

Introduction to forest carbon

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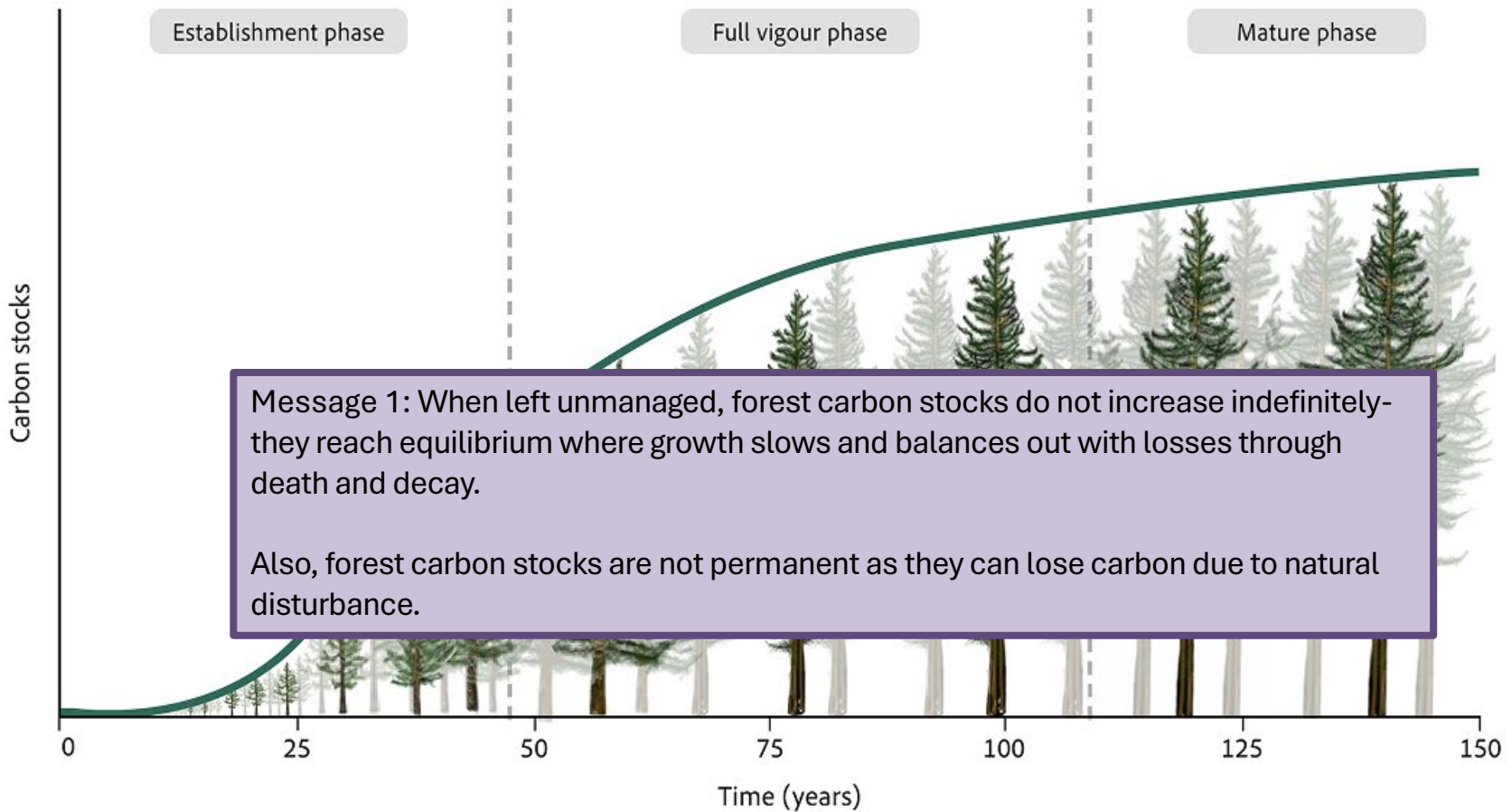
Content presented here is independent of the consultation and is Forest Research's own view based on previous research

I will cover- in 10 minutes

1. Forest carbon basics
2. Relationship between forest-derived biomass and forest carbon stocks

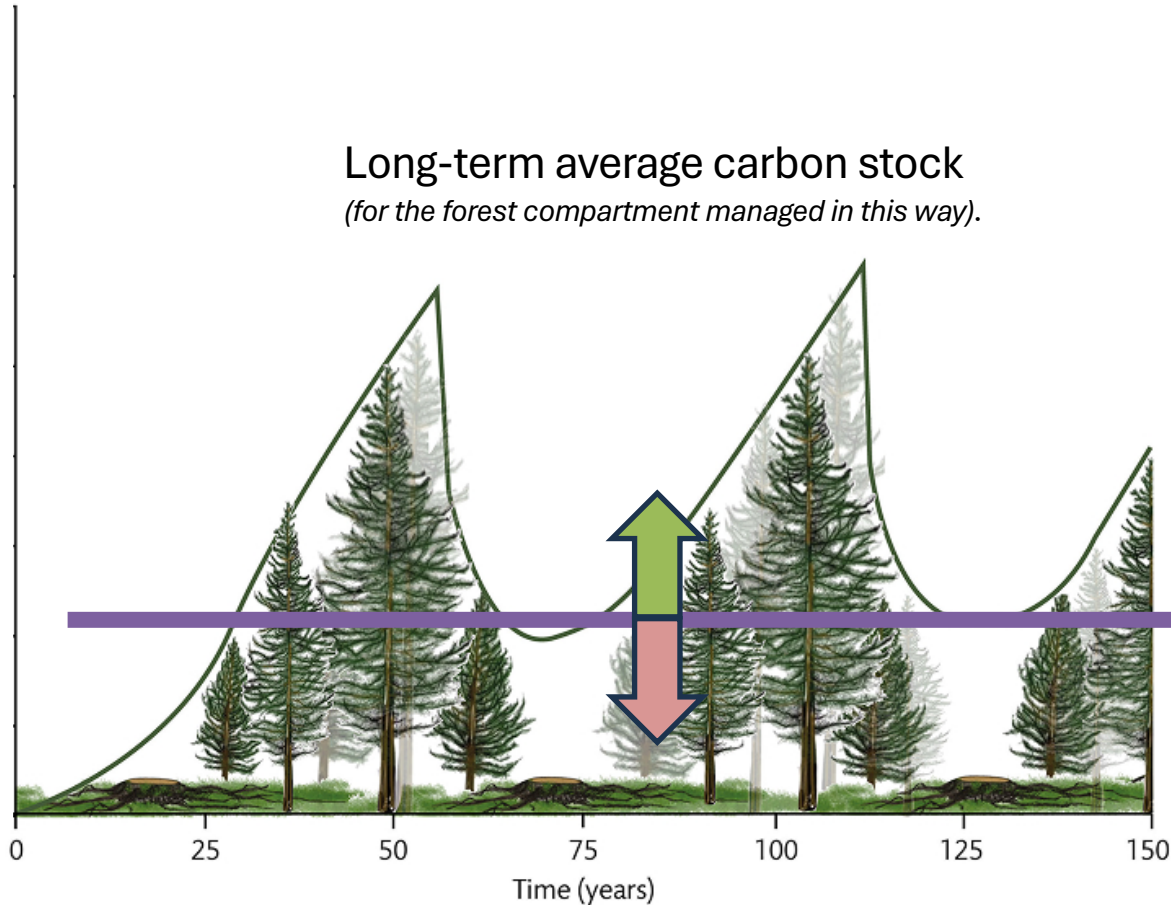
Forest Carbon Basics

Carbon stocks - single stand



Forest Carbon Basics

Carbon stocks - forest (one hectare)

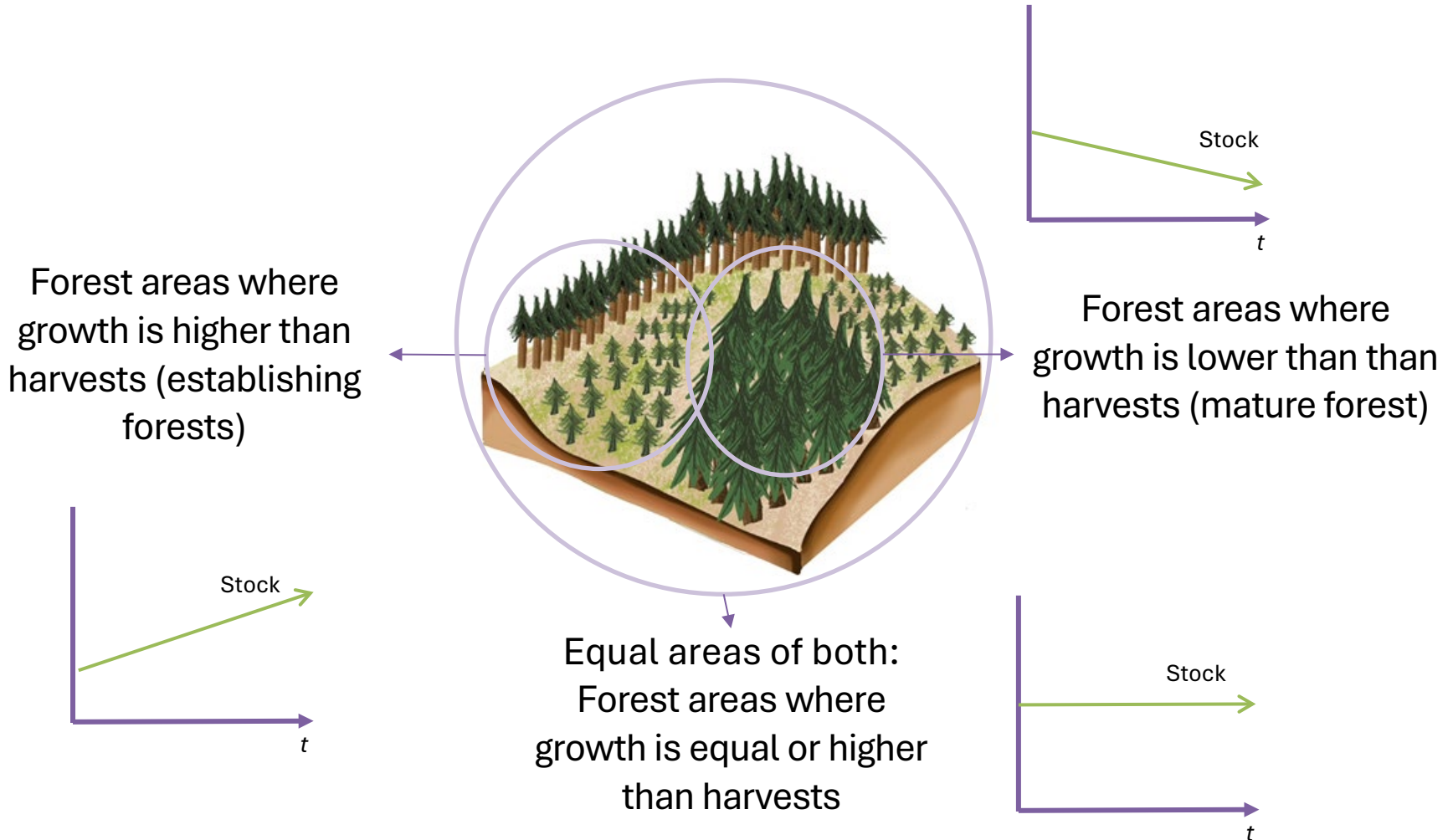


Message 2: The long-term average carbon stock is a function of many factors, including:

- Tree species
- Growth rate
- Rotation length
- Forest management
- Residue management
- Soil type

If forest management is consistent then long term carbon stocks are expected to also be consistent.

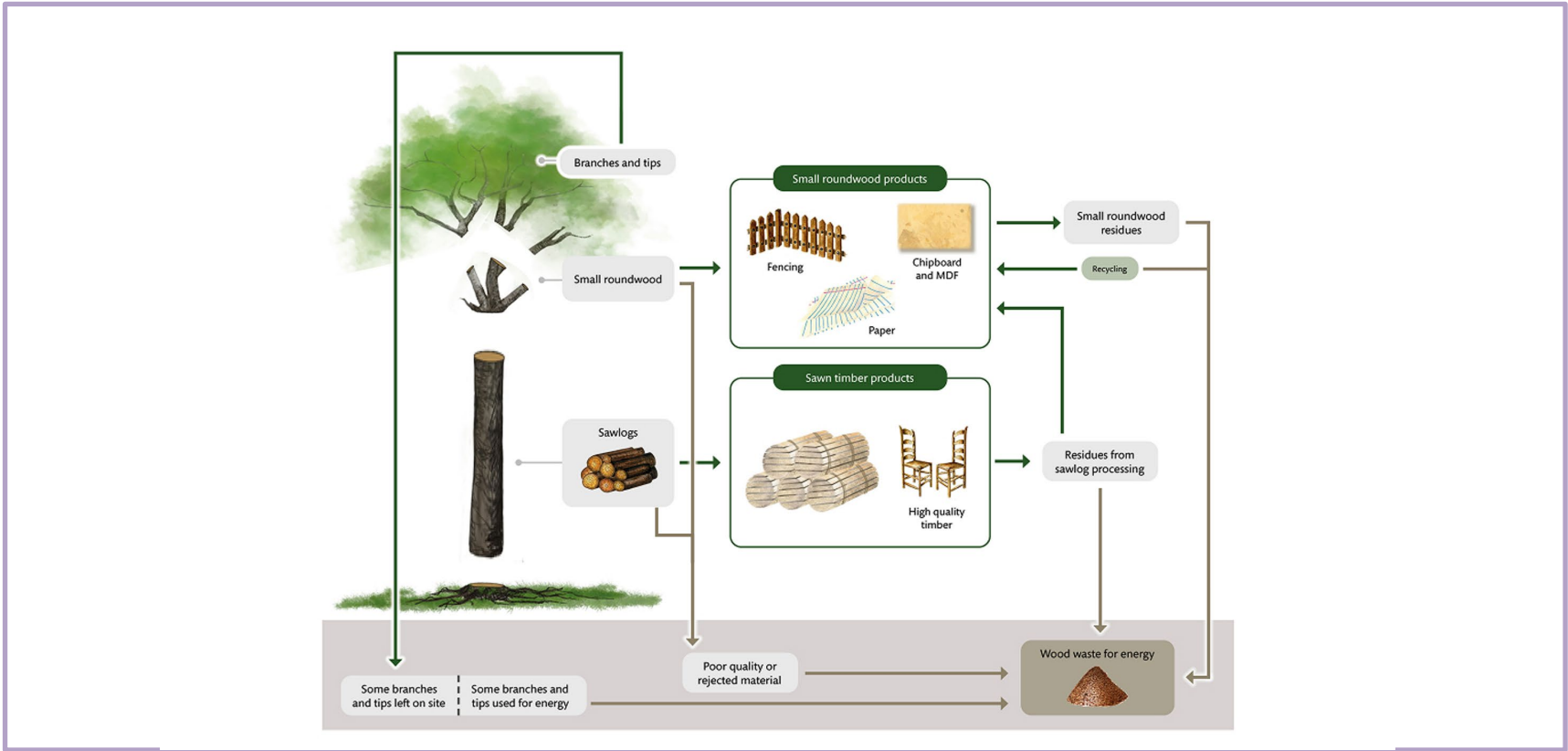
Message 3: The long-term average carbon stock is also dependent on the scale of assessment. In reality a forest or supply base is comprised of many forest compartments that are at different stages of the forest cycle, and/or managed more or less intensively.



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- Forest management
- Residue management
- Soil type

How does the biomass industry affect forest management decisions?



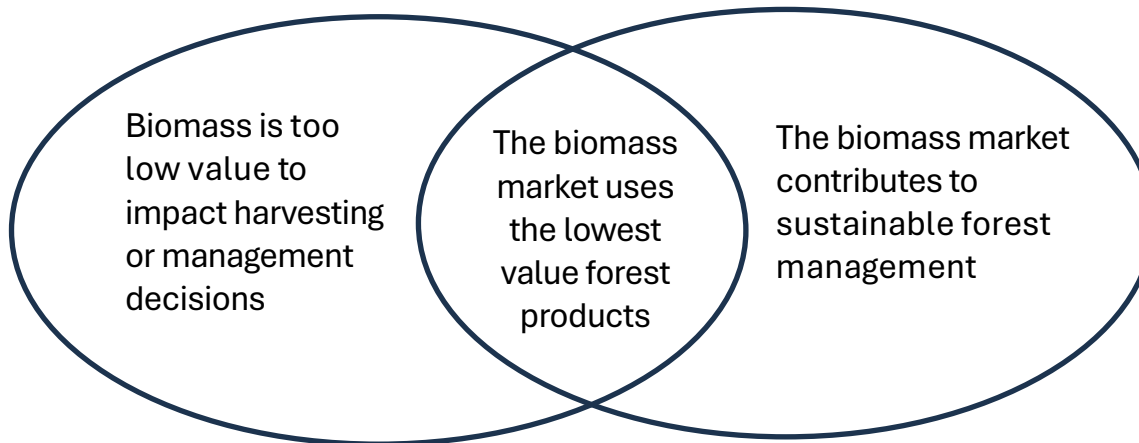
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- Forest management
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- Soil type

How does the biomass industry affect forest management decisions?

There are two main views and statements made in the scientific literature and from industry regarding the impact of the biomass market on forest management:

No clear relationship between the biomass market and forest management decisions



Suggests that the biomass market causing a change in forest management in some way. The impact on carbon stocks should be understood - could be positive, negative or neutral

In reality – one or both may be true, depending on the market conditions at harvest

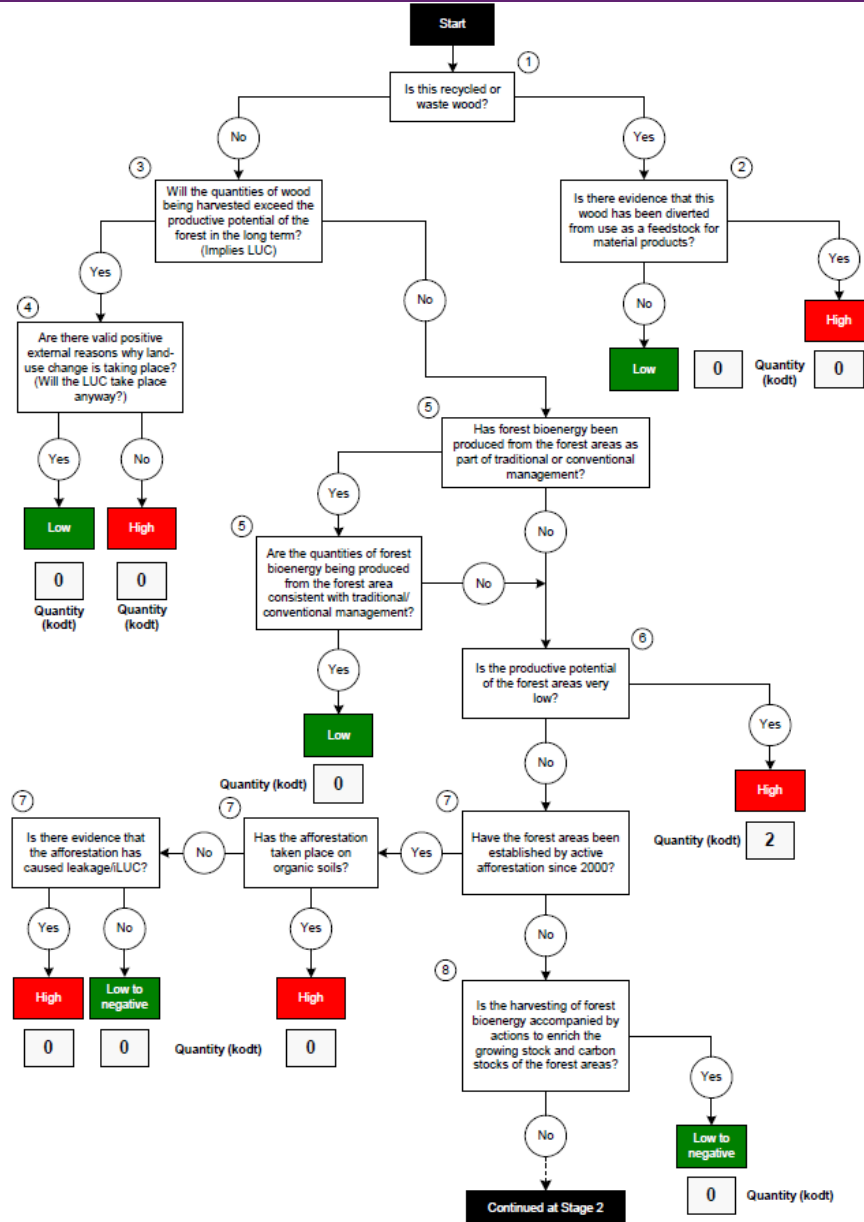
Research to identify routes with positive outcomes and avoid negative outcomes

Questions:

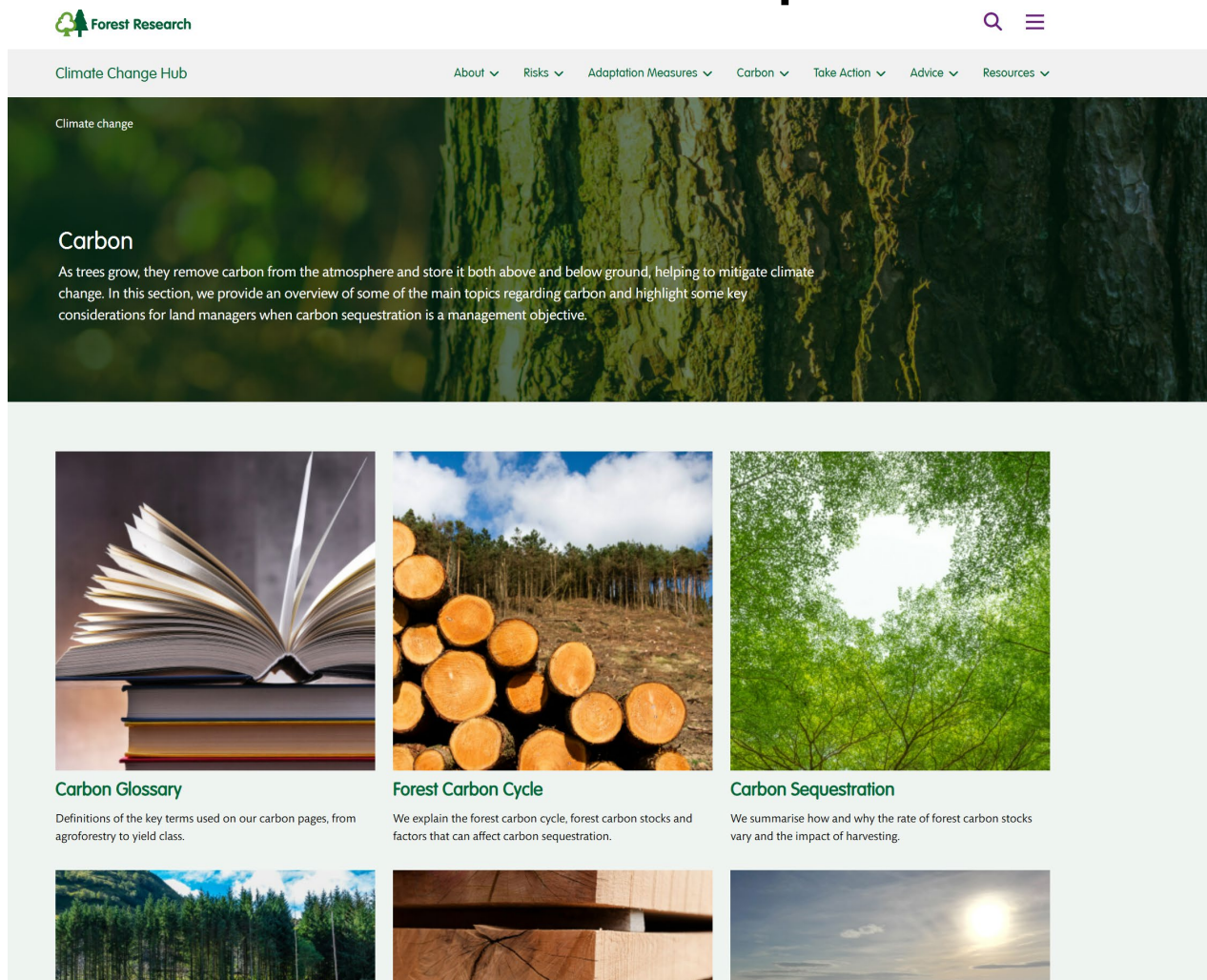
What are the risks, based on the current biomass supply and practice in the forest sector?

What information is needed to understand risks or impact?

How do these risks apply to different biomass feedstocks?



Want to explore more?



Forest Research


Climate Change Hub

About Risks Adaptation Measures Carbon Take Action Advice Resources

Climate change


Carbon

As trees grow, they remove carbon from the atmosphere and store it both above and below ground, helping to mitigate climate change. In this section, we provide an overview of some of the main topics regarding carbon and highlight some key considerations for land managers when carbon sequestration is a management objective.



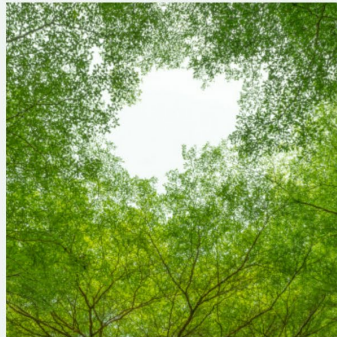
Carbon Glossary

Definitions of the key terms used on our carbon pages, from agroforestry to yield class.




Forest Carbon Cycle


We explain the forest carbon cycle, forest carbon stocks and factors that can affect carbon sequestration.




Carbon Sequestration

We summarise how and why the rate of forest carbon stocks vary and the impact of harvesting.







<https://www.forestresearch.gov.uk/climate-change/carbon/>

Search: Forest Research
Climate change hub carbon

Pages on

- Forest carbon cycle
- Carbon sequestration
- Carbon impacts of managing woodland
- Wood products
- Measuring forest carbon
- Forest bioenergy
- Establishing new woodland
- Agroforestry
- Woodland carbon code
- Climate change impacts on soil

