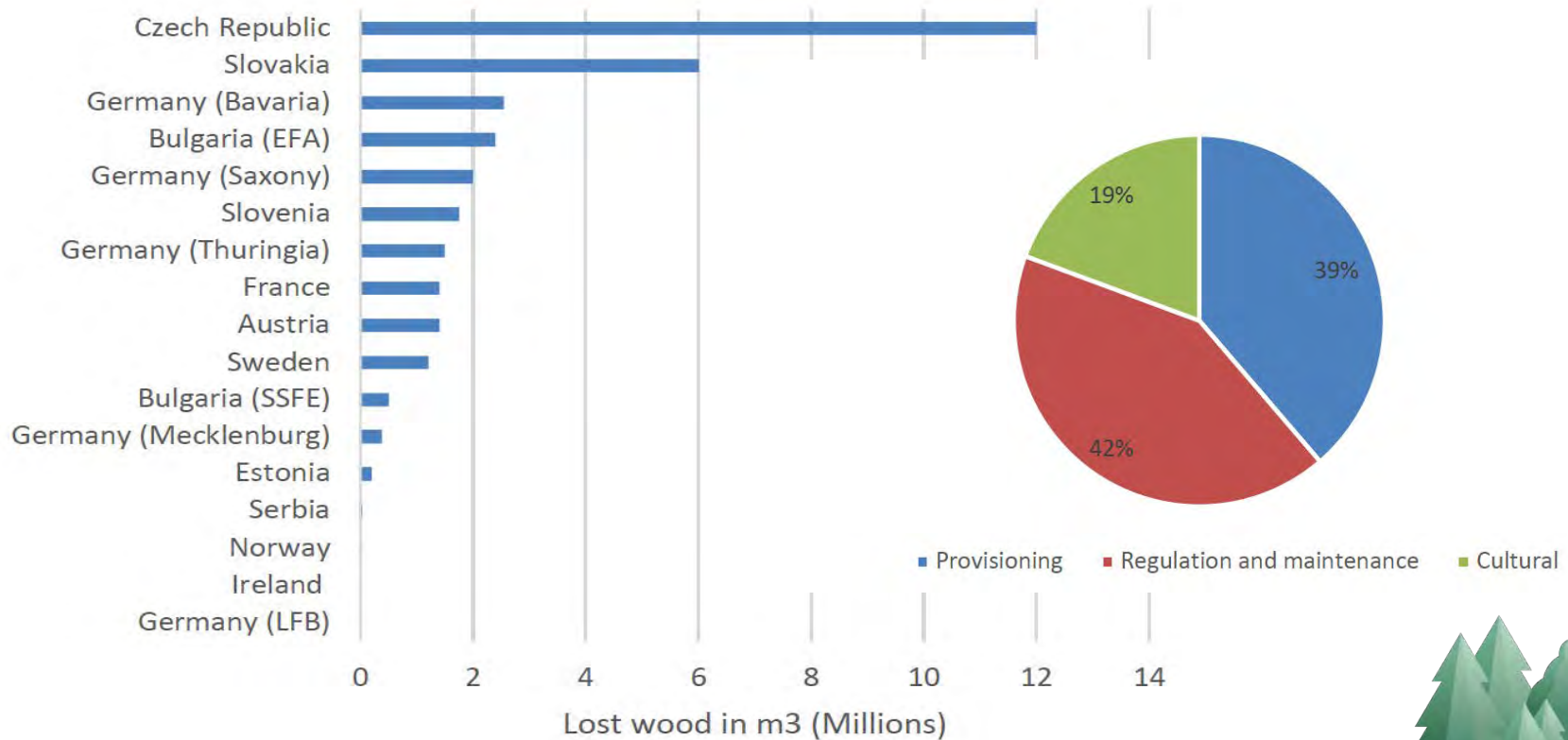
\* A few members, reported data that is a bit older



# Climate change related damages in State Forests

- » More than 1,2 million ha of forest have experienced damage, resulting in the loss of more than 36 million m<sup>3</sup> of wood.

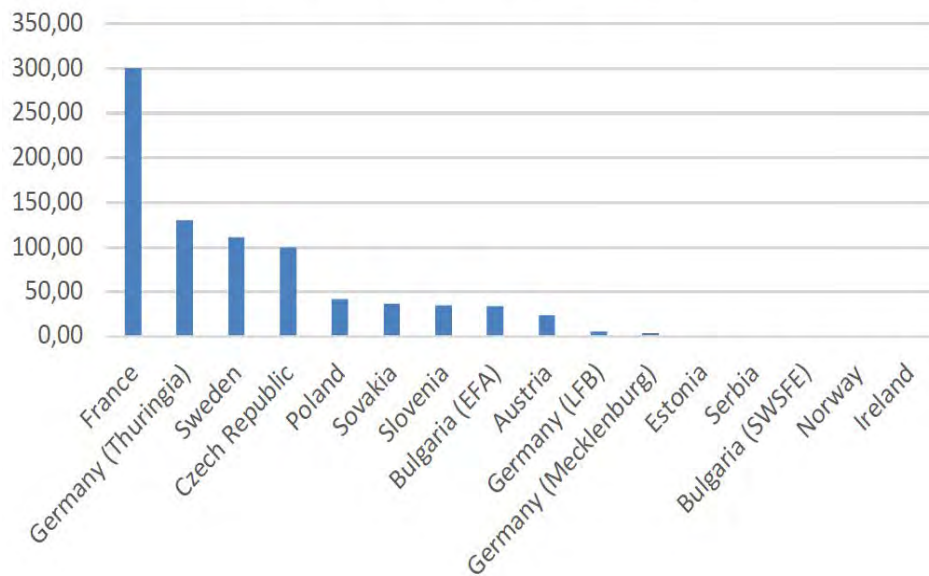
Member from Czech Republic has noticeably higher loss of wood than others



# Climate change related damages in State Forests - outcomes: cost -

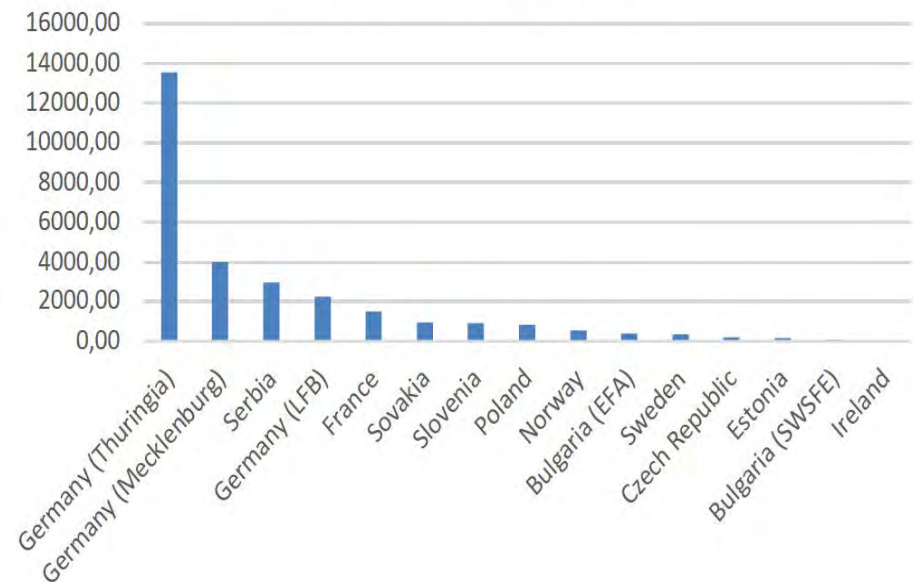
- » Close to 800 million EUR were/will be spent to recover from forest damages.
- » In order to tackle the damages, approximately 84% of the enterprises had to engage additional workforce in the form of contractors and other state forestry organizations/enterprises.

Cost of recovery in EUR (Millions)



Cost of recovery in Mil EUR

Cost of recovery (EUR/ha)

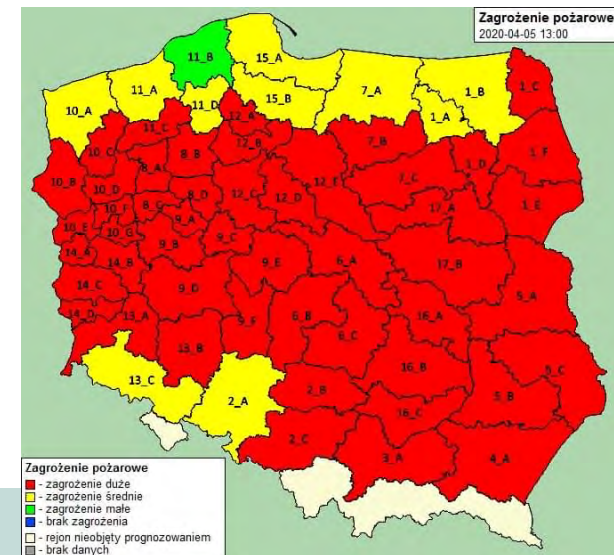


Cost of recovery in EUR per ha



# Measures taken: combating and preventive

- » Regular forest management and its adaptation:
  - thinning
  - cleaning the sites
  - sanitary felling
  - regeneration of the affected areas
  - adapting the forest species mixture, assisted migration
  - ungulates management
  - different monitoring and observation activities



# Climate change related damages in European State Forests - measures taken: combating and preventive -

- » Other measures: chemicals, fungicides, and insecticides such as pheromone traps, commercial products (Rotstop, Trico, browsing repellents)
- » Fighting forest fires: helicopters, engaging the ground crew and fire extinguishers were used
- » Prevention measures: raising the awareness of political decisionmakers, society and the media



The market situation → in the Czech Republic, the introduction of a dynamic purchasing system for public procurement was made. France searched for new outlets for industrial wood and wood for energy.

As storage played a significant role, resources were invested in preparing new and upgrading old storage locations, both wet and dry.



# European State Forests' best practices

## BEST PRACTICES IN CLIMATE MITIGATION AND ADAPTATION FROM EUROPEAN STATE FORESTS

### Creation of new forest stands and restoring disturbed forests

- 1** Coillte - Establishment of native woodlands on cutover peatland
- 2** Österreichische Bundesforste AG - Diversity as a prerequisite for climate-fit forests
- 3** ThüringenForst - Climate change adaptation and mitigation based on forest conversion of spruce stands in the higher elevations
- 4** Lesy České republiky - Reforestation of forests affected by large-scale calamities caused by climate change in areas larger than 10 ha
- 5** Junta de Castilla y León - Restoration of burnt forests in protected areas; adapting and mitigating climate change

### Preventive adaptation measures, including water and fire management

- 6** Lasy Państwowe - Adaptation of forests and forestry to climate change - small retention schemes and fire protection
- 7** Forestry and Land Scotland - Adaptation of Scotland's forests and associated land to help support Scotland's National Flood Risk Assessment
- 8** Statskog - Forest fire challenges and prevention measures

### Research, innovations and technology

- 9** Metsähallitus - Carbon classification in forests as a tool for climate-smart forestry
- 10** Niedersächsische Landesforsten - Forest management planning based on site water balances to cope with climate change
- 11** Office National des Forêts - Adapting forest genetic resources in the face of climate change

### Using wood and wood products

- 12** ForstBW - Adaptation and mitigation activities supported by ForstBW
- 13** Sveaskog - Making sustainable biofuels from forest biomass

### Multipurpose approach to combat climate change impacts

- 14** Bayerische Staatsforsten - Sustainable forest management to tackle climate change



To read the full case studies, click here.

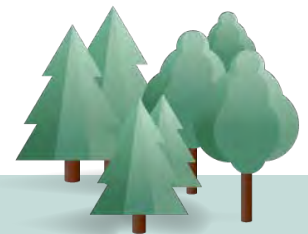


# Key messages

- » European forests & forestry value chain have important strategic roles in mitigation & adaptation
- » European forests should be integrated into a global climate & sustainable development architecture
- » Forests must be actively & professionally managed to make them climate-fit and able to cope with the challenges of climate change
- » 3 „S” matters – apart from sequestration in living trees, the storage in wood products as well as substitution of fossil energy and materials must be accounted
- » Resources should be mobilized to assist adaptation and restoration of forests damaged by climate change
- » EU climate policy should consider all other policies and market trends to ensure forest are dully managed and optimally used

*Lesson learned/take home message from State Forests*

***“Adaptive forest management in the face of anticipated climate change requires foresters to trial and test new forest management approaches in an integrated way. This implies learning by doing, including accepting mistakes which cannot be totally avoided.”***



# Challenges ahead

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## Political:

- Changing policy environment (climate/energy/environment/economy) – progressing fragmentation of “forest issue” in the EU policy making
  - EU Green Deal → Climate law, Bioenergy law, Biodiversity Strategy, EU Adaptation Strategy, Forest Strategy, Monitoring & Strategic plans law, Deforestation law – what future option for forests?
  - Sustainability of woody biomass (RED II)
  - Sustainable finance (Taxonomy)
- Multifunctionality and sustainability as a policy and management concept is challenged

## Environmental:

- Adaptation to climate change – resilience of ecosystems at risk vs large scale conservation
- Timber production or ecosystem services, or both?
- Increasing restrictions – old-growth protection/setting aside/new certification systems

## Socio-economic:

- Public perception – license to operate
- Conflicting demands: provision of renewable raw material & products vs. bio-energy vs. leisure-recreation, healthy livelihoods, clear water/air, etc.

## Innovations



# EUSTAFOR 2022



- » Brussels-based voice of European state forestry since 2006 with EU and pan-European focus
- » 36 Members from 24 countries
- » Revised Strategy & Vision towards 2026
- » Promotion of SFM and multi-purpose forestry
- » Large-scale state land managers



# EUSTAFOR in numbers

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- » Total land area managed ~49 mill. ha (~30% of EU forests)
- » Total forest area managed ~42 mill. ha (including French overseas departments)
- » FMP as an obligatory management tool embraces principles of sustainability and multifunctionality
- » Protected and protective forests ~16 mill. ha & ~ 8 mill. ha of N2K
- » Certification in SFMO: 43,6 mill. ha (23,6 mill. ha PEFC & 19 mill. ha FSC & 0,6 mill. ha other); overlaps
- » Average size of public forest holding - more than 1000 ha (considerable differences among countries)
- » Annual increment ~200 mill. M3
- » Annual harvest ~130 mill. M3
- » Number of employees ~100 000





**Thank you**