



Tree assessment protocol

The protocol is based on observational indicators used in forest ecology and biodiversity monitoring, adapted for citizen science to allow reliable recording without specialised equipment.



15' (average time to complete activity)



Introduction

Observing a single tree is one of the simplest ways to begin understanding the ecological condition of a forest. Trees respond to soil, climate, disturbances and competition over long periods of time and their condition can be used as an indicator of the state of the forest ecosystem.

By looking carefully at visible features such as the crown, leaves, trunk, and surroundings, it is possible to recognise signs of stress, stability, or natural development.

This protocol introduces basic indicators that are commonly used in forest observation and monitoring. The aim is not to make precise measurements, but to learn how to observe consistently and to record information in a way that can be compared between different places and over time.



When & Where to do it

The observation can be carried out in any forest location and in any season, although leaf characteristics are easier to observe during the growing period.

Select a tree that draws your attention, and which can be clearly observed from the ground. Its crown, trunk, and surrounding area should be visible.

It may be large or small, young or old, but it should be rooted in the ground and part of the forest stand, not recently cut or fallen.

Avoid choosing a tree that is heavily damaged by recent work, unless the activity specifically asks for it.

Once you have chosen the tree, remain with the same tree during the whole observation.

Safety note

Prior to commencing the assessment, carefully observe and assess the tree and its surroundings for any risks, such as hanging branches or precarious trees.

Always make sure to avoid trees that you cannot safely approach and be mindful of risks around you.

What you need

- Mobile phone with the app
- Notebook (optional)
- Measuring tape (optional)
- Camera (optional)



No special equipment is required. Careful observation is your most important tool.

Step-by-step observation



Take a moment to look at the tree as a whole before focusing on details.



1. Crown condition

Observe the shape and density of the crown.
Is it full and regular, or sparse and uneven?
Are there many dead branches?
Does the tree receive full light or is it shaded by others?



2. Leaves or needles

Look at the colour and general appearance.
Are the leaves healthy and typical for the species?
Do you see discolouration, holes, drying, or unusual shapes?

3. Trunk and bark

Observe the trunk from the base upwards.
Is the bark intact or damaged?
Are there cracks, wounds, fungal growth, or loose bark?

4. Surroundings

Look at the ground around the tree.
Is the soil covered with leaf litter, moss, or vegetation?
Is the ground compacted or disturbed?
Are there other trees very close?



5. Forest layer

Notice in which layer the tree stands.
Is it part of the canopy, the middle layer, or the understory?

Indicators to record



The protocol includes the following indicators:

Tree species (if you need help to identify your tree, you can use the ID Tree field guide found at the **Learning resources** page of the website).

Crown condition

Leaf colour and vitality

Trunk condition

Visible fungi or decay

Cavities or holes



Data entry in the App

This protocol can be followed step by step using the mobile application, which guides the observation and allows the data to be recorded directly in the field.

In the app through a sequence of short questions and prompts participants observe a tree of their choice in the field.

The app allows photographs to be added and records the observation as part of the project database.



Methodological background

The tree assessment protocol is based on visual indicators that are commonly used in forest health monitoring and field surveys. Indicators such as crown condition, leaf characteristics, bark structure, and growth patterns are part of evaluation programs on tree vitality, habitat structure, and environmental stress conditions.

This simplified method used here is adapted for citizen science and educational activities. This simplified protocol does not replace professional monitoring, however repeated documentation of visible signs that may be related to drought, nutrient availability, mechanical damage or pathogens when made by many participants can provide useful information about forest conditions and changes over time.

The activity is designed to encourage careful observation and sensory awareness while also producing structured observations, comparable across sites.



Based on the sources:

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