



ICELANDIC FORESTRY PAST, PRESENT AND FUTURE

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A stylized, monochromatic illustration of a plant with several long, narrow leaves and a cluster of small, round buds or flowers, set against a dark green background on the left side of the slide.

ICELAND WAS
WOODED

Tall birchwoods in valleys



Open with rich understory vegetation



More *Sorbus aucuparia* than today



They covered whole hillsides



Scrubby along the coast



And towards the highlands



Very low growing in some places



A stylized, monochromatic illustration of a plant with several large, pointed leaves and a cluster of small, round buds or flowers on a thin stem, set against a dark green background on the left side of the slide.

THE WOODLANDS
WERE USED
UNSUSTAINABLY

Burned to create grazing land



Charcoal was important for smelting and working iron



Mynd: Vigfús Sigurgeirsson

Charcoal pits are found all over Iceland



Harvested for fodder



Fuel wood for cooking until the 1940s



Mynd: Jón Jónsson

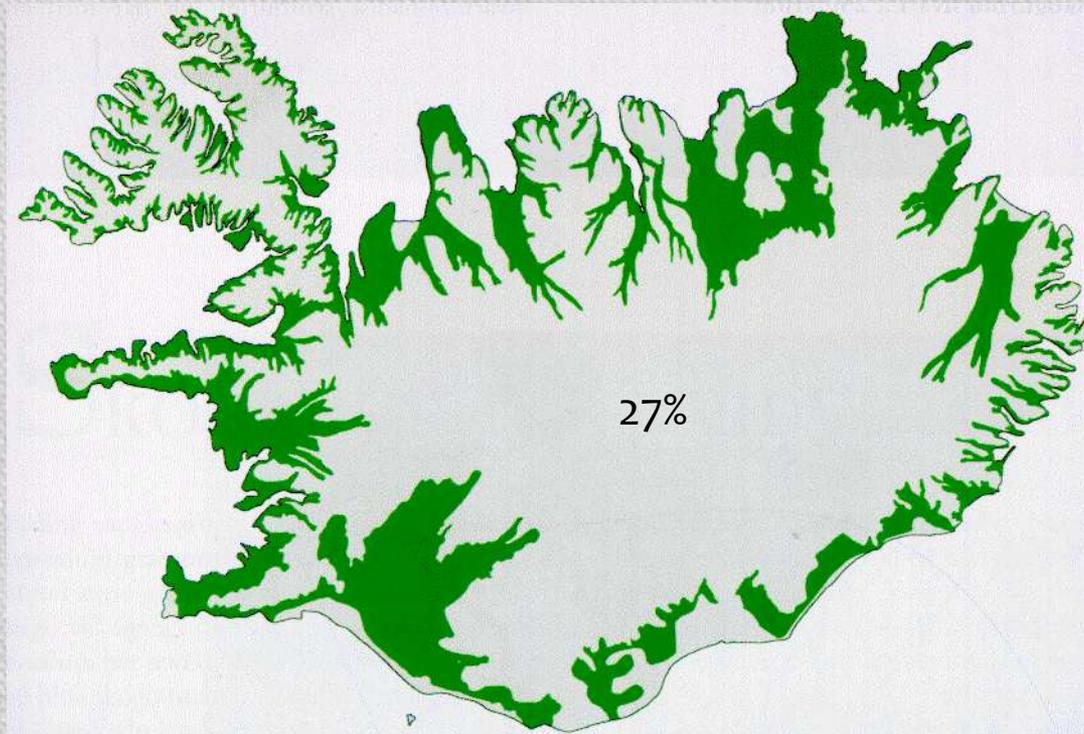
Livestock grazing prevented regeneration



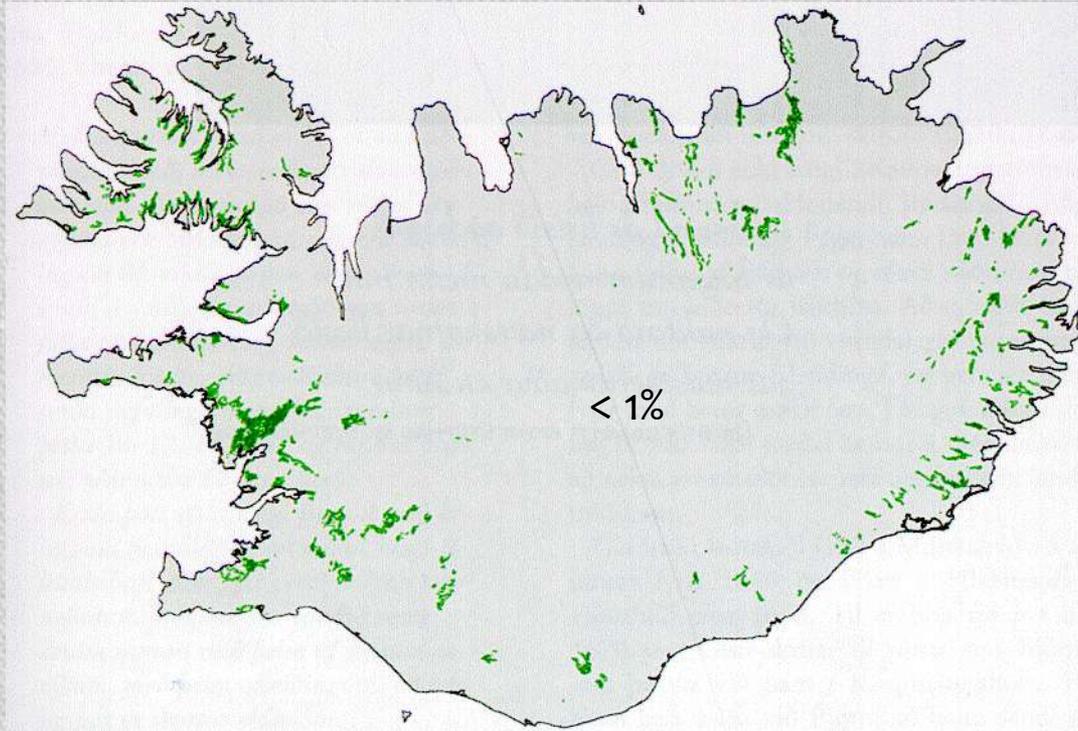
Resulting in severe erosion



870



1990



Icelanders' past forest use was not sustainable.

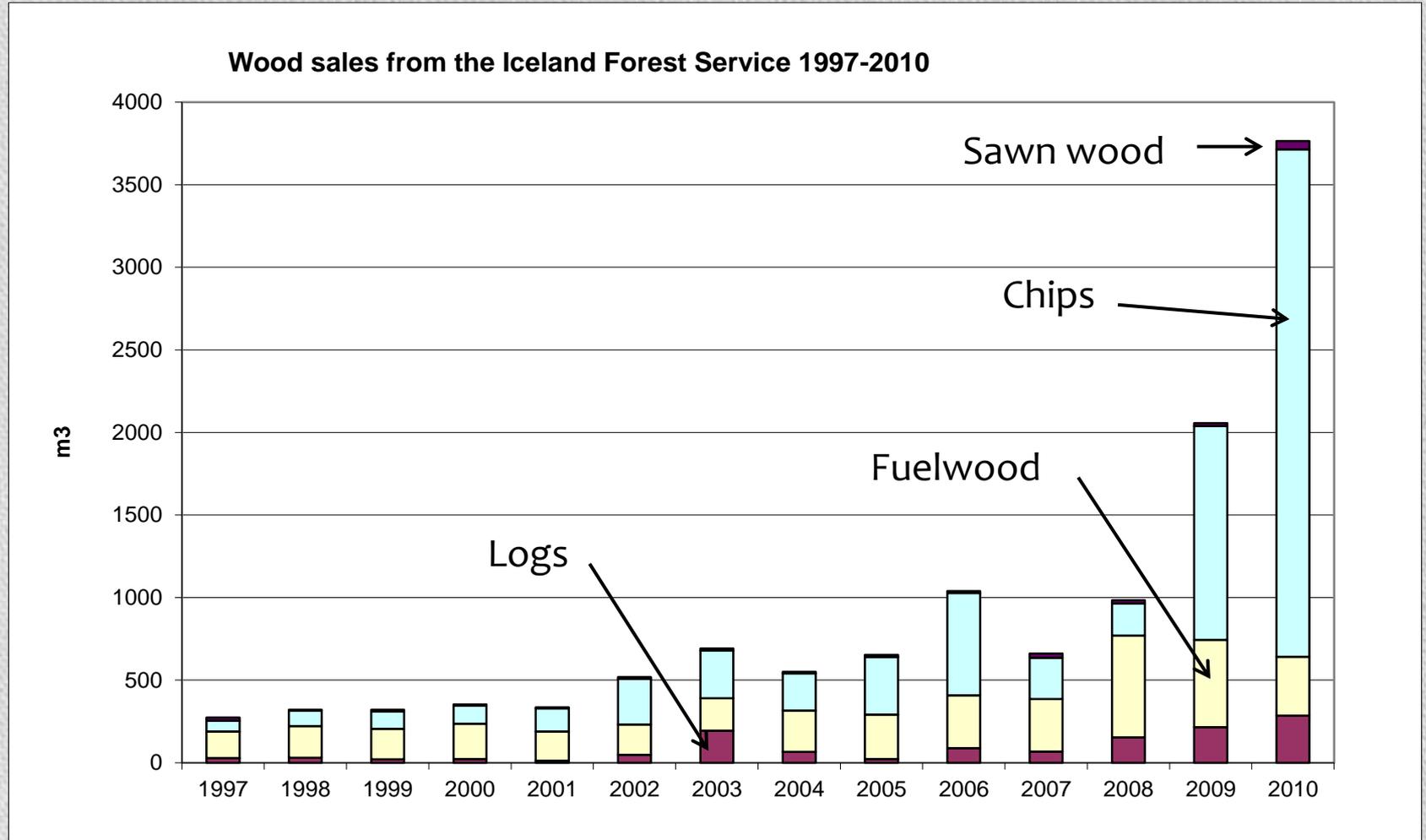
- Result:
 - We no longer have a viable forest resource
- But now:
 - We say that we want development to be sustainable
 - Economically
 - Environmentally
 - Socially
- What does that mean?



Currently

- We are afforesting about 1000 ha per year
 - 3 million seedlings planted annually (down from 6 million in 2008)
 - Mostly on farms – Regional Afforestation Projects
 - Forestry societies – Land Reclamation Forests project
 - Hekluslógar and other projects
- Main species
 - *Betula pubescens* (30% in 2010)– soil conservation, amenity
 - *Picea sitchensis* (26%) – production
 - *Larix sukaczewii* (14%) – production, soil conservation
 - *Pinus contorta* (13%) – production, soil conservation
 - *Populus trichocarpa* (6%) – production, shelter

Forests planted 1950-1980 are becoming economically sustainable



Chips as a carbon source in silicon smelting



Social aspects

- Cultivated forests, especially in and around urban areas, are much used for outdoor recreation
- The average Icelander visits a forest 15 times per year (Gallup 2004)
 - Population – 320,000
 - 4.8 million forest visits per year



Environmental aspects

- Iceland still has only 1.4% forest and woodland cover
- The native birch is spreading within areas protected from grazing
- Native vs. exotic species?



The future

- When making decisions about what the emphasis should be in forestry, should we look to the past or to the future?
 - Emphasis based on the past
 - Reclaim birchwoods
 - Use only native species
 - Maintain traditional land use (including overgrazing)
 - Conserve landscapes (including eroded land)
 - Conserve biodiversity (keep it unchanged)
 - Emphasis looking to the future
 - Develop a forest resource that meets future needs
 - That means using exotic species
 - Change traditional land use
 - Accept some landscape change
 - Enhance production (which will cause changes to biodiversity)

The role of larch

- Larches are the best pioneer species on dry heathland and eroded land (the land most available for and in greatest need of afforestation) in much of Iceland.
- Well adapted to soils but less well to climate
- Production is largely suitable for biomass (which is also the biggest market)
- They ameliorate both soil nutrient status and microclimate
 - The second generation can be species with greater long-term production such as Sitka spruce or even Douglas-fir.
- With a warming climate, *Larix sukaczewii* will be important at higher elevations and *Larix decidua* will be more used in the lowlands.

Thank you

