



▶▶▶ Ecosystem services – what are they?

Biodiversity contributes to on-farm activities by maintaining the broader environment in which agricultural enterprises operate. We have long understood the importance of the services which nature provides, but only recently has research been undertaken to quantify their contribution to agricultural enterprises.

What value is put on the services provided by nature?

Is it possible to put an economic value on biodiversity? Can we objectively value the contribution of biodiversity to sustaining our everyday lives?

Ecosystem services flow from nature to provide us with financial, ecological and cultural benefits. Land managers are both beneficiaries and suppliers of ecosystem services. Human society depends on the maintenance of those services for long term survival. Most people are aware of the value of timber products that are harvested from natural forests. But what other benefits are derived from land dedicated to forests? The range of services provided by the forest extends way beyond the value of the timber products. Additional ecosystem services contributed by the forest include maintenance of water quality, climate control, biodiversity conservation and salinity control, among many others. Humanity can't survive without these services.

Ecosystem services provided by nature include:

SERVICE	EXAMPLE
Biological control	Predator control by prey species
Climate regulation	Greenhouse gas regulation
Cultural	Aesthetics; recreational, educational, spiritual benefits
Disturbance regulation	Storm protection, flood control
Erosion control, sediment retention	Prevention of loss of soil
Food production	Production of fish, game, bush foods
Gas regulation	CO ₂ / O ₂ balance
Genetic resources	Genes for resistance to plant pathogens and crop pests
Nutrient cycling	Nitrogen fixation, organic matter recycling
Pollination	Native insect and bird pollinators
Raw materials	Production of timber, fuel and fodder
Refugia	Regional habitats for locally harvested species
Soil formation	Accumulation of organic material
Waste treatment	Pollution control, sediment filtration
Water regulation	Provision of clean water for agriculture and urban areas
Water supply	Provision of water by watersheds, reservoirs



Funded by:



FSBD16 Produced by: QMDC, 2006
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