

WHAT ARE 'ECOSYSTEM SERVICES'?

The description of large projects often states that they will provide 'ecosystem services'. LFW has been asked – what are these services? Below is a very brief outline.

An ecosystem is a suite of living things (plants, animals, fungi, bacteria and others) that interact with one another and their surrounding non-living environment. These interactions perform functions and produce outcomes that are above and beyond what would come from the species separately – the whole is greater than the sum of the parts. We should never forget, for example, that the composition of the air and the temperature of the earth are maintained within the limits for human life by plants.

The concept of 'services' arose to acknowledge the reliance of people on ecosystems. The functioning of natural ecosystems provides things that are essential for human health and survival. Examples of the kinds of services we receive from nature are the filtration of the water we drink, the maintenance of soil fertility, flood mitigation, pollination, pest control and even spiritual uplift. And of course, ecosystems are where our food, fibre, pharmaceuticals and, on a world scale, most of our building materials come from.

Ecosystems take natural assets like soil, water, air and living species and produce products that people benefit from and value in many ways, including financially. But people are important in the delivery of ecosystem services too. For example, farmers manage ecosystems and so play a key role in sustaining and fulfilling human life. The role of land managers in providing food and fibre has always been recognised, but as our understanding of ecosystems has grown, this is now expanding so that their role in maintaining air and water quality, climate, flood protection, healthy rivers, pest control, pollination, biodiversity and cultural, spiritual and intellectual values is also being recognised.

So, instead of asking what we have to *give up* in order to have a healthy environment, we should ask the question, what do we have to *gain* by maintaining a healthy ecosystem? This includes asking – who benefits from the delivery of ecosystem services, and how can costs and benefits be fairly shared? One of the roles of the Natural Resource Management Councils is to provide and implement a strategy to answer these questions. It's a big task – but vital to our future.