

Forest and Carbon Intelligence

Forest change evidence and transparent carbon scenarios

XSensee supports forest assessments with satellite context, vegetation observations and source-scale biomass estimates, helping teams examine carbon stock assumptions and change.

Forest landscape context



1 m optical output for local context

Forest observations

Context for reviewing vegetation change

Biomass estimates

Source-scale stocks and uncertainty

Explicit scenarios

Visible carbon conversion assumptions

Forest change and carbon assessment

Forest managers need spatial context and explicit assumptions to understand how vegetation change may relate to biomass and carbon stocks.

Who uses the evidence

Forest and land managers

Vegetation review and local investigations

Regional environmental teams

Biomass and carbon assessment studies

Research and consulting partners

Transparent methods and scenario analysis

Satellite analysis workflow

01

Area of interest

Territory and client question

02

Valid data

Suitable dates and source data

03

Service analysis

Application maps and estimates

04

Local review

Comparison with client records

Where would clearer forest evidence or a transparent carbon scenario support your next assessment?

What it supports

Forest observations

Context for reviewing vegetation change

Biomass estimates

Source-scale stocks and uncertainty

Explicit scenarios

Visible carbon conversion assumptions

1 m optical detail at lower cost

XSensee reconstructs Sentinel-2 imagery on a 1 m output grid, helping teams examine local context with a lower-cost optical baseline.

Sentinel-2 RGB input



XSensee super-resolution



1 m output

Reconstructed optical imagery for local review.

Proprietary 10× algorithm

More visual detail from Sentinel-2 imagery.

Lower-cost baseline

Optical context for territorial screening.

Measurement scale

Thermal, water and carbon retain their source scale.

Same reference scene. The 1 m output is a reconstruction of optical imagery.

Forest context and stock estimates

Optical detail supports local interpretation while biomass and carbon estimates retain the scale of their source data.

Vegetation observations

Review forest cover and available indicators across valid observations.

Biomass stock estimates

Use above-ground biomass estimates at the source information scale.

Carbon scenario analysis

State the affected stock share and release assumptions for each scenario.

Sentinel-2 forest and urban edge context



Biomass and carbon estimates retain source uncertainty and scale. Scenario values represent model assumptions rather than observed emissions.

Forest review and carbon scenarios

Forest review and carbon scenario analysis address related questions while retaining different evidence and assumptions.

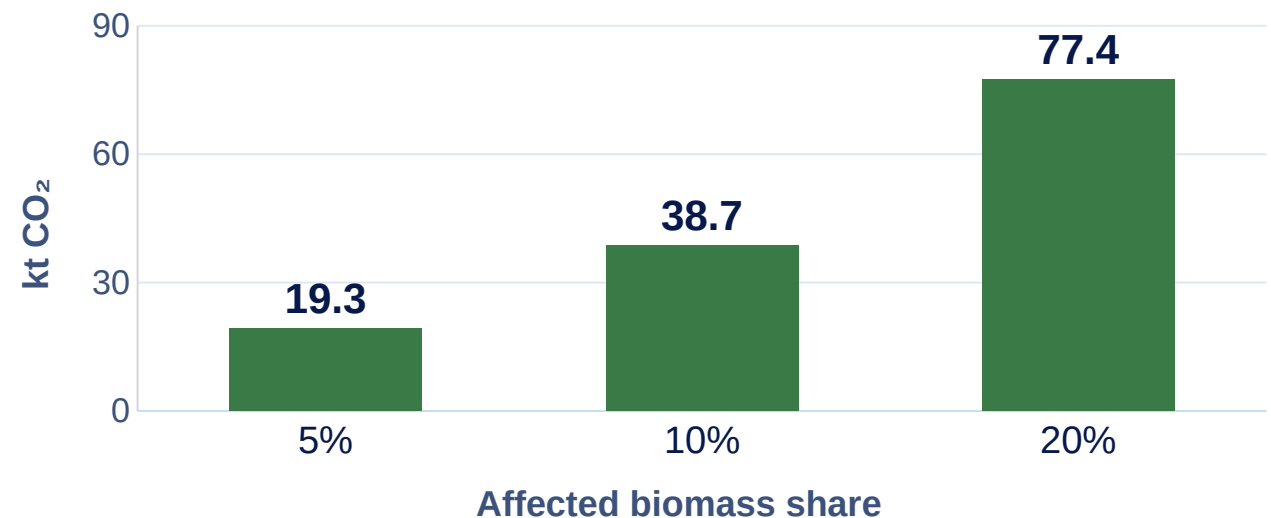
Forest change review

Identify areas for local investigation using comparable vegetation observations and forest records.

Carbon stock discussion

Compare explicit affected-stock scenarios and document the assumptions behind potential releases.

Potential release under stated assumptions



Scenario inputs: 422,000 t dry above-ground biomass. Carbon fraction 50%, release fraction 50% of carbon in the affected stock, CO₂ conversion 44/12.

A pilot on your territory

The pilot starts with a defined client question. Its scope reflects the territory, available data and the decision your team needs to make.

Pilot scope

Forest area and objective

Select the management area and the forest or carbon question to assess.

Evidence and inputs

Observations and stock data

Agree dates, source biomass data and local forest records.

Deliverables and review

Maps and scenario report

Review vegetation evidence and carbon assumptions with the responsible team.

A shared review of the evidence defines the next local checks and the scope of any further work.

A pilot for your next territorial decision

Tell us the area you need to assess and the decision the evidence should support.

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Forest and Carbon Intelligence



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Explore the platform and watch the demonstration.