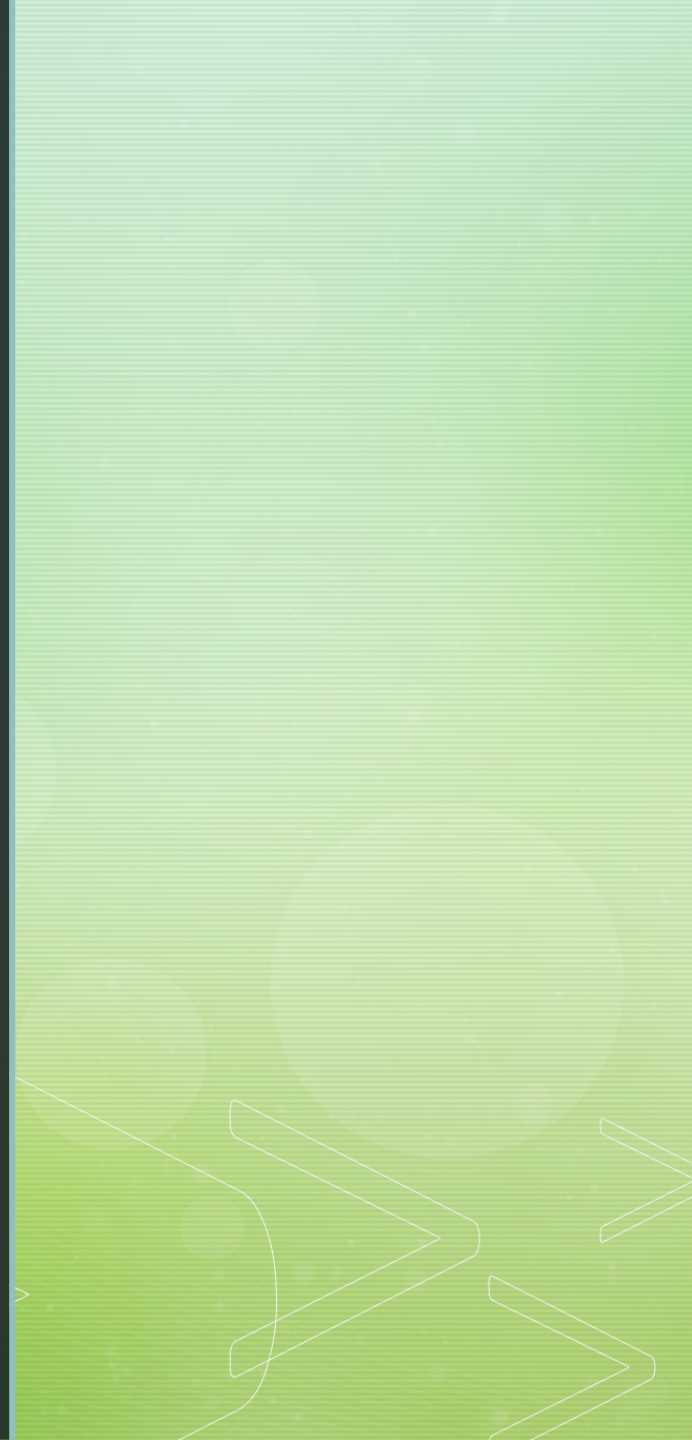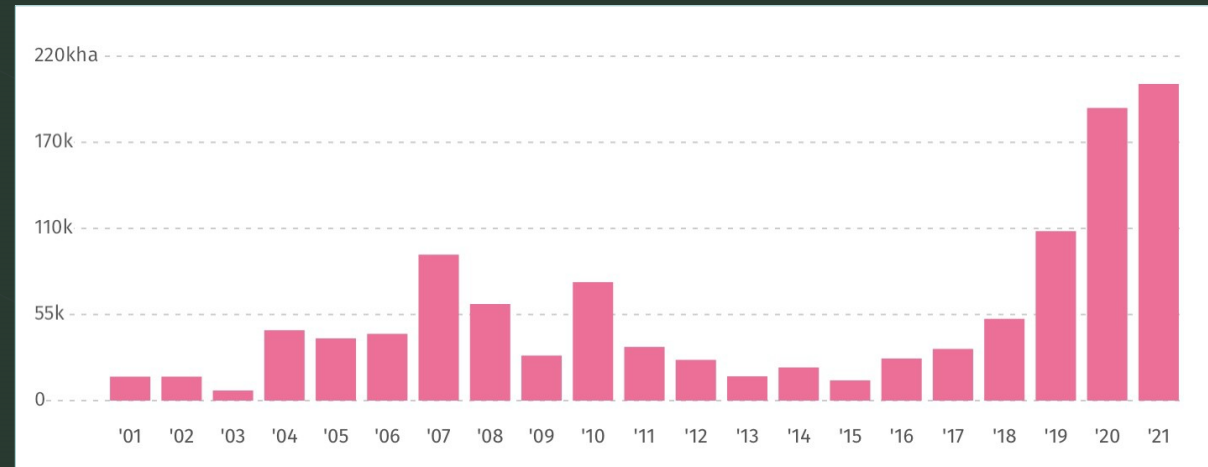# Reasons and consequences of deforestation in
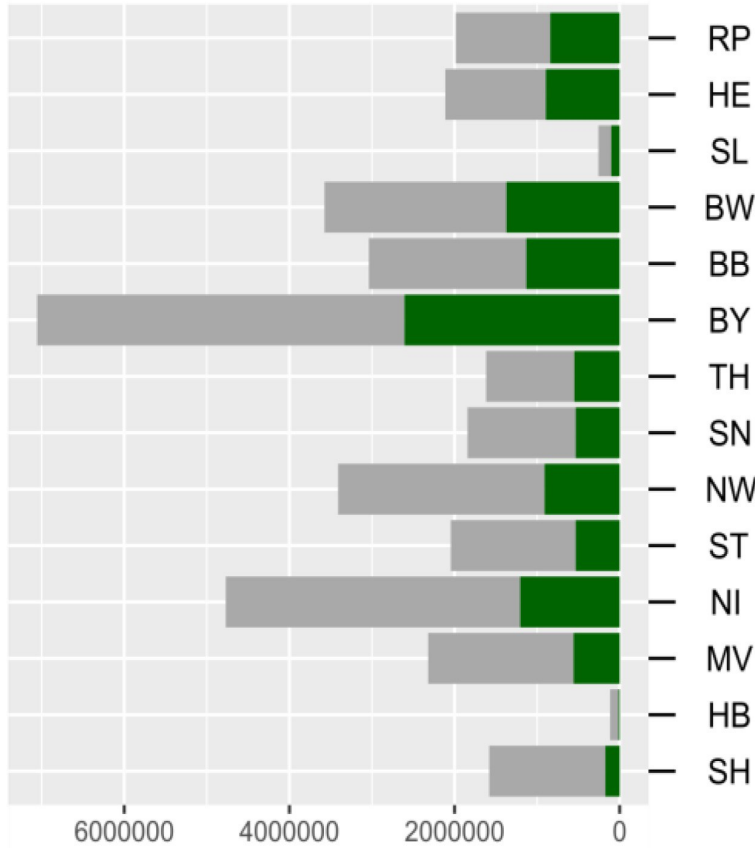
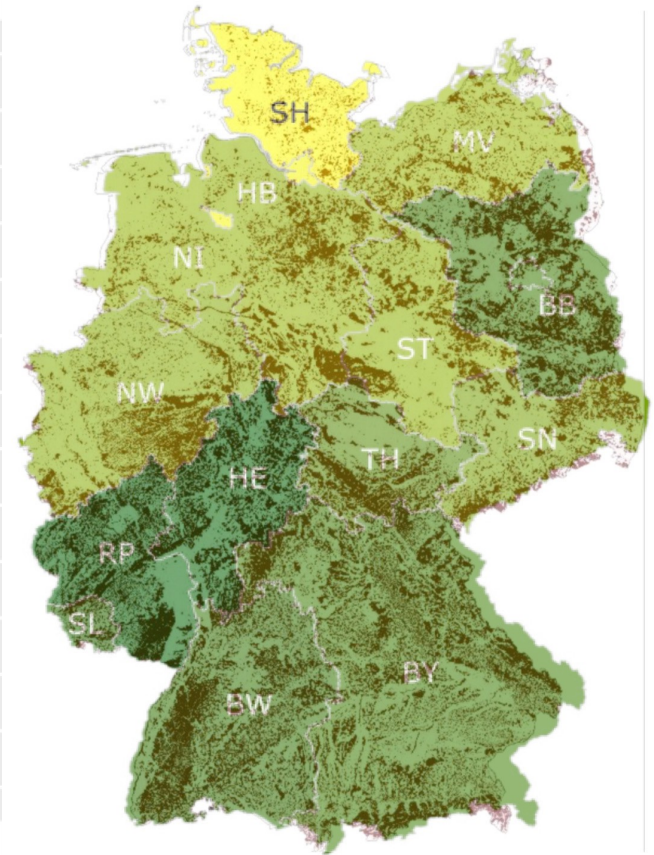# Germany

Tree coverage in Germany
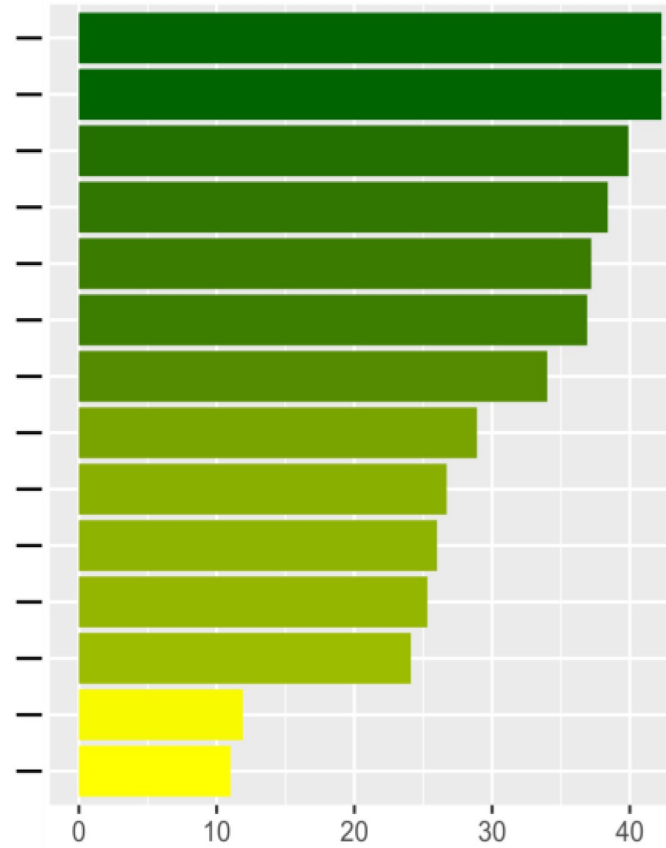
- Germany is one of Europe's most forested countries

- In 2000, 35% of Germany was natural forest cover –> 12.5 Mha

- Since then to 2021, there was a 9,1% decrease in tree cover (not taking gain into account) –> 1.14 Mha

- 6.42 kha of this loss due to fires

- In 2020, 32% of the land area in Germany is forested –> 11.4 Mha

Area forest cover of total land area (ha)

Percent forest cover

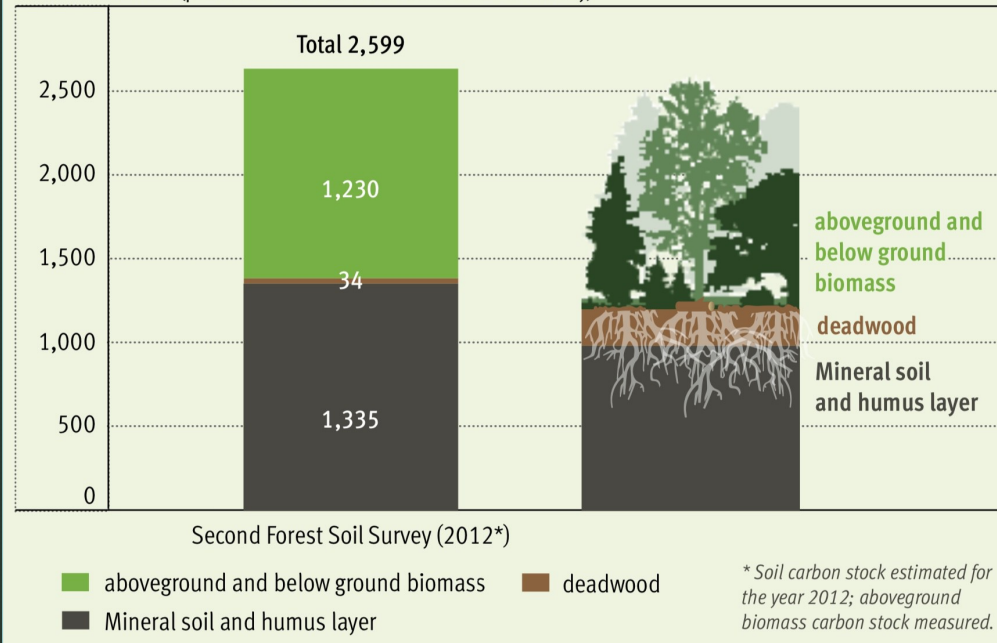# Deforestation in Germany Reasons:

- 2018–2020 prolonged periods of drought and hot spells and low water levels –> weakening the trees and providing favourable conditions for pests

- Air pollution

- Large–scale clearance –> clear–cutting has increased since 2018 and continues

- Pest: dark beetle presents the greatest danger with large areas dying off and trees being removed to prevent greater loss
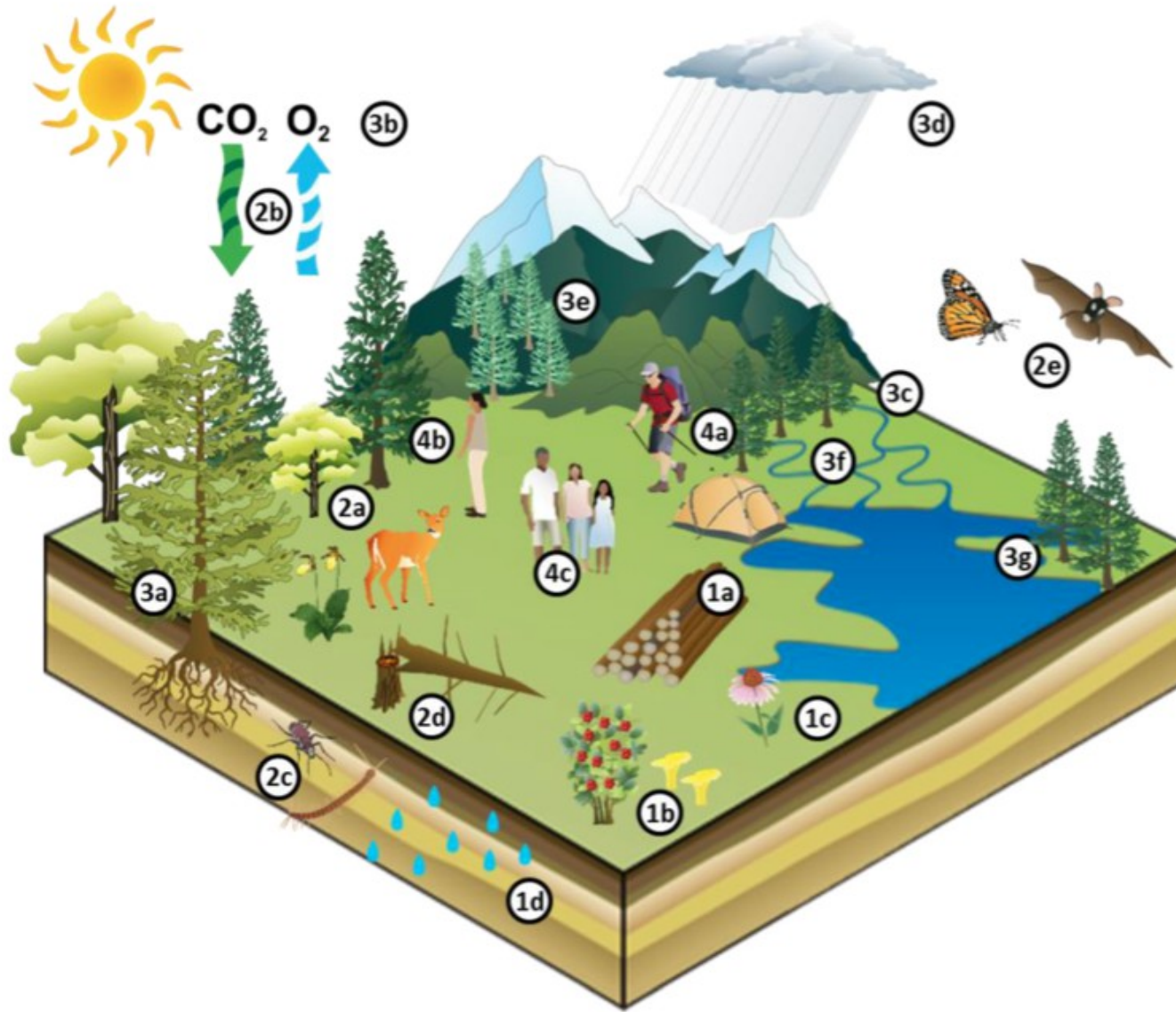
Forest carbon

Total carbon stock in forests and forest soils in Germany

in million tonnes (pertains to entire forested area in Germany)

Total 2,599

- 2,500
- 2,000 — 1,230
- 1,500 — 34
- 1,000 — 1,335
- 500
- 0

aboveground and below ground biomass
deadwood
Mineral soil and humus layer

Second Forest Soil Survey (2012*)

- ▇ aboveground and below ground biomass   ▇ deadwood
- ▇ Mineral soil and humus layer

*Soil carbon stock estimated for the year 2012; aboveground biomass carbon stock measured.

- ▪ Germany's forests sequester roughly 62 million tonnes of carbon dioxide form the atmosphere each year

- ▪ Forest carbon stock is about 2.6 billion tonnes in total (see figure)

Ecosystem services of forests

1. Provisioning Services
   a. Timber/Fibre (construction, energy)
   b. Food (deer, fruits, herbs, seeds, honey)
   c. Chemical and medicinal products
   d. Water

2. Supporting Services
   a. Habitats for fauna and flora (biodiversity)
   b. Photosynthesis/Primary production
   c. Soil formation
   d. Nutrient cycling
   e. Pollination, seed dispersal

3. Regulating Services
   a. Carbon storage (above/below ground)
   b. Purification of air
   c. Purification of water
   d. Climate regulation
   e. Protection against erosion/ avalanches
   f. Flood mitigation
   g. Protection against coastal erosion and storms

4. Cultural Services
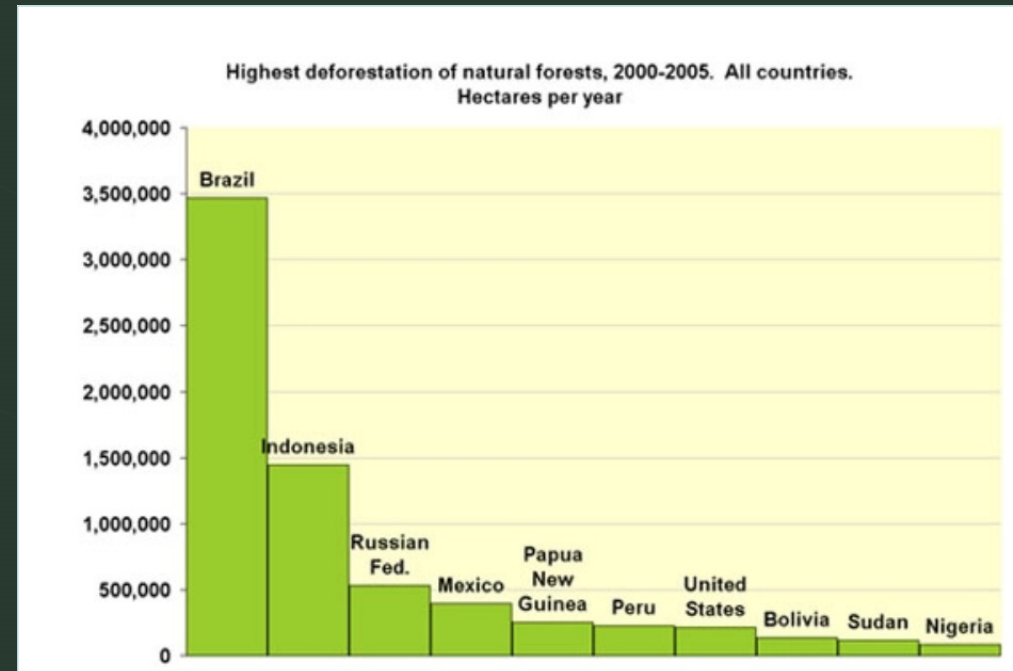   a. Recreation/Aesthetics
   b. Spirituality
   c. Education

Symbols courtesy of the Integration and Application Network, University of Maryland Center for Environmental Science (ian.umces.edu/symbols/)

Ecosystem serives of forest

- Graphic shows enormous indirect value forest plays in daily life
   -> comtribute to human well-being

- Forests provide raw materials, food, chemical/medicinal products and (often) access to water sources

- Supports land against erusion

- Self-regulating services as water and air filtration essential for humans and climate change

International context

- Germany's deforestation is fractional

- Especially deforestation of tropical rain forests are a problem

- Climate change causes more loss of forested areas -> storms, drought, fires

Highest deforestation of natural forests, 2000-2005. All countries. Hectares per year

Thank you for your attention!

If there are any questions left, you may ask them now.