



TIME TO ACT

Time to act is a handy educational resource for teachers and students – calling all of us to make a few changes in our daily lives for the benefit of the environment. Many of these changes can also save us money. In this booklet you'll find a few tips about easy things that you can do around the house, at work or school, or when you are enjoying Australia's beautiful natural environment. With the global challenge of climate change, ongoing drought and an increasing number of threatened species, it's time to focus on the things that we can all do to help the environment.

Why not start by visiting *My Environment* at www.deh.gov.au/myenvironment to find out what is in your own backyard. *My Environment* is a web tool using your own address to generate information on what plants and animals live near your home or school, what the weather is like, what heritage places are in your area and much more information on your local environment.

Then follow the simple tips in this booklet to help reduce your impact on the environment.

Time to act: care for our coasts

About 86 per cent of Australia's population live along the coastal zone. Declining marine and coastal water quality is one of the most serious issues affecting our marine and coastal environments. Each year, thousands of tonnes of sewerage effluent discharges into estuarine and coastal waters. The challenge is to repair this type of damage as well as manage the coastal zone in a way that minimises further degradation.

Whether we live on the coast or just visit on holidays, there are many things we can do to help protect our coastal and marine animals and plants, as well as make sure that our coasts are places that we can enjoy for years to come.

Do something

Stay off the sand dunes: stick to the tracks and keep off the dunes – sand dunes are held together by the plants that grow on them and if these get pulled up or disturbed there is little to stop the sand from blowing away.

Leave rock pool animals and plants in the water: when looking around the rocks, put back any that you have overturned, as animals and plants will die if left out in the sun.

Be a seagrass and coral friendly sailor: be careful of using anchors, propellers and swing mooring chains when sailing across a sea bed as they can damage seagrasses and coral if dragged along the bottom.

Stick to the laws: find out more about the bag limits affecting fishing or collecting coastal animals – and stick to them.

Dispose of your rubbish properly on land: dispose of unwanted or tangled fishing lines, nets and bait packages on land as they can kill fish, marine mammals, birds and reptiles. Don't bury your rubbish in the sand as it will soon be uncovered by the tide, or animals or people's feet.



Time to act: clean up our atmosphere

Cars and sprawling cities affect our air quality. Some human activities release greenhouse gases, 'ozone-depleting substances' and particulates in our atmosphere.

Greenhouse gases such as carbon dioxide absorb heat leaving the earth and return some of it, making the earth warmer overall. This is called the 'greenhouse effect' and keeps the earth at a temperature capable of sustaining life. However, the concentration of greenhouse gases has increased significantly during the past 200 years as a result of human activities, such as burning fossil fuels and land clearing. This has led to the 'enhanced greenhouse effect' and can cause higher global temperatures, rising sea levels, changing weather patterns and a loss of biodiversity.

'Ozone depleting substances' break down and thin the ozone layer. Since the ozone layer absorbs a lot of the sun's UV radiation, a thinning of the ozone layer means that more UV radiation can reach the earth, which leads to a higher risk of skin cancer. Some greenhouse gases, such as chlorofluorocarbons (CFCs) and halons, are also 'ozone depleting substances'.

'Particulates' refer to the other pollutants in our atmosphere that can come from sources such as power stations, vehicles and factories. When particulate levels are too high, it can have negative effects on both human health and the environment.

The greenhouse effect and ozone depletion are global issues, but there are lots of things we can do to help solve these problems at the source.

Do something about greenhouse gases and climate change

Use your car efficiently: reduce air pollution and save petrol money. Motor vehicles are the single greatest source of air pollution in cities, which means we can make a big difference simply by changing a few of our driving habits:

- » minimise your vehicle use – do multiple errands in a single trip
- » drive in high gear - the engine runs most efficiently between around 1,500 and 2,500 rpm (lower in diesels)
- » minimise fuel wasted in idling
- » drive smoothly - avoid unnecessary acceleration
- » use air conditioning sparingly - air conditioners can use about 10 per cent extra fuel when operating
- » lighten your vehicle's load - clear out the boot and remove roof racks if not needed
- » ensure your tyres are filled to the maximum recommended air pressure *and*
- » have your car serviced regularly.

Choose a less polluting car: when buying a new car, check its fuel consumption label. Since 2004, all new cars are required to have a label showing their fuel consumption and greenhouse gas emissions per kilometre under a standard test. You can also compare the greenhouse and air pollution emissions of these vehicles in the Australian Government's Green Vehicle Guide www.greenvehicleguide.gov.au. The tested fuel consumption of cars built before 2004 can be found in the previous Fuel Consumption Guide at www.greenhouse.gov.au/transport/fuelguide.

Use alternatives to cars: walk, ride a bike, or catch public transport instead of driving. Think about whether you can use the telephone instead of going out in the car or organise to car pool with neighbours and friends.



Create an alternative transport friendly workplace:

set up a car pool register and ask management to install facilities for cyclists.

Leave your car at home: leave the car at home one day every week – if everyone did this it could make a huge difference.

Rethink your work travel choices: consider alternatives such as video and telephone conferencing, use of email/internet, facsimile and telephone to cut your organisation's travel bill and make huge greenhouse gas savings.

Control the temperature in your home:

- » seal cracks and gaps, fit dampers to fireplaces and block unnecessary vents to keep heat in
- » shade windows from hot sun and install close fitting blinds or curtains with pelmets to keep the house cool – in extreme climates, look at installing double glazed windows *and*
- » when building or renovating, try to put in north-facing windows to catch the winter sun and avoid unshaded roof glazings, large west facing windows and large skylights.

Choose energy efficient appliances: check the energy rating label when buying new or second hand electrical appliances. More stars mean fewer greenhouse gases but more savings for you on your energy bill. The energy rating website will help you select energy efficient appliances: www.energyrating.gov.au.

Use your electrical appliances wisely: save money and reduce greenhouse gas emissions by:

- » turning off appliances at the power outlet when not in use – stand-by mode uses a lot of electricity
- » washing with cold water and only when the washing machine is full
- » using a clothes line to dry clothes
- » switching off your television, VCR and computer when not in use *and*
- » fitting low wattage globes and remembering to turn off lights when leaving the room.

Use less hot water:

- » avoid using only small amounts of hot water if cold will do – when hot water goes cold sitting in the pipes, it wastes both water and the energy used to heat it
- » fix leaking hot water taps to reduce your hot water bill and save on greenhouse gases *and*
- » consider gas or solar water heating when building or renovating.

Do something about 'ozone depleting substances'

Find out about refrigerators and air conditioning systems: a lot of these, including car air conditioners, still use the ozone depleting refrigerants chlorofluorocarbons (CFCs). Newer air conditioning systems often contain the global warming substance, hydrofluorocarbons (HFCs). You should have all of this equipment repaired and regularly serviced by a certified technician to ensure these gases do not escape into the atmosphere.

When throwing out or replacing your fridge, contact an appropriately licensed person who will have equipment to recover and recycle the refrigerants.

Follow some car air conditioner tips: if your car was manufactured before 1994 it will probably have a refrigerant in its air conditioning system which is harmful to the ozone layer. Make sure your vehicle's air conditioner is serviced by a certified technician:

- » ask if refrigerants will be recovered and recycled during servicing
- » have all leaks repaired
- » run your air conditioner weekly in winter to keep the seals lubricated *and*
- » consider converting your vehicle's air conditioner to a non-ozone depleting substitute.

Return banned fire extinguishers: if you have a yellow hand-held fire extinguisher (BFC) containing halon, deposit it at a Halon Bank Collection Depot, fire brigade or fire equipment supplier. Halons are a very aggressive ozone depleting chemical.

Do something about 'particulates'

Burn your wood heater efficiently: save money and cut down on smoke:

- » burn dry, seasoned, untreated wood
- » stack wood under cover in a dry, ventilated area
- » use small logs
- » burn the fire brightly
- » don't let it smoulder overnight *and*
- » open fire places are especially inefficient – use them only on special occasions.

Time to act: save water

Australia is the driest inhabited continent on the earth and one of the world's largest consumers of water – we use more than 1 million litres of water per capita per year. Around 75 per cent of this water is used for irrigation, and urban and industrial use accounts for around 20 per cent.

Droughts have highlighted the important part water plays in our way of life. Water is a precious resource and despite Australia's best efforts to "stop the drop" there are still many easy ways we can help to save water.

- » See if your school or other community organisation is eligible for a Community Water Grant – encouraging better water usage or improving water health through practical on-the ground projects. Visit www.communitywatergrants.gov.au for more information.

Apply the following tips around the home to save water and money.

Do something – garden

- » Install a tap timer so you'll never forget to turn off the hose. Make sure you don't set the timer to over water your garden – and turn it off when there's a likelihood of rain.
- » Install a dripper system and only water during permitted hours.
- » Use mulch to prevent water loss through evaporation and prevent soil erosion. Mulch can also help to smother your weeds.
- » Plant your garden in watering zones (hydrozoning). Plants that require large amounts of water should be planted together. This helps to reduce the amount of water wasted on plants that don't need it.
- » Choose a drought resistant lawn that will cope with our harsh, dry conditions.
- » Don't over water your lawn – train it to use less water by encouraging the roots to grow deeper.
- » Set your mower level higher during summer and let your lawn grow longer. Keeping grass longer shades the soil surface and reduces evaporation loss.
- » Weed! Weeds compete with your plants for water.
- » Don't water during windy weather – the water will blow away from where it's needed most.
- » Water proof terracotta pots before you plant. Terracotta pots are porous and allow the moisture to escape rapidly.
- » Regularly check your outdoor taps and hoses for leaks. Leaks normally get worse, so it pays to fix them as soon as possible.
- » Always use a broom or rake to clean paths, paved areas and patios.
- » Install a rain water tank in your backyard – use this water to wash the car and water the garden.



Do something – bathroom

One of the easiest ways of saving water in the bathroom and toilet is to install a water efficient shower head and toilet cistern and ensure that you use them properly. Buy water-efficient appliances and plumbing products that display the Water Efficiency Labelling Standards (WELS) Scheme star-rating label: the more stars the better – WELS products will save you money on water and energy bills.

In your bathroom:

- » Take shorter showers. A shower uses 10-20 litres of water every minute.
- » You can save up to 11 litres of water every minute by installing a water efficient shower head, look for plumbing products displaying the WELS star-rating label.
- » Install a dual flush toilet - this can save you up to 50 per cent on every flush.
- » Check for a leaking toilet cistern. Put food colouring in the cistern. If the colour shows in the toilet bowl without flushing, you've got a leak.
- » Turn the taps off when you're brushing your teeth, washing your hands and shaving.
- » Install aerators on your taps.

Do something – kitchen

- » Install aerators on taps - aerators reduce the water flow and stop you using as much water.
- » Look for dishwashers with the WELS star-rating, and power efficiency labels.
- » Only turn the dishwasher on when it's full.
- » When you're running the taps waiting for water to cool down or heat up, collect the water in a jug for use on the garden.
- » Turn taps off when you're washing vegetables or your hands.
- » Fix any leaks as soon as possible.
- » In every wet area try to use environmentally friendly cleaning products and detergents.

Do something – laundry

One of the easiest ways to save water in the laundry is to install a water efficient clothes washer. Also in your laundry, you can:

- » Look for the WELS star-rating label when you're choosing a washing machine. The more stars, the more water efficient the machine is.
- » Don't turn the washing machine on until you have a full load or make sure you adjust the load setting to suit your washing requirements.
- » Fix any dripping taps and install aerators on taps.
- » Consider reusing grey water from the laundry on the garden (make sure you check out all the planning, health and plumbing requirements before undertaking this activity).
- » If you're buying a new washing machine consider investing in a front loader or a water efficient top loader. Although they may cost more initially, they may use less water and require less detergent.



Time to act: reduce the waste you produce

One of the major threats to our environment is the amount of waste we produce. Despite considerable recycling efforts by Australians, there is still an awful lot of waste sent to landfill each year.

In fact, Australia is the second highest producer of waste per capita after the USA, sending 18 million tonnes to landfill each year. This is equivalent to one tonne for every person, and it would be enough to cover the state of Victoria to a depth of 10cm. There are many things we can do to reduce waste.

Do something

Separate your garbage: put recyclable items such as paper, cardboard, bottles, cans and cartons in the correct bins, and keep it separate from your garbage.

Provide separate bins at your school or workplace: in classrooms, offices and in the kitchen put three separate recycling bins. One bin is for paper, another for organic waste, and the third is for cans and bottles. Make and display a poster explaining what goes in each bin to ensure everyone understands how to use the system properly.

Buy less packaging: one third of domestic waste Australians produce is made up of packaging materials, so think carefully about what you are buying. Also, say no to plastic bags and use 'green' bags when you go shopping. Discarded plastic bags not only litter the environment they can also clog drains and harm wildlife and ocean creatures.



Compost your kitchen and garden waste: contact your local council to find out the best way to do this in your area.

Dispose of electronic waste thoughtfully: when updating your mobile phone, don't throw out the old hand set and accessories. These contain valuable metals such as gold, which can be recycled. Visit www.amta.org.au/aoi.asp?ID=Recycling to find your nearest mobile recycling centre.

When your computer has reached the end of its life, find out from your local council where you can recycle it. Computers contain hazardous materials such as lead, mercury and phosphors and should not be dumped as landfill as these substances can leak into the environment.

Become a worm farmer: worm farming is an alternative to composting. You might even consider feeding your organisation's organic waste to worms and then giving the castings to staff for their gardens. Contact your local council to find out more.

Use paper wisely: think about whether you need all the paper you use. Look at using recycled paper and printing or copying on both sides of the sheet. Perhaps documents can be distributed by email or on the internet instead of being printed. Editing can be done using the word processor on the screen.

Consider the environment when you buy products: consider the following when next making a purchase for your organisation or the home:

- » what is the recycled or remanufactured content of the product?
- » can the product be reused or recycled when you've finished with it (for example printer toner cartridges or bottles?)
- » how much packaging does it have?

Find out about your contractor's waste policy: before hiring someone to do a job, consider their efforts to reduce waste, reuse and recycle.

Recycle used motor oil: just one litre of oil can contaminate one million litres of water so recycling this oil makes sense. Used oil can be cleaned of contaminants and recycled again and again and again. Australia has more than 800 used oil recycling depots. To find the facility nearest you, visit www.oilrecycling.gov.au/directory.html.

If you smoke – be responsible when you throw away your cigarette butts as they contain chemicals which can harm our environment.

Time to act: protect our wetlands and waterways

Wetlands and waterways provide habitat for wildlife, they can be breeding grounds for fish, and the source of life for entire communities – including humans. They are also often places of great natural beauty where we can enjoy a swim, cast a rod or pitch a tent by the riverbank.

Though we are not always aware of it, everything we do in our cities and in the country is eventually reflected in our water. When we drop litter onto the road, or pour chemicals and fertilisers down the drain they get washed into stormwater drains and into the rivers and ocean.

Wash with water when camping: don't use soaps or detergents in the river when camping, as this can upset the aquatic ecosystem.

Consider buying a front loading washing machine and look for appliances and plumbing products with the WELS star-rating label: these products save money on water and energy bills.

Minimise the use of fertilisers and pesticides in your garden and on your farm: they can find their way into waterways.

Plant native trees or grass local to your area to reduce areas of exposed soil: this stops soil and fertilisers from being washed into waterways.

Plant native trees and shrubs local to your area along riverbanks: they will protect water quality and improve wildlife habitat. Remember not to plant Willow trees as branches can break off and grow elsewhere, clogging the river system. Talk to your local nursery for advice.

Join a waterbird watching group: enjoy what you have helped protect.

Do something

Take note of what goes down the drain: don't put oils, fats or harmful chemicals down the sink – they will eventually end up in the rivers, lakes or oceans and harm our water quality and wildlife. Use a strainer in the kitchen sink to collect solids from your washing up water.

Conserve water: install water-efficient appliances and plumbing products that display the WELS star-rating label e.g. flow restrictions on taps and dual flush toilets can more than halve the amount of water you use, which will save you money too.

Use environmentally friendly cleaning products: detergents with no or little phosphorus are better for the environment because phosphorus increases the nutrient loads in rivers and can cause excessive algal growth and harm or kill aquatic plants and animals, as well as make waterways smelly.

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Time to act: conserve our biodiversity

Biodiversity is the variety of all life forms. It includes humans, plants, animals, fungi and micro-organisms, along with the genes that they contain. But biodiversity is more than the life in the bush or the oceans and rivers. It has many important functions: it gives us food and medicine, produces oxygen, breaks down our garbage, and cleans up our sewage...to name a few! There are many things we can do to conserve biodiversity for the future.

Do something

Create habitat for native animals and birds: Plant local native species in your garden and add logs and rocks to create habitat for native animals and birds. It is important to plant native species local to your area, as some plants can become serious weeds and end up doing more harm than good. Talk to your local nursery for advice.

Leave dead wood in the bush: Get your firewood from a timber yard, and remember to ask for plantation timbers. Birds and animals live in dead trees and logs. Collecting firewood from the bush robs them of their homes.

Leave rocks in the bush: Rocks are important habitat for small animals, lizards and insects. Get rocks from construction sites or landscaping supply outlets.

Use pesticides and herbicides sparingly: If you must use pesticides in the garden, opt for those made from natural ingredients, such as pyrethrum. Birds, frogs and reptiles can become sick or die if they feed on insects sprayed with pesticides.

Remember to put the cat in: Keep your domestic cats inside at night, put bells on their collars, and have them desexed. Native animals do most of their feeding at night and can easily become extra food for pets.

Join a community group in your local area: Volunteer your time to do on-ground, office or coordination work to help revegetate your local area. Get involved in tree planting, seed collection and weed control. Contact Landcare, Greening Australia, the Australian Trust for Conservation Volunteers, or the Threatened Species Network to find out more.

Learn about your environment: Visit national parks, botanical gardens or a zoo in your area and learn more about your environment. Take your friends with you.

Drive carefully: Watch out for native animals when driving at dusk and dawn, particularly in bush areas.

Care for the bush: Make sure that all campfires and cigarettes are properly extinguished before leaving the bush, and remember to take your rubbish with you. Stick to the tracks if walking or mountain biking.

Be informed before you fish: Find out which species you can take home for dinner and which you should throw back in. Take only what you need and leave the undersized ones for another day. Call your local fishing authority to find out more.

Try to use plantation timber: Buy plantation timber instead of native forest or woodland timber, if you are building or renovating. This will help conserve the forest and woodlands.

Dispose of garden waste carefully: Weeds, pruning and grass clippings dumped in the bush can introduce or spread weeds.

Take note when travelling overseas: Be careful about what you buy overseas and bring into the country as you may be buying into illegal trade in wildlife.

Become an AuSSI school: join the Australian Sustainable Schools initiative – encourage your school to be environmentally friendly. Visit www.deh.gov.au/education for more information.



For more information

on climate change and how you can help, visit

www.greenhouse.gov.au/education/index.html



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