Old growth forests

Scientists believe that old growth rainforests are the largest carbon sinks of any forest type:

- *Old growth forests are ecologically mature forests which have remained either completely undisturbered or have been allowed to recover over a sufficent period so the effects of past disturbances become negligible.*
- *Despite their importance there has been no comprehensive survey of old growth forests across Australia.*
- *Some surveys were carried out by the Australian government in regions where assessments were conducted for Regional Forest Agreements. Within these areas:*
  - *22% are classified as old growth forests. That's more that 5.2 million hectares.*
  - *74% of this is now protected in nature conservation reserves.*
  - *30% is available for timber production.*

Why carbon sinks are important and why we should protect and extend existing old growth forests to help fight climate change.

According to the United Nations Framework Convention on Climate Change (UNFCCC). A sink is defined as any process, activity or mechanism which removes a greenhouse gas, an aerosol or a precursor of a greenhouse gas from the atmosphere.

- *All forests play an important role in the carbon cycle, removing carbon dioxide from the atmosphere and storing it as carbon in plant material and soil.*
- *This process is called sequestration.*
- *Forests are the largest store of carbon on land.*
  - *50% of a tree's mass is carbon.*
  - *Carbon is also stored underground, as roots, decaying plant and animal matter or organic carbon in the soil.*
- *50% of the world's forests have already been cleared.*
- *Burning or clearing a forest releases the stored carbon.*

Carbon is found in all living things and is stored in many different ways:

- *In the atmosphere as CO2.*
- *Dissolved in water.*
- *Carbonate rocks ie. limestone and coral.*
- *Fossil fuels ie. coal, oil, and natural gas.*
- *Living plants*
- *Living animals*
- *Dead organic matter ie. wood products, peat, compost.*

Carbon is continuously cycled between reservoirs in the ocean, land, and the atmosphere. This natural carbon cycle has evolved over the last 400 million years. Scientists believe that humans are now altering this natural process.

Australian Rainforest Foundation actions:

Help Australia's rainforest fight climate change - become a Hero2.

To find our more go to www.arf.net.au

Further information:

Crude – the incredible journey of oil:

www.abc.net.au/science/crude/

www.greenhouse.crc.org.au

Information largely sourced from:

Greenhouse CRC, Australian Government Department of Agriculture, Fisheries and Forestry.