

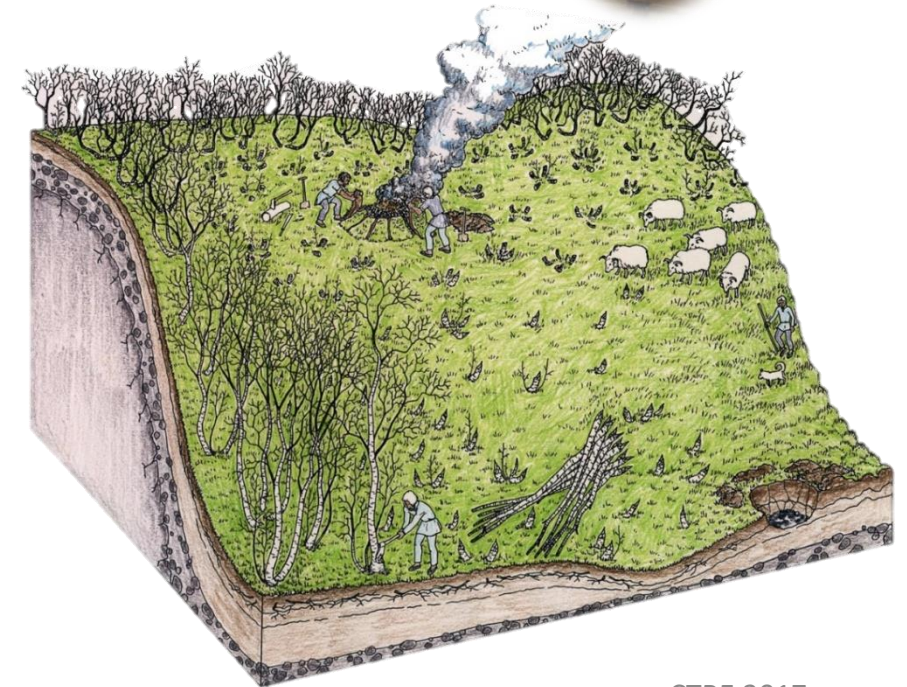
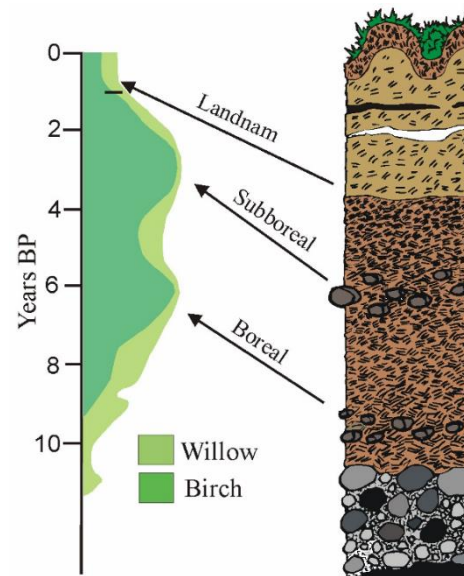
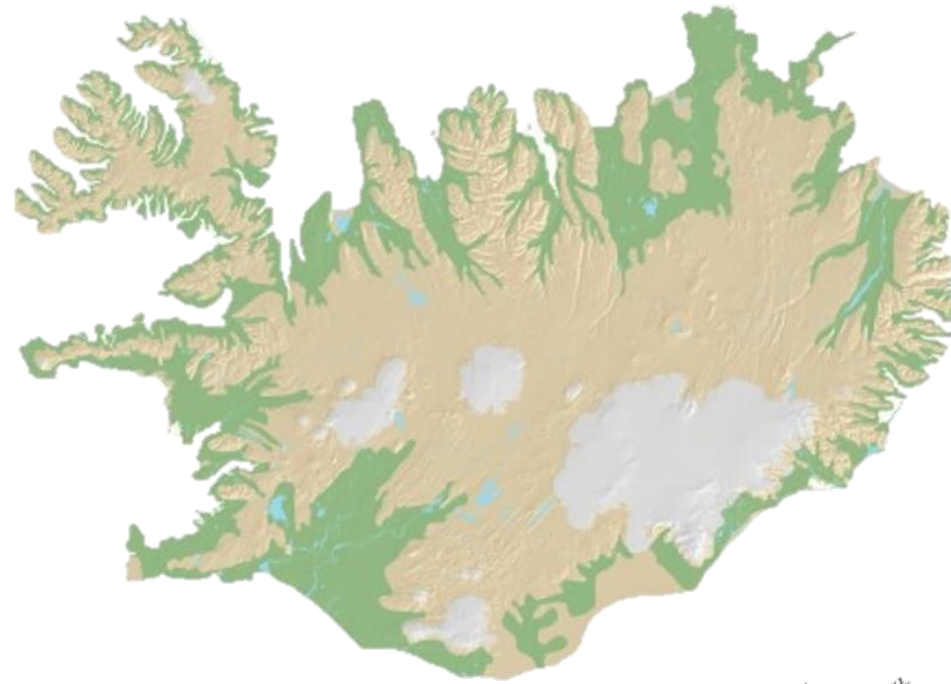
Forest research activity in Iceland

Edda Sigurdís Oddsdóttir
Research Director
Icelandic Forest Research
Mógilsá



History of Icelandic forests

- ca 25% of land covered with wood
 - Birch, Salix, Rowan
- Deforestation
 - Human activities
 - Grazing
 - Increased volcanic activity
 - Decreased temperature



Afforestation in Iceland

1899 - The first forest plantation at Thingvellir ("The Pine stand")

1935 - The Forest Association

1963 - Drop in temperature

1990 - The establishment of the afforestation projects

2015 - Highest tree over 27m

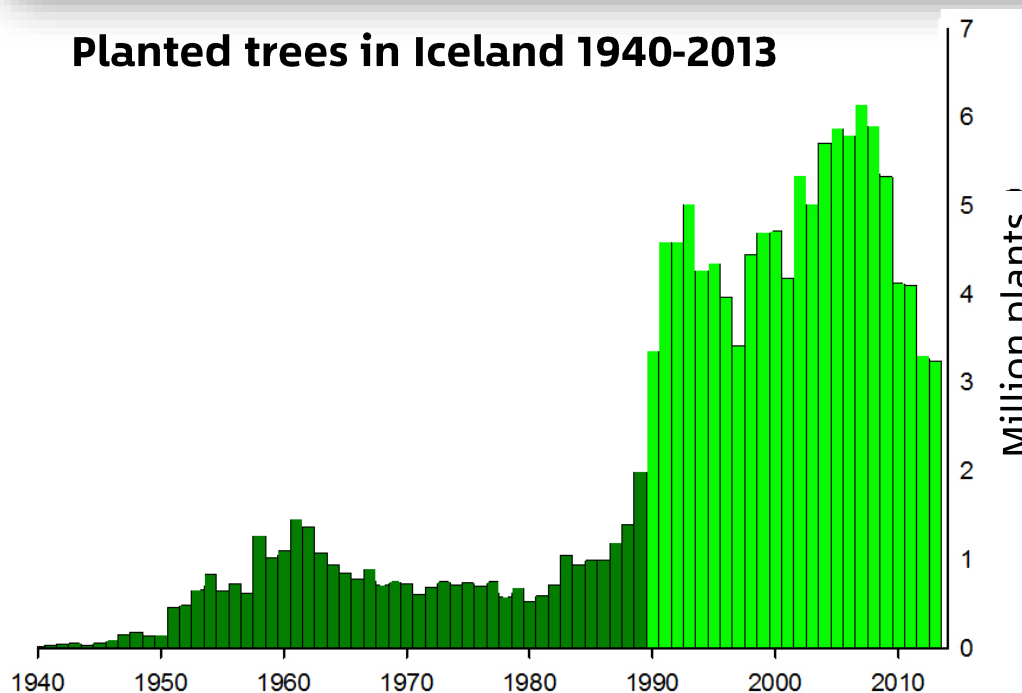


1899



2003

Planted trees in Iceland 1940-2013



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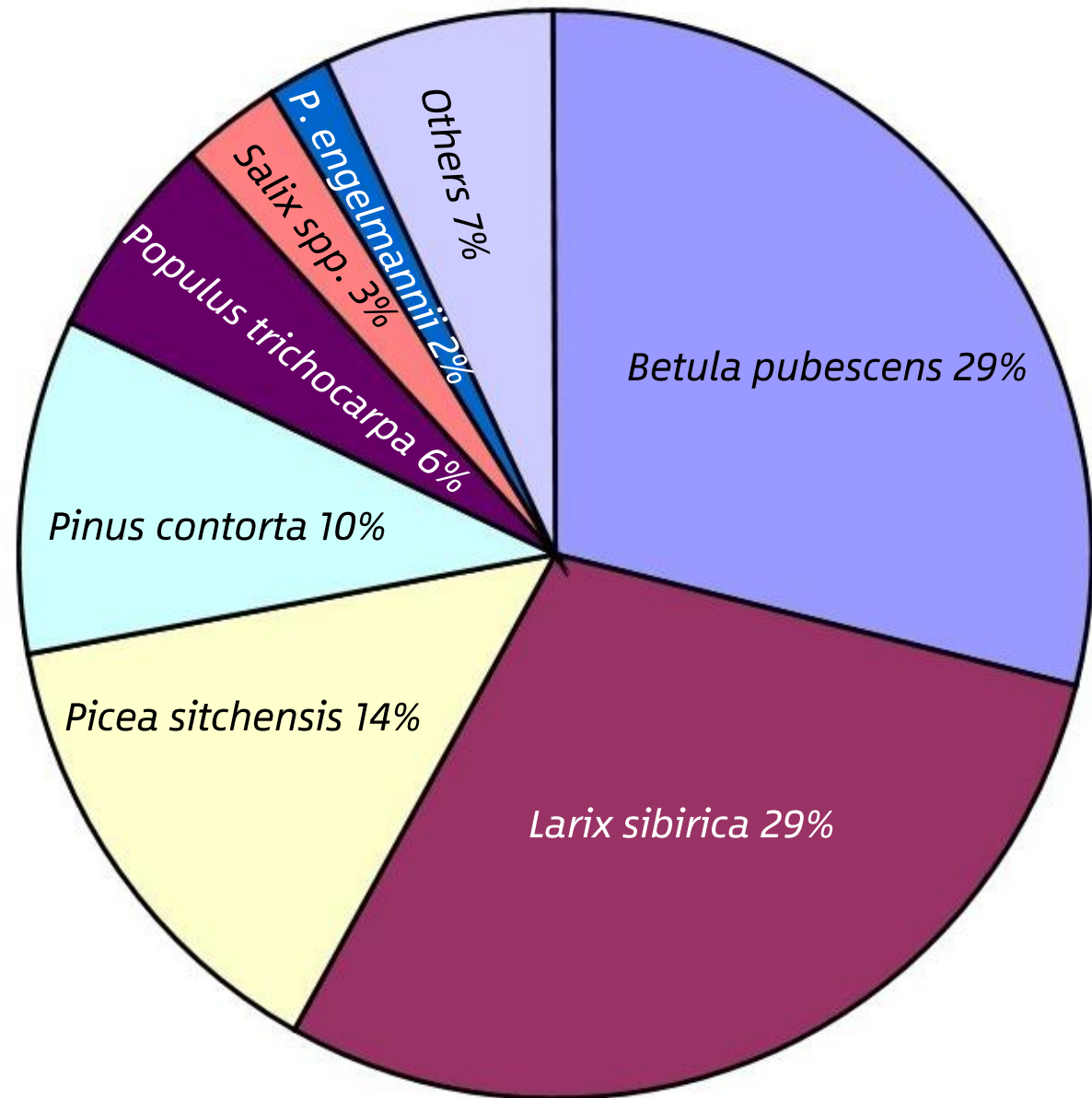
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Trees planted

2014 figures

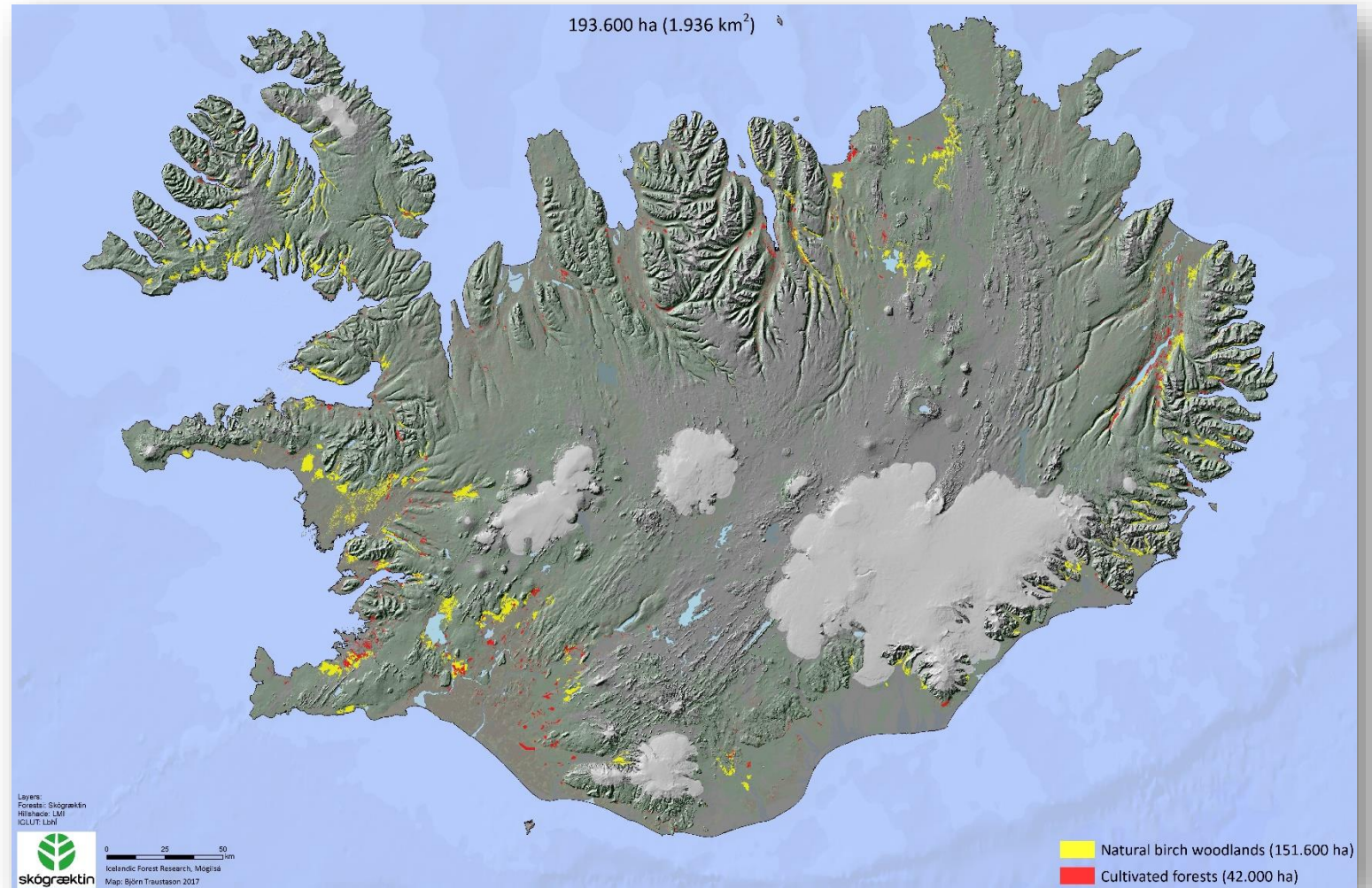
Total 4 million seedlings

Birch, larch, sitka spruce, pine and black cotton wood ~ 90%



Forest cover 2017

- Natural birch woodland 151.600 ha (~1.5% of land cover)
- Cultivated forests 42.000 ha (~4.2% of land cover)



Icelandic Forest Research, Mógilsá

- Opened in 1967
 - 2 scientists
- A gift from Norway
- A monument of the cooperation between Norway and Iceland, especially in forestry



Mógilsá today

Dr. Edda Oddsdóttir, director

M.Sc. Arnór Snorrason, forester

B.Sc. Bjarki Þ. Kjartansson, geographer

M.Sc. Björn Traustason, geographer

Dr. Brynjar Skúlason, forest genetic

M.Sc. Brynja Hrafnkelsdóttir, forester

Dr. Halldór Sverrisson, plant pathologist

B.Sc. Jóhanna Ólafsdóttir, forester

Dr. Ólafur Eggertsson, geologist

B.Sc. Þorbergur Hjalti Jónsson, forester

Areas of research

Genetic resources and breeding

Establishment of forests and shelterbelts

Forests and climate change

Silviculture and forest products

Forest ecology

Forest health

Forests and society

Forest genetic resources and breeding

- Larch breeding and seed production
- Sitka spruce breeding and seed production
- Seed production in lodgepole pine
- The breeding of black cottonwood clones with rust resistance
- Selection and breeding of birch, and rowan
- Provenance- and clonal trials for a large number of other tree species



Establishment of forests and shelter-belts

- Survival and growth of young pine and black cotton wood trees in dry heathland
- The use of lupine and fertilizer in afforestation with black cotton wood cutlings
- Hólasandur experiment



Forests and climate change

- National forest inventory
 - Carbon sequestration
 - UNFCCC, FAO and other reports
 - Carbon sequestration in soil and vegetation
- Carbon measurements in black cotton wood on old mire
- Estimation of available wood in Icelandic forests



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Silviculture and forest products

- Long term effects of afforestation on forest development
 - Tree species composition, tree density etc
- Quality of Icelandic wood
 - Density, strength, durability
- Thinning



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Forest ecology

- ForHot - the effects of soil warming on forest ecosystem
- Dendrochronology and environmental changes
- Effect of climate change on birch cover
- SEEDS - estimation of „invasiveness“ of introduced tree species



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Forest health

- Monitoring forest health
- New insects and pests
- Studies on *Ceramica pisi*
- Green spruce aphid
- *Pineus pini*



Future challenges

Climate change

- Tree species
- Pests and diseases
- Carbon sequestration

The crucial first years

Forest management

Products and marketing



