Ecosystems services

Services provided by the environment

Services are generally thought of as being provided by people for people, yet increasingly the value of services provided to our community by natural environments are being recognised. Forested areas, for example, provide natural water filtration. The value of this free filtration service can be considered in terms of the money saved by not having to build and maintain large water treatment plants. While calculating the value of ecosystem services can be difficult, there is a growing realisation that this value needs to be considered in order to achieve more sustainable resource management outcomes.

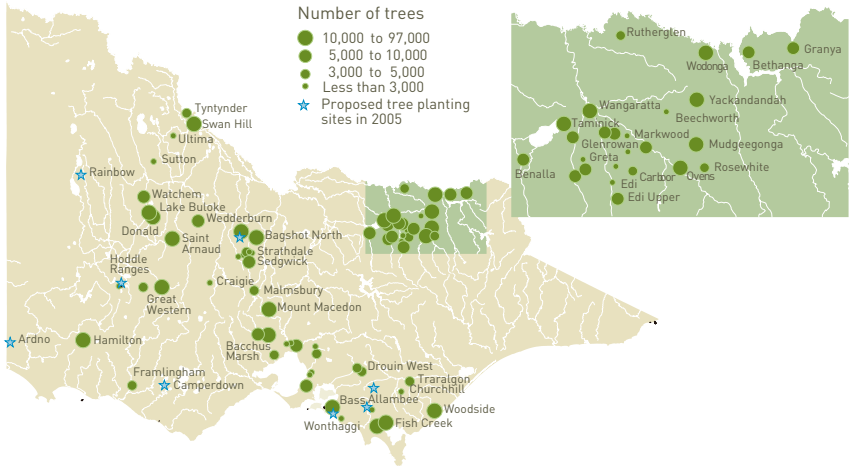
Ecosystem services and community wellbeing

Ecosystem services provide more than economic benefits. Human health benefits are gained through ecosystem services such as filtration and waste absorption which produce clean water and air. The environment also provides benefits which are less tangible: landscape beauty, cultural and spiritual meaning and a sense of place. These are all significant for the wellbeing of individuals and communities.

Types of ecosystem services[1]

Selected ecosystem services	Examples of economic cost if free service were unavailable
Maintenance of healthy waterways	Salinity damage Agricultural productivity loss
Water filtration	Water treatment Health risk (eg. toxic blue green algae)
Waste absorption and breakdown	Waste treatment Health risk (eg. contamination, disease)
Maintenance of soil health	Agricultural productivity loss Crop disease risk
Prevention of soil erosion	Land stabilisation and remediation
Insect pest control	Greater pesticide use (economic & health risk costs) Agricultural productivity loss
Pollination	Agricultural productivity loss Alternative pollination (eg. beekeeping)

Trees planted by Greenfleet[2]



Using an ecosystem service: the Greenfleet project

To limit the potential impacts of carbon emissions on climate change, ways are being sought to limit their build-up in the atmosphere. Trees offer a natural carbon storage system and provide the ecosystem service of 'carbon sequestration' – the process of removing carbon from the atmosphere.

The Greenfleet Australia project, initiated in Victoria in 1997, is based on the ability of trees to provide this service. Motorists are given the opportunity to pay $40 for the planting of 17 native trees which will absorb the greenhouse gases that a car produces in one year. To date over 800,000 trees have been planted in Victoria absorbing approximately 213,037 tonnes of carbon dioxide (based on 4.3 tonnes of CO_2 for the average car). Other benefits resulting from forest establishment are improved habitat, land health and waterway rehabilitation.[3]

Water in a Dry Land "The link between water and land" p. 84
Land and People "Landscape health" p. 74

Sources [1]Binning et. al. 2001 *Natural Assets* [2]Greenfleet 2005 unpublished data [3]Greenfleet 2005 "About Greenfleet"