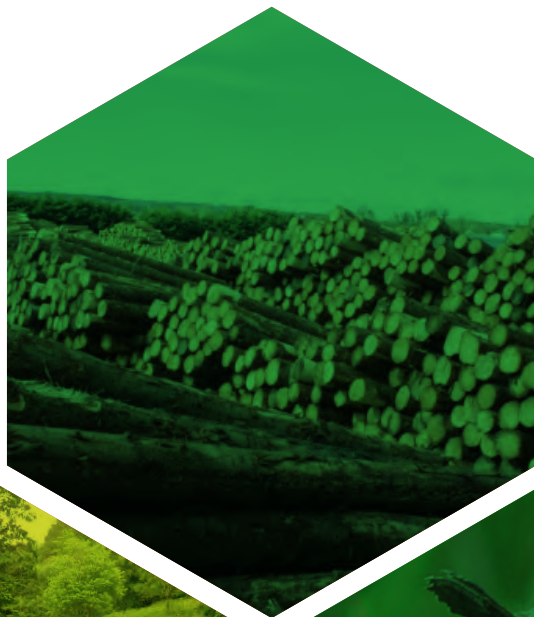
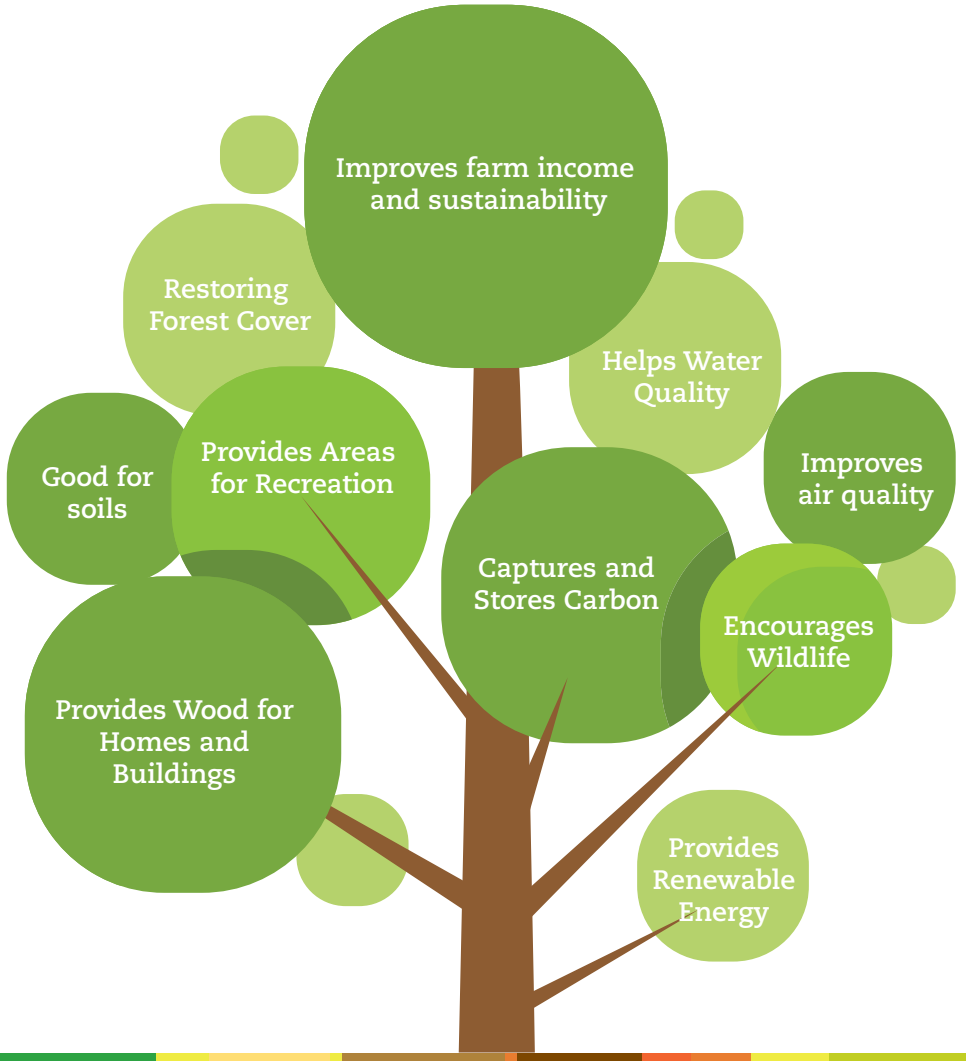


# Sustainable Benefits of Forests



# Forest Benefits

The Forest estate in Ireland provides an outstanding natural resource to people and the environment. 49% of forests in Ireland are privately owned with the remaining owned by the state. While the private forest estate is very young; with almost all forests less than 30 years of age; tree growth is vigorous with many forests now producing quality timber and moving on from a stage where having a forest is seen only as a land use change and an annual premium payment to a stage where there is a tangible timber crop with valuable harvests in sight. This also provides potential for many other benefits which are perhaps less obvious. Many of these benefits are outlined in this leaflet.



# Forestry as a land use option

The opportunity to grow a new crop, together with the support of the afforestation programme presents landowners with a real land use option. A generous afforestation grant to cover establishment costs along with annual premiums allow landowners to consider planting trees in a way which suits their particular site while meeting their carefully considered objectives. The fact that forestry (planted since 2008) may be eligible for Basic payment removes another potential obstacle to plant with the benefit of boosting and stabilising overall farm income.

Forestry is however a permanent land use change and so must be considered carefully before proceeding. Research on the economics of forestry when compared with other farm enterprises demonstrates that it can play a significant role in improving farm income, overall farm efficiency and sustainability.

The Forestry Programme presents a vast array of choice for land owners; the growing of highly productive conifers, slower growing broadleaves, native woodlands, Agroforestry or growing wood for fibre. Grant categories can be combined on one application and managed using different silvicultural systems in order to meet multiple objectives.

For more details on the Afforestation program see [www.teagasc.ie/forestry/grants](http://www.teagasc.ie/forestry/grants)



# The Timber resource

The private forest estate significantly contributes to the thriving timber processing sector in Ireland. The overall forestry sector is worth an estimated €2.3 billion to the economy. The expansion of the sawmilling industry relies totally on the increasing supply coming from the private forest.

For those who take a passing interest in their forest; the end of premium payments infers 'an end point' to their forest enterprise. But from a timber production aspect, these privately owned forests become highly valuable as timber reaches a commercial value. In many productive conifer forests, final harvest can occur within 15 years after the final premium payment. An alternative silvicultural system for example Continuous Cover Forestry can be used.



# Measuring potential value

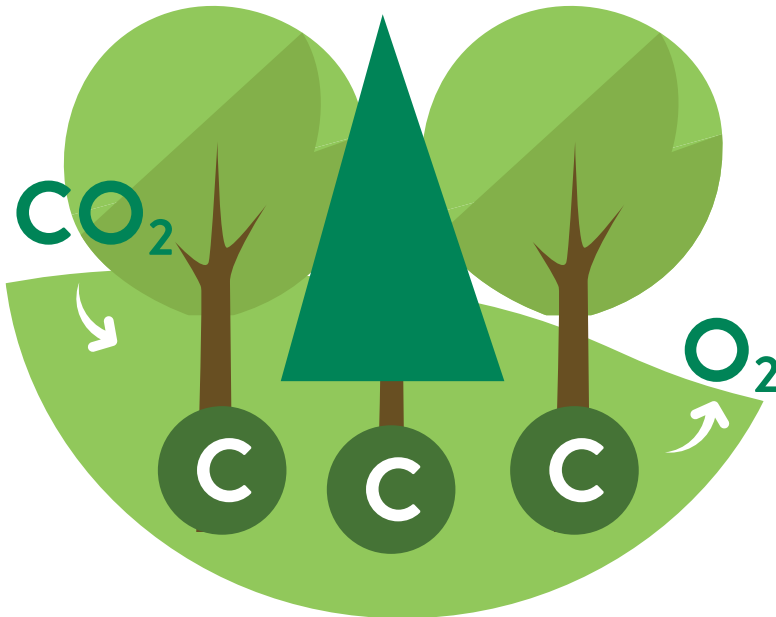
*There are several tools and supports available to private forest owners to quantify the potential value of their forest. All of which help to put the forest owner in control before any decision to harvest or sell a forest crop is considered:*

1. Employ a qualified forester to assess your forest
2. Join a forest owner group and learn with fellow forest owners about marketing/measuring/valuing timber crops.
3. Talk to your local Teagasc Forestry Development Officer/attend a Teagasc timber measurement course
4. Use existing tools to calculate indicative forest values and timing of harvesting.
  - a) Teagasc FIVE program (available in consultation with Teagasc Forestry Development officers). FIVE is a decision-support tool for forestry advisors, using Discounted Cash Flow to model indicative financial returns for a potential forestry land-use option.
  - b) Felling Decision Tool; This is an online tool hosted by the DAFM website which estimates timber revenues for the main conifer species. This tool may be used to assist in deciding when to clear fell [www.agriculture.gov.ie/forests-service](http://www.agriculture.gov.ie/forests-service)



# Ecosystem services

Carbon sequestration is the net removal from the atmosphere of carbon dioxide ( $\text{CO}_2$ ), and its storage in plant biomass and the soil. It is estimated that the net removal of carbon in Irish forests from the atmosphere is 3.6 MT  $\text{CO}_2$  per year. Establishing a farm forest can contribute to the global environment and benefit the farm in terms of carbon sequestration. If a forest is clear-felled and replanted, significant levels of carbon can be stored in the harvested timber if used in construction (e.g. roof of a house). Carbon can also be released and recaptured as the new forest grows again. Forests offer carbon storage through on-site storage, removal from harvested wood products and emission avoidance by substitution of fossil fuel energy.



# Shade and shelter

Trees and hedgerows are part of our cultural heritage and have always been highly valued by farmers for the shelter they provide for livestock and crops alike. As a farm forest grows, it will help provide important and increasing shelter for adjoining fields (as well as farm buildings and houses).

This shelter effect can be further optimised by linking the forests with existing hedgerows or scrubland areas. Properly planted and managed shelterbelts and hedges can help reduce ground wind speed by up to 50% with resultant increases in air and soil temperatures of up to 5°C and 2°C respectively. Research shows that good shelter results in healthier livestock, earlier germination and better yields from cereal crops and reduced heat loss from buildings.

Shelter from forestry and trees in general may reduce livestock winter feed costs and veterinary bills, pesticide costs and heating bills for farm buildings.



# Biodiversity and habitat creation

Farm forests offer unique habitats for wild plants and animals. The range of plants and animals living in the forest is dependent on a number of factors including the age and species of trees growing.

A well planned mixed broadleaf/conifer forest provides an improvement in habitat on the farm for many plants and animals.

By following the Forestry & Biodiversity Guidelines published by the Forest Service, new farm forests can achieve the twin objectives of enhancing the number and type of species of living creatures within the forest ecosystem and the production of quality commercial timber.

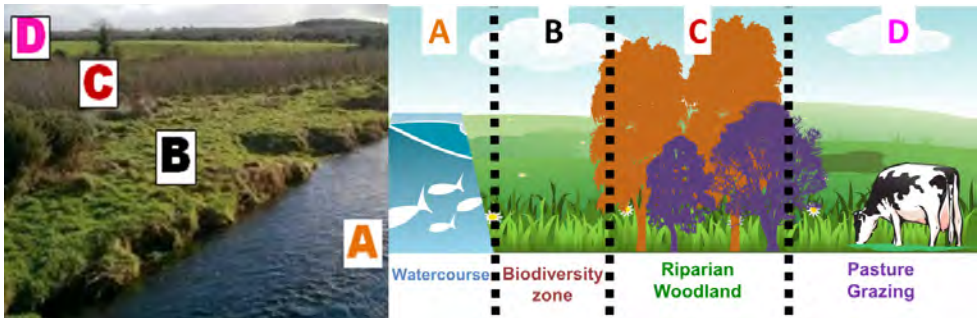




# Forestry and Water

Forests capture and store water, playing an important role in providing drinking water for millions of people around the World. When managed appropriately, forests can reduce the effects of floods, prevent soil erosion, regulate the water table and assure a high quality water supply for people, industry and agriculture. The management of water and forests are closely linked and require innovative policy solutions which take into account the interaction of these vital resources. Forest activities can have the potential to interact both positively and negatively with aquatic resources.

Careful planning and management will mitigate against potential negative impacts while maximising the positive aspects of forestry, such as aquatic biodiversity enhancement and the creation of appropriate riparian ecosystems. All land owners, have a responsibility to play their role in conserving and enhancing overall catchment quality. The DAFM's Water Quality Guidelines set out practical measures based on the principles of Sustainable Forest Management (SFM) to protect water in the context of forest management.

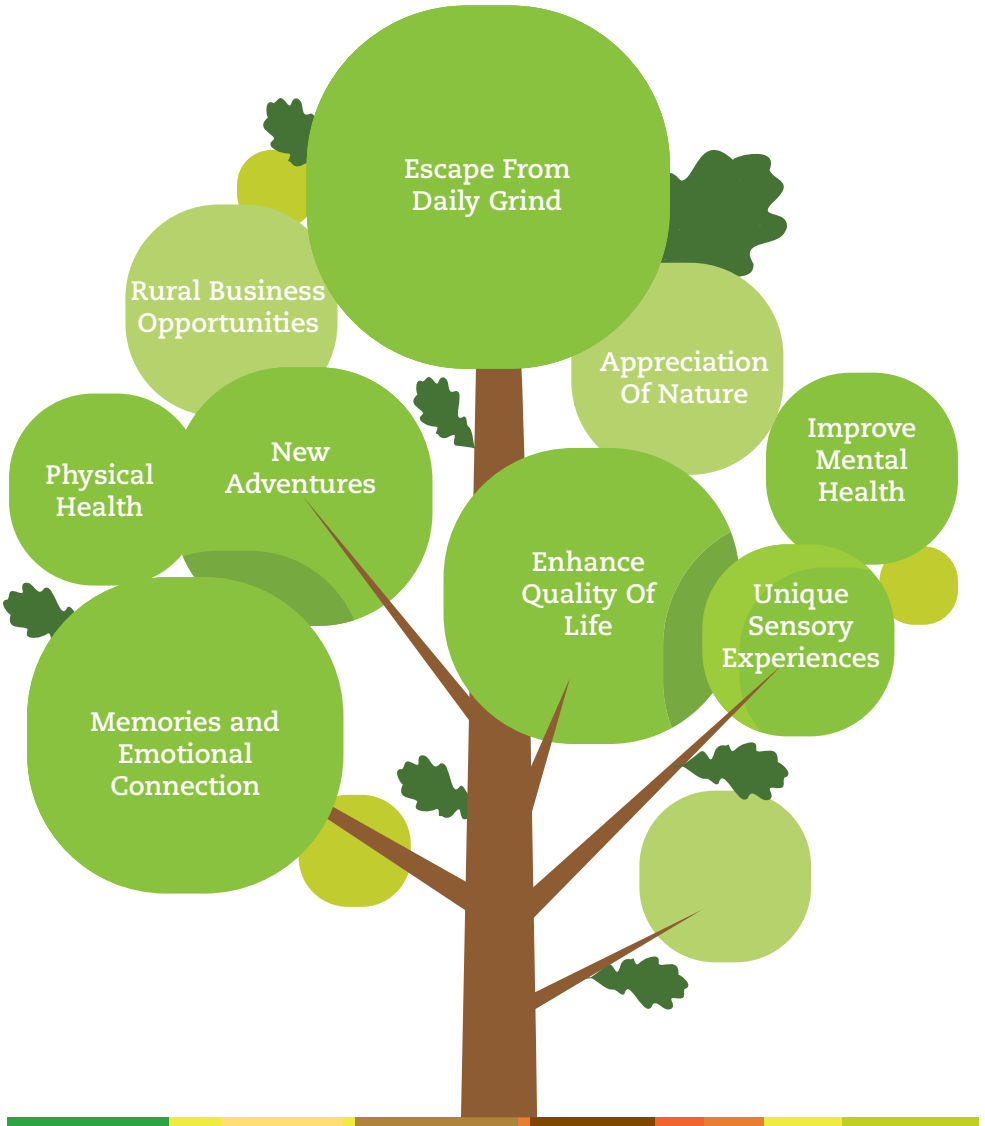


# Recreation and Wellbeing

From a small group of trees in an urban based park to larger forests in the countryside; trees form the basis of one of Ireland's most popular amenities. Many appreciate the sense of 'escape from the daily grind' that woodlands can offer. Beyond the very basic 'walk in the woods'; our woodlands are very versatile; being suitable for many activities like picnics, cycling, paint balling or camping. An estimated 18 million visits are made to forests in Ireland every year. This is mainly in the estates of Coillte and the National parks and Wildlife; but does include some private woodlands. The development of forests for recreation is seen as an important aspect of sustainable forestry and there is an increasing recognition of the wide ranging benefits that forests provide to society.



# Forest Recreation offers...



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Jan 2020



**An Roinn Talmhaíochta,  
Bia agus Mara**  
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Food and the Marine

