

# ENERGY AND EMISSIONS

## KEY POINTS

The Sun's renewable energy powers plants and the biosphere.

Climate, fossil fuels, global vegetation and land management all link into the global carbon cycle.

Stabilising climate will require high income countries to reduce emissions by 60–90% over 2006 levels by 2050 with major reductions in place by 2015.

Energy and its environmental impacts are embodied in products and world trade.

To achieve sustainable individual levels of energy use will require dramatic reduction over current levels.

Horticulture must plan for increased urbanisation and climate change.

Parks and gardens are low energy users but can significantly reduce both direct and indirect energy use by local food production.

Chapter 1 showed how sustainable horticulture can become part of a global sustainability effort working towards a secure environmental future. We then looked at some of the many kinds of sustainability accounting that are being used to assist this process. It was also suggested that one simple but effective method of assessing sustainability is to measure the way our use of the resources energy, water, food and materials impacts on biodiversity and ecology.

This and the next four chapters explore each of these resource consumption categories at

different levels of human organisation (global, Australian, household, individual) to see how their use in urban space and gardens fits into the big sustainability picture.

In considering environmental impacts we need to distinguish between those that are *direct* and those that are *indirect*.

Direct impacts occur on-site. So in a garden something that affects water flows to the garden beds or encourages native wildlife is having a direct impact. Indirect impacts occur at a distance from the site. So, for example, when we use mains water it has the