

## 20 Definitions

### Adaptation

Adaptation to climate change means changing the way that we do things to take account of the inevitable and unavoidable changes that have started and will continue to happen during the coming decades.

### Carbon footprint

This term provides a measure of the impact certain activities have on the environment in terms of the amount of greenhouse gases produced.

### Carbon neutral/carbon lean

Wood fuel is often described as carbon-neutral because the carbon dioxide that is produced by burning wood is absorbed by trees planted in place of those cut down. However, in reality wood fuel is carbon lean because a small amount of fossil fuel is required as part of the production process – e.g. to power machinery or in transport.



### Carbon Sink

The term 'sink' is used to mean any process that removes a greenhouse gas from the atmosphere. A forest is a sink only while the carbon stock continues to increase.

### Carbon Store

Wood products are a store of carbon, as they themselves do not capture carbon dioxide from the atmosphere, but keep it locked up throughout their lifetime.



### Climate change

Climate is how the atmosphere "behaves" over relatively long time periods. The term weather describes atmospheric conditions over a short time period. Climate change means changes in the long-term average of daily weather.

### Coppicing

This is a traditional method of sustainable woodland management in which young tree stems are repeatedly cut down to near ground level. In subsequent growth years many new shoots emerge and after a number of years the coppiced tree or stool is ready to be harvested and the cycle starts again.

### Deforestation

A change in land use from forested to non-forested land.

### Emissions/Emission scenarios

The emissions referred to are greenhouse gas emissions. Climate change scenarios are produced by the UK Climate Impacts Programme every 6 years. These are based on various scenarios depending on whether greenhouse gas emissions are reduced, stay the same or increased. Go to the UKCIP website for more information: <http://www.ukcip.org.uk/>.

### Greenhouse effect

This is the process by which greenhouse gases in the Earth's atmosphere warm the Earth by absorbing some of the radiation emitted by the Earth's surface and preventing it escaping back outside the Earth's atmosphere.

### Greenhouse gas

Any gas in the atmosphere that absorbs and emits radiation within the thermal infrared range. This process is the fundamental cause of the greenhouse effect. Greenhouse gases occur naturally within the Earth's atmosphere, and the Earth would be uninhabitable without them. Common greenhouse gases in the Earth's atmosphere include water vapour, carbon dioxide, methane, nitrous oxide and ozone.

### Life cycle analysis (LCA)

An LCA is the investigation and valuation of the environmental impacts of a given product or service caused by its existence.

### Locking up carbon

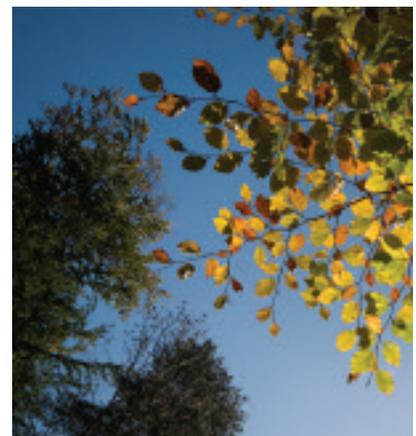
Forests are often referred to as "locking up carbon" because they absorb carbon in the form of carbon dioxide from the atmosphere, and store it in their wood, soils, roots, leaves and seeds.

### Mitigation

The term mitigation refers to all activities aimed at reducing greenhouse gas emissions and/or removal of carbon dioxide from the atmosphere.

### Offsetting

Carbon offsetting describes the process of reducing greenhouse gas emissions by purchasing credits from others for products that seek to reduce emissions, emissions reductions projects e.g. tree planting, or carbon trading schemes.



**Phenology**

This is the study of periodic plant and animal life cycle events and how they are influenced by seasonal and interannual variations in climate. In a changing climate the timing of events such as bud-burst may be altered.

**Provenance**

Provenance refers to the source of the planting material in question. In this context for example, oak of French provenance might be better suited to a warmer climate than oak of English provenance.

**Resilient woodlands**

Refers to woodlands that are able to adapt to and withstand climate change.

**Sequestration**

This is the storage of carbon (usually captured from atmospheric carbon dioxide) in a solid material through biological or physical processes.

**Substitution**

Using one material in place of another, in this context using wood as a product instead of materials like concrete or steel.

**Sustainable woodland management**

Sustainable woodland management practices seek to balance the wide range of benefits that woodlands provide, including biodiversity, recreation and effects on the carbon cycle. Management takes the form of cyclical harvesting and growing – trees that are cut down are allowed to regenerate naturally, or more are planted in their place. Well-managed woodlands generally have higher carbon stocks than stands that are not harvested.

**Urban heat island**

An urban heat island is a built up area that is significantly warmer than surrounding rural areas. The main cause is modification of the land surface by urban development.

