

Chapter 11 – Appendix 3: What do we mean by...? A glossary of ecological terms

We have been using many 'ecological' terms throughout the chapter, and these are important to use correctly and in context when communicating with all of the stakeholders in any Forest School project, particularly landowners/managers and your groups.

- **Sustainable site management**

'**Sustainability** = avoidance of the depletion of natural resources in order to maintain an ecological balance.' (Lexico, 2021)

Tied in with concepts we have mentioned elsewhere – *leave no trace* and *do no harm* – sustainable management of our Forest School sites means we have a duty of care towards the natural spaces we use and enjoy. This wide-ranging term covers everything from the mindful foraging or harvesting of materials already mentioned, through ensuring we don't add harmful substances or materials to our sites (such as using glitter or washing up liquid in puddles or leaving up nylon cordage on trees), to careful consideration of how much deadwood we may be removing for campfires or den building. Some sustainable management is active, such as coppicing hazel on a rotation; some is passive, such as only using or bringing to site natural art materials. There is a strong connection here to landscapes for learning and fostering a sense of place – every autumn I have a pang that I can't offer the chance to have a game of conkers to my Forest School groups, but we don't have any horse chestnut trees on site, so we explore the huge range of other opportunities 'our patch' can provide instead.

- **A biotic factor** is a living thing that has an impact on another population of living things or on the environment, i.e. animals, plants, fungi, bacteria – all living things.
- **An abiotic factor** is a non-living thing that has an impact on living things or on the environment, i.e. climate, temperature, water, and soil type.
- **Biodiversity:** A measure of the variety of different species living in a habitat. The greater the number of different species in a habitat, the greater its biodiversity.
- **Colonisation:** The action by a plant or animal of establishing itself in an area.
- **Community:** The group of organisms that live together and interact with each other within an environment or habitat. Together, the biotic community and the physical landscape or abiotic factors make up an ecosystem. Communities consist of a group of different species, which partake in direct and indirect biotic interactions, such as predator-prey interactions.
- **Ecosystem:** A community and the habitat in which it lives – the living (biotic) organisms in a particular area, together with the non-living (abiotic) components of the environment.
- **Food chain:** A sequence (usually shown as a diagram) of feeding relationships between organisms, showing which organisms eat what and the movement of energy through the trophic levels (i.e. whether an organism is a producer, or primary or secondary consumer). A food web is a network of food chains, showing how they all link together.
- **Habitat:** A place where an animal or plant lives. This is made up of biotic (living) and abiotic (non-living) components.
- **Life cycle:** The stages of development and growth an organism undergoes throughout its whole life.
- **Niche:** An ecological niche describes how a species interacts with, and lives in, its habitat. Ecological niches have specific characteristics, such as availability of nutrients, temperature,

terrain, sunlight and predators, which dictate how, and how well, a species survives and reproduces.

- **Natural succession:** The process by which one community of plants gives way to another, normally from coloniser to climax. An example would be bare, clay soil in Hampshire left alone to develop over decades into undergrowth and scrubby trees, and then into mixed woodland. Each stage of succession would be suitable for certain communities of plants and animals.
- **Wildlife corridor:** A strip of natural habitat connecting populations of wildlife otherwise separated by cultivated land, built up areas, or roads.

These terms are commonly used when we track and consider our impacts on our sites and green spaces:

- **Compaction:** The process of soil becoming compressed (by the action of trampling feet or vehicles) that decreases its open soil structure, decreasing soil organisms and its ability to absorb water.
- **Competition:** Interaction between animal or plant species, or individual organisms, that are attempting to gain a share of a limited environmental resource.
- **Decomposition:** Dead organisms are broken down into smaller pieces by the process of decay. Decomposition is the process by which bacteria and fungi break dead organisms into their simple compounds. Plants can absorb and use these compounds again, completing the nutrient cycle.
- **Erosion:** The process of wearing away soil or rock, usually by wind, water, or trampling.
- **Eutrophication:** Excessive richness of nutrients in a lake or other body of water, frequently due to run-off from the land, which causes a dense growth of plant life.
- **Invasive species:** 'A non-native species that has a negative environmental, economic or societal impact.' (Booy, Wade, & Roy, 2015) Some example species are Sitka spruce, Spanish bluebell, water primrose, and ring-necked parakeets. (British Ecological Society, 2021)
- **Non-native species:** 'A species that has been transported from its native range to a new region with the assistance of humans.' (Booy, Wade, & Roy, 2015). Some example canopy layer tree species are sweet chestnut, sycamore, and walnut. (Woodland Trust)
- **Nutrient cycling:** All living things contribute to the cycling of carbon, nitrogen, phosphorus, and potassium through the environment. The first two are particularly important for humans, as the mainstays of our agricultural systems. Our ongoing impact on the carbon cycle can now be tracked through the effects of human-induced climate change.
- **Trampling:** The result of the passage of feet, wheelbarrows, and trolleys on the ground and field layer vegetation. Trampling can reduce the biodiversity of flora in an area and over time can contribute to both Compaction and Erosion.