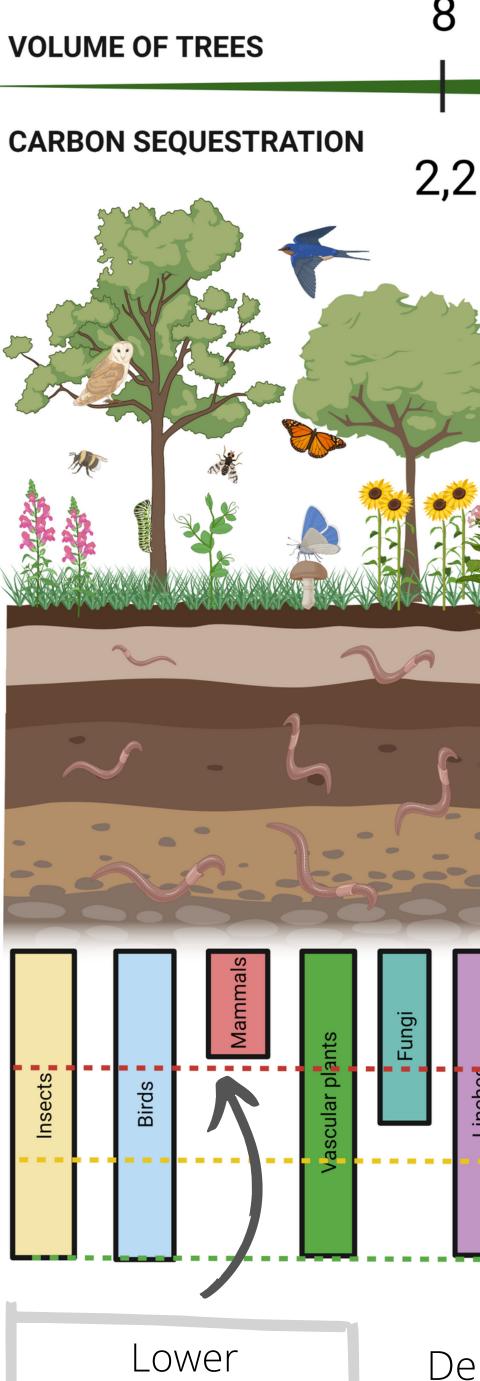
# Sitka Spruce - a Dilemma of **Carbon Storage vs. Biodiversity**

## What is Sitka Spruce?

**15** LIFE ON LAND

The Canadian spruce "Sitka" was planted in Norway around 100 years ago. Considering its high resistance to wind and cold, it is a great choice for afforestation mainly for timber production purposes. Unfortunately, Sitka spruce is an invasive species, with no natural enemies in Norwegian nature. At this point, Stikas have outcompeted many native species leading to great biodiversity loss and are spreading uncontrollably in many parts of the country.

INTRODUCTION OF ALIEN



## **BIODIVERSITY LOSS:**

The early and rapid expanse of the Sitka Spruce leads to an overall reduction in biodiversity.

BIODIVERSITY



This poster is based on the paper "Consequences of Sitka spruce afforestation in Norway " written by Dusi, M., Eichler, A.H., Håskjold, E.E., Jespersen, A.S., & Sjursen, T.F (group 4) for the course "SDG215 - "UN Sustainable Development Goal 15: Life on land" at the Faculty of Mathematics and Natural Sciences, University of Bergen. All references for this poster can be found in the paper.

abundance of mammals in the landscape before Sitka introduction

SPECIES (*Sitka spruce*) 24 18 m<sup>3</sup>ha<sup>-1</sup>year<sup>-1</sup> 16 CLIMATECHANGE MITIGATION: tC/ha 3,2 5,4 6,5 4,3 The increase of land covered by Sitka spruce equals an increase in CO2 removal from the atmosphere. Solving the dilemma As with many other SDGs, it is difficult to reach the most sustainable compromise. Because forests take time to grow it is important to evaluate OW possible feral side effects in advance. In this case, introducing a bigger variety of ...HIGH species, that are not invasive, could be less damaging for the Dense plantation of Sitka leaves little Directly biodiversity, while at the same Increased due sunlight and nutrients to the forest connected to time potentially mitigate climate to more humid the decrease in floor, leading to out shading and change by increasing forest land forest floor lower species richness in vascular vascular plants cover, thereby increasing CO2 plants and lichens sequestration.

This poster was made by Dusi, M., Eichler, A.H., Håskjold, E.E., Jespersen, A.S., & Sjursen, T.F

