

The Greenhouse Effect, Climate Change and our Garden

The Greenhouse Effect

Anyone who's ever come back to a closed car on a summer's day and been overwhelmed by the heat trapped inside, has experienced the greenhouse effect. The sun's rays bring heat in and as it can't all escape, the temperature rises. The same thing is happening, ever so slowly, with the Earth.

The mix of gases in our atmosphere has always trapped the sun's heat to some extent and so our air keeps us warm. What is worrying now is that the mix of gases in our atmosphere is changing.

The amounts of carbon dioxide (CO₂) and other gases (such as water vapour and methane) are increasing and this increases their greenhouse effect. This is cause for concern because although there have been fluctuations due to natural causes (seasons, volcanoes etc) over the millennia, people's fuel-burning activities in the last few hundred years have put the natural cycles out of balance.

Climate Change

Scientists and national leaders are currently addressing the causes of global warming, and all of us can do our bit to reduce energy use and slow down the warming. [We know about 'recycle, reduce, reuse' but growing plants helps too. A cover of plants (trees, shrubs and pasture grass) removes CO₂ from the air and helps sequester it in the ground.]

This slowing will not happen overnight and in the meantime, our climate will continue to change. Glaciers and polar icecaps will continue to melt and storms to increase in ferocity and frequency. Some parts of the country will get hotter and drier; a few tropical parts hotter and wetter.

Our Garden and the plant diversity challenge

The future of humankind may depend on maintaining the diversity of plant species in the world – they are our natural resource for the future. Plant species which have not been 'Rare & Threatened' on the IUCN's Red List up till now, may well become so as the climate changes. Our Garden, like other botanic gardens round the world, has several important roles to play:

- * Our collection of plants from the arid and semi-arid areas of Australia constitutes a 'plant insurance gene pool' in case their original sites become unsuitable for their growth. We must continue to keep them growing well.
- * The trees, shrubs, flowers and ground covers in our collection are hardy and may inspire visitors whose gardens become exposed to hotter, drier conditions.
- * Monitoring of local flora and collection of its seed is a role we have been playing for some time. The Millennium Seed Bank, managed by the Royal Botanic Gardens, Kew, in the UK, already has some seed from our local plants.
- * Myall Park Botanic Garden will continue to be involved at the local, national and international levels to conserve natural resources and minimise biodiversity loss as the climate changes.

