



sustainable
 illawarra
SUSTAINABLE LIVING GUIDE
 For the Community of Wollongong, Shellharbour and Kiama



ACKNOWLEDGEMENTS

Aimed at helping residents take the hard work out of being green, *Sustainable Illawarra* was a sustainability project run by Wollongong, Shellharbour and Kiama Councils with support from the NSW Governments Environmental Trust. The community education component of this project was called *Sustainability Begins at Home*, and from June 2008 – June 2010 this program involved:

- Over 7,000 residents attending 43 sustainability events such as the Solar Expo, Harvest Festival and Giant Community Garage Sales.
- More than 1,100 residents attending 80 hands-on workshops to learn about a range of topics from bike maintenance to creating a backyard veggie patch.
- Partnering with ten local businesses to provide discounts to the community on selected sustainable products such as hot water systems and rain water tanks.
- Providing a comprehensive sustainability website, monthly e-newsletter and hotline number.
- Supporting 150 selected households to achieve their own sustainability goals through the innovative Super Challenge.

This publication is a legacy of the *Sustainability Begins at Home* project, and is designed to give you ideas and inspiration about simple changes you can make to your home and lifestyle to create a brighter, more sustainable future for the Illawarra.

There is a special section of this workbook that has been dedicated to celebrate the stories of some of the wonderful 'Super Challenge' participants, who have inspired the community with their journeys towards sustainable living. We would like to thank the Super Challengers for generously offering their time to be interviewed, and local journalist Dena Leighton for volunteering to interview the Super Challengers and create the Super Challenger stories in this book. The professional photography on the cover and throughout has been taken by Daniel Hopper (www.danielhopper.com.au).

Many thanks are extended to Vanessa John, Alison Mellor, and Caren Taylor for visualising, researching, writing and editing this book. We would also like to acknowledge the many Council staff who have dedicated their time and energy into making the *Sustainability at Home* project a success. In creating this workbook we acknowledge the ideas and inspiration contained in the Watershed Urban Sustainability Workshop Series, the Australian Conservation foundation's GreenHome Guide, and the Living Smart program.

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For further idea and inspiration about sustainable living in the Illawarra and please visit the Sustainable Illawarra funded website KiamaSphere at:

- www.kiamasphere.com.au

And the environment/sustainability pages of your local Council website:

- www.wollongong.nsw.gov.au
- www.shellharbour.nsw.gov.au
- www.kiama.nsw.gov.au

Sustainable Illawarra has also provided a selection of sustainability books and DVD's to your local Council library.

The Sustainable Illawarra team would like to extend many thanks to everyone in the community for their support and enthusiasm for the *Sustainability Begins at Home* Project. We wish you all the best of luck on your future sustainability endeavors!



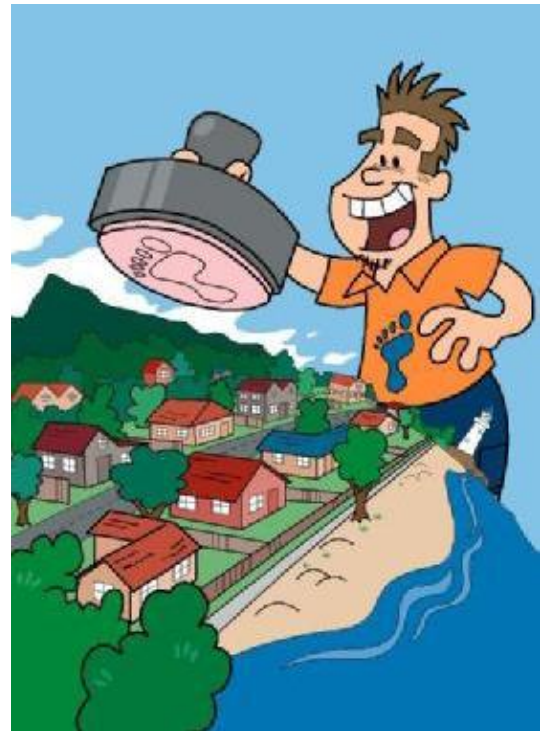
welcome

Welcome to the Sustainable Illawarra *Sustainable Living Guide*! Created especially for residents of Wollongong, Shellharbour and Kiama, this guide is organised into six chapter themes:

- Water
- Energy
- Waste
- Better Buying
- Sustainable Food
- Biodiversity

Each chapter contains a:

- Brief overview of major sustainability issues
- Challenge Action Checklist
- My Goals section
- Contacts and Links
- Recommended Reading and Viewing
- Glossary



There is also a special 'Super Challenge' chapter which features inspiring local families and showcases their journeys towards sustainability.

We hope this booklet provides you with further ideas and inspiration on your lifelong journey in sustainable living.

May we all work together for positive change in the world, and may the seeds we plant be watered, tended and nurtured with love and hope.

Robin Clayfield



water

Freshwater systems in Australia are under threat from drought, pollution, landclearing and intensive water extraction. In recent times a combination of water restrictions and greater public awareness, has delivered decreases in average household onsite water consumption. Illawarra residents have enthusiastically taken up offers of rebates on rainwater tanks, and retrofitted showerheads and tap fittings.

Whilst local dam storage levels are looking healthier now than the all-time low of 35% in 2007, the demand-side pressure on our water system remains high. Working out where we use water is complex. There are immediate things we can do to change behaviour and technologies to make the most efficient use of the water that enters and leaves our homes. Many of these things you'll find in the Challenge Action Checklist.

The online game 'Mission CO2' was launched in 2010 with enthusiasm from NSW Water Minister Phil Costa. Mission CO2 makes sustainability fun in a 3D interactive landscape, encouraging Australians to save water and energy. You can join in on this fun interactive learning experience by visiting www.savewater.com.au/mission-co2-game.

It's vital that we also recognise the invisible 'embodied' water which is used in producing, processing and packaging all of the goods and services we consume. We can all make better choices to reduce the impact of our consumption on our precious water resources.

As agriculture accounts for around 70% of the total water consumption in NSW, it's especially important to be particularly mindful of the choices we make about the foods we eat.

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Embodied water – or 'water footprint' – of common products

1 cup conventional coffee	140 litres water
1 litre milk	1,000 litres water
1 kg wheat	1,350 litres water
1 Cotton shirt	2,700 litres water
1kg rice	3,000 litres water
1 kg beef	16,000 litres water

Making better choices about our water usage includes looking at what we put on our plates (see the Sustainable Food chapter), and avoiding purchasing cheap clothing made from highly irrigated fibres (see our Better Buying chapter).

Water Wise Rules for Illawarra Sydney Water customers

In July 2009, Sydney Water drought restrictions for water use ended, and a new set of 'Water Wise rules' were brought into place. The new rules are:

- All hoses must now have a trigger nozzle.
- Watering is allowed before 10am and after 4pm.
- No hosing of hard surfaces such as paths and driveways.
- Washing vehicles is allowed.

Visit www.sydneywater.com.au/Water4Life/WaterWise/ for more details

water



Home Water Audit

To track your progress in reducing your household water use, it can be useful to record the average amount of water you use every day.

To do this, find your most recent water bills. On your water bill find the section 'Your average daily usage'. It has a graph with three columns, showing your average daily water use for this bill, last bill, and the same time last year. The number at the top of each column represents the average daily amount water used by your household for each billing period. You can enter each of those three numbers in the table below.

You don't need to calculate anything, find old bills, or write \$ figures. The billing period date can be found under the section 'usage charge' near the top of your bill. From this you can count backwards to determine the billing period of your last bill and the bill you received for the same period last year.

When you get water bills in the future, you can then come back and compare your water usage to the 'baseline' figures in the table below, and see what progress you've made. There are lots of great ideas in the Challenge Action Checklist at the end of this chapter about how you can become more water smart around the home.

Title of graph column	Billing period (e.g. 1 June – 31 August 2009)	Average Daily Use (litres)
This bill		
Last bill		
Same time last year		
This bill		
Last bill		
Same time last year		

water

What help can you get from Sydney Water?

- You can apply for a **FREE DIY Water Saving Kit** contains aerators and flow restrictors that are easily installed in tap fittings and showers to save 100s of litres of water a week.
- The **Toilet Replacement Service** involves the removal of the old single flush toilet and the delivery and installation of a new dual flush toilet by a licensed plumber. There is a discount of \$200 available for Sydney Water customers per toilet. Costs range from \$330 to \$528 depending on toilet selected.
- From only \$22, a registered plumber will come to your home to install water saving devices and check for leaks as part of the **Water Fix** program.
- You can access a \$150 rebate if you upgrade to a new 4.5 star-rated Washing Machine.
- Get expert advice on your garden's watering needs for just \$33 through the **Love Your Garden** program.

The Sydney Water website contains an amazing amount of information, including online tools to help you choose appropriate plants for your garden. Visit www.sydneywater.com.au/Water4Life or call 1800 995 886 for details. Please note these offers do have varying expiry dates.

Rebates

The NSW government (through Sydney Water) offers rebates up to \$1,500 for installing rainwater tanks in your home, depending on the size of the tank, the date the tank was purchased, and whether a licensed plumber connect the tanks to the toilet and/or washing machine. For more details visit www.sydneywater.com.au/Water4Life (call 1800 995 886) or visit www.environment.nsw.gov.au/rebates.

The Federal Government, through the National Rainwater and Greywater initiative, offers homeowners rebates of up to \$500 are available to households for either:

- The purchase and installation of a new rainwater tank which is connected for internal reuse of the water for toilet and/or laundry use; or
- The purchase and installation of a permanent greywater treatment system.

For more information on the federal rebate visit

www.environment.gov.au/water/programs/nrgi/index.html, email nrgi@environment.gov.au or call 1800 808 571.

There is a limit of one rebate per residential property, but the NSW rebate and federal rebate for rainwater tanks can be combined, meaning there is a total of **up to \$2,000** of rebates available.

water

Reusing Greywater

Greywater is the wastewater generated from your washing machine, shower, bath and basins which, when used safely, can replace drinking water for watering lawns and gardens. There are three ways greywater can be reused:

- **Manual bucketing** - Small quantities of water are collected from either the washing machine or the shower in a bucket for reuse outside on gardens or lawns
- **Greywater diversion devices** - Involves the installation of a greywater diversion device to redirect greywater to the garden or lawn via a sub-surface irrigation system. You'll need a plumber to install the device. Council approval is not required if the conditions of Section 75A of the Local Government (General) Regulation 2005 are met. For more information see fact sheets from the NSW Department of Energy, Utilities and Sustainability at www.dwe.nsw.gov.au/water_urban/recycling.shtml, or call 8281 7777.
- **Greywater treatment systems** - Enable you to use treated greywater for toilets and washing machines, and on gardens and lawns. Council approval is required and you need a plumber to install the system. Federal rebates are now available for greywater re-use systems – see the above rebates section for more details.

Rainwater Tanks

Generally, you can install a tank up to 10,000 litres without requiring consent from Council providing you meet Councils conditions regarding height and proximity to neighbouring buildings.

It's a good idea to install the largest tank you possibly can, and work with your supplier to obtain the maximum catchment from your roof. Tanks are available in a range of poly plastics, bladders for use beneath buildings, concrete, fibreglass and steel. To decide on a tank, you need to know:

- How much water do you use every year? (see your Sydney Water bill)
- What do you want to use the rainwater for? The garden, washing machine or toilets?
- How much rain can you catch?
- What is your budget? (keeping rebates in mind)
- What are your site constraints?

To calculate how much rain you can harvest, use this simple formula: Annual Rainfall (approx 1200mm for the Illawarra) x Catchment area m² x 70% (contingency for full tanks and below average rainfall) = Annual Total

Example: Anna's family uses about 163,000 litres of water a year. They have retrofitted the taps, toilets and shower fittings, and changed their behaviour to use less water. Anna thinks there is about 120m² of roof to catch water. She'd like to connect to the washing machine, small garden and toilets which account for around 68% of her total use, or 73,440 litres a year. The total amount of water likely to be harvested every year is:

1200 x 120 x 70% = 100,800 litres a year – enough for their needs.


Anna chose a 10,000 litre tank and received **\$2,000 in rebates from the NSW and federal government.**

There are simple ways to keep you rainwater tank safe for you and your family - visit www.rainharvesting.com.au/national_guidelines.asp for rainwater harvesting. national guidelines.

water



Challenge Action Checklist

The actions below are simple, achievable and will have a measurable impact on your water footprint. Tick  and date any actions you and your household will take.

.. **Fix leaking taps and toilets**

Date: Up to 95,000 litres of water a year can be wasted by unattended leaks! Taking advantage of Sydney Water's Water Fix program gives you access to a licensed plumber to install water-efficient appliances and fix minor leaks for only \$22. Call 1800 995 886 to register

.. **Change your showerhead**

Date: You can either install a flow restrictor on the one you've got, or get a new WELs-rated showerhead. Older showerheads can use more than 20 litres of water every minute. Save up to 30,000 litres of water a year. *Note that you may not be able to use these devices on instantaneous or gravity fed hot water systems, check with your supplier.

.. **Take shorter showers**

Date: An inexpensive shower timer can help – no more than 4 minutes is the recommended shower length. If you do a lot of grooming in the shower, consider finding out more about new devices which fit to your showerhead and let you turn the water on and off without losing your temperature settings at the flick of a switch.

.. **Book your free home sustainability assessment**

Date: Through the new federal government Green Loans program, home owners and renters can book a free comprehensive home sustainability assessment, where a qualified assessor can help you identify how to reduce your water bills. For more information or to book your home assessment, call 1800 895 076 or visit www.environment.gov.au/greenloans.

.. **Shower with a bucket**

Date: Catch cold water before the hot water comes through the pipes and use it to flush the toilet, or water plants.

.. **Install flow restrictors and aerators on taps**

Date: These simple devices simply reduce the flow of water, and are available free from Sydney Water.

.. **Choose suitable plants for your climate and property**

Date: Plants that are locally adapted require less water and are more hardy.

.. **Avoid harmful chemicals entering our waterways**

Date: The water we use at home is part of the global water cycle. Whether it leaves your property via the sewer or the stormwater drain, everything we add to it ends up in our waterways. Pet flea rinses, cleaning products, paints, oil, detergents and other chemicals we use every day can all be harmful to the water cycle and the plants and animals who depend on it. Including us! Learn more about 'detoxing' your home in our Better Buying section, or visit the Sustainable Illawarra website for more information.


.. **Mulch your garden**

Date: Mulch helps to cut down on watering by up to 70%, and can improve soil health.

water



Challenge Action Checklist

The actions below are simple, achievable and will have a measurable impact on your ecological footprint. Tick  and date the actions you and your household will take.

.. **Water wisely**

Date: Early morning is the best time to water your garden. Less water is lost to evaporation and plants have the best uptake at this time of day. Drip irrigation systems connected to rainwater tanks can be very efficient. In general, long infrequent soaking is better for root development than scant frequent watering.

.. **Avoid bottled water**

Date: Bottled water is expensive, and ecologically disastrous. PET bottles are recyclable, yet take litres of oil and water to manufacture – not to mention the resources used to transport, extract, refrigerate and market something that you can get freely from a tap. Less than 60% of PET containers actually end up being recycled. Install a water filter if you're concerned about water quality, and take your own safe polycarbonate, glass or stainless steel bottle with you wherever you go.

.. **Install a rainwater tank**

Date: Catch water where it falls – your roof is an amazingly efficient catchment.

.. **Look for the Water Efficiency Labelling Standard (WELs) label**

Date: WELs is a Federal Government scheme which rates products on their water efficiency. The more stars, the more efficient it is.

.. **If it's yellow let it mellow, if it's brown, flush it down...**

Date: This one is suggested to us time and again by workshop participants and people who grew up without access to mains water. It's a personal thing, but depending on your loo you can save 3 to 12 litres every time you don't flush.

.. **Divert or treat and recycle greywater**

Date: Greywater basically refers to wastewater from washing machines or showers. You can fit inexpensive devices to divert water directly onto gardens, or investigate accredited options for treating and reusing greywater. There are some considerations including ensuring that detergents are low in phosphate and sodium, and that health guidelines are followed. See Links for more information.

.. **Dishwashing**

Date: Consider how much water is in the sink if doing dishes by hand. Dishwashers with a high Water Efficiency Labelling Standard (WELs) rating can use as little as 15 litres per cycle – but make sure the machine is full before starting.

Children of a culture born in a water-rich environment, we have never really learned how important water is to us. We understand it, but we do not respect it.

William Ashworth, Nor any drop to drink,



water

My Goals

In addition to going through the Challenge Checklist above, you might want to set some specific goals for you or your family. A good goal is achievable, has clear steps, and you can set yourself a deadline.

Example

- Goal** *Aim to cut household water bills by at least 20%*
- Step 1** *Dig out our past bills and use the table in the Home Water Audit section of this booklet to record our average daily usage figures*
- Step 2** *Book a free home sustainability assessment through the Green Loans program to get expert advice on the best options to reduce our water bills (call 1800 895 076 or visit www.environment.gov.au/greenloans)*
- Step 3** *Organise a Sydney Water Love Your Garden assessment to get some ideas on how we can reduce water use in the garden (phone 1800 354 106 or visit www.sydneywater.com.au/garden)*
- Step 4** *Plan to implement the changes suggested in the home sustainability assessment and Love Your Garden assessment*
- Timeline** *Start next month, aim to achieve 30% reduction within 6 months*

GOAL

Step 1

Step 2

Step 3

Timeline

Do you have a water leak? An easy way to check is to read your water meter just before going to bed, and again as soon as you wake up. You'll be looking at the **red** dials. Assuming no one has flushed the loo, the reading shouldn't change overnight. If the dials have moved, start searching for leaks!

Check for dripping taps indoors and out, and change washers as needed. A hissing sound in toilets can indicate a continuous leak. Putting coloured food dye in the top of the cistern will let you see if there's a slow stream of water entering the bowl. Contact a plumber for repair, or if it's an old single flush toilet consider taking up Sydney Water's replacement offer (see box above).

water

GOAL

Step 1

Step 2

Step 3

Timeline

Comments

MY NOTES

Between earth and earth's atmosphere, the amount of water remains constant; there is never a drop more, never a drop less. This is a story of circular infinity, of a planet birthing itself.

Linda Hogan, Northern Lights, Autumn 1990

water

Contacts and Links

Sydney Water

www.sydneywater.com.au/Water4Life or 1800 995 886

Find out about rebates, water saving programs and more.

Green Loans

www.environment.gov.au/greenloans or 1800 895 076

Through the federal governments Green Loans program you can book a free comprehensive home sustainability assessment with a qualified local assessor to help you find ways to reduce your energy and water bills in your home. Please note the interest free Green Loan component of this program is no longer available.

Water Efficiency Labelling and Standards Scheme (WELS)

www.waterrating.gov.au | 1800 803 772

Search for water efficient products.

NSW Department of Water and Energy

www.dwe.nsw.gov.au/water_urban/recycling_grey.shtml#82817777

Has published some handy fact sheets about reusing greywater at home.

NSW Health

www.health.nsw.gov.au

Manages the register of accredited wastewater management systems and guidelines for residential greywater reuse.

Save Water!

www.savewater.com.au

A helpful resource for water saving tips, and case studies about smart domestic, industrial, commercial water use. They also organise the annual national Water Week in October.

Water Footprint

www.waterfootprint.org

NGO using science to quantify the impact of human consumption on freshwater systems.

Green Plumbers

www.greenplumbers.com.au

1300 368 519

Find a local plumber able to advise on water conservation options for your needs

Your Home

www.yourhome.gov.au

Excellent resources which encourage the design and renovation of homes to make them more sustainable and enjoyable, including a Technical Manual, Buyers Guide, and Renovator's Guide.

water

Recommended Reading

Your Home Technical Manual

Australia's most popular and comprehensive 'how-to' tool for renovating, designing and building a more comfortable home that has less impact on the environment, and is more economical to run, healthier to live in and adaptable to your changing needs. Covers how to save water, collect rainwater and reuse grey water. This fourth edition (2008) contains approx. 340 pages of environmentally sustainable solutions for designing and building your home. Also available on-line at www.yourhome.gov.au

Making Your Home Sustainable: A Guide to Retrofitting

Very comprehensive, practical guide by Derek Wrigley (2005), covering rainwater and greywater use, as well as how to make your home more comfortable and energy efficient.

Create an Oasis with Greywater

Art Ludwig (2006) opens your eye to the world of greywater systems, from the simplest to the most complex. You can also check out Art's website at <http://oasisdesign.net/>

Water: Not down the drain

Stuart McQuire provides a comprehensive how to guide on using rainwater and greywater at home. See www.notdownthedrain.org.au

Earth Garden Water Book

Produced by Earth Garden Books (2004), this book is jam-packed with money and water saving ideas to help you become more waterwise.

Recommended Viewing

Gardening Australia

Saturdays, 6.30pm on ABC1 – look out for segments on how to manage your garden for water efficiency.

Flow

An award-winning documentary investigation into the major problems we face with water, and the people and institutions providing practical solutions to the water crisis. See www.flowthefilm.com for more details.

When you look out the other way toward the stars you realize it's an awful long way to the next watering hole.
Loren Acton, The home planet, 1988

water

Glossary

Stormwater	Run-off from rainfall events
Sewage	Waste matter discharged to a sewerage system
Catchment	A catchment is the area in which water is collected and flows into the landscape. In a natural catchment, all rain and stormwater eventually flows to a creek, river, lake, ocean or into the groundwater system
Greywater	Wastewater generated from your washing machine, shower, bath and basins
Blackwater	Wastewater with higher level of contamination than greywater, from sources such as toilets, urinals and kitchen sinks (kitchen sink water is sometimes classed as greywater, depending on the level of wastes contained)
Water Cycle	The movement of water through an ecosystem as it evaporates, condenses in the atmosphere, precipitates to the ground, then re-infiltrates the waterway.
Aquifer	An underground layer of porous rock and sand that contains water, and can be tapped by bores for drinking and irrigation.

“Of all our natural resources, water has become the most precious...In a age when man has forgotten his origins and is blind, even his most essential needs for survival, water along with other resources has become the victim of his indifference”

Rachel Carson, Silent Springs

References:

1 www.waterfootprint.org



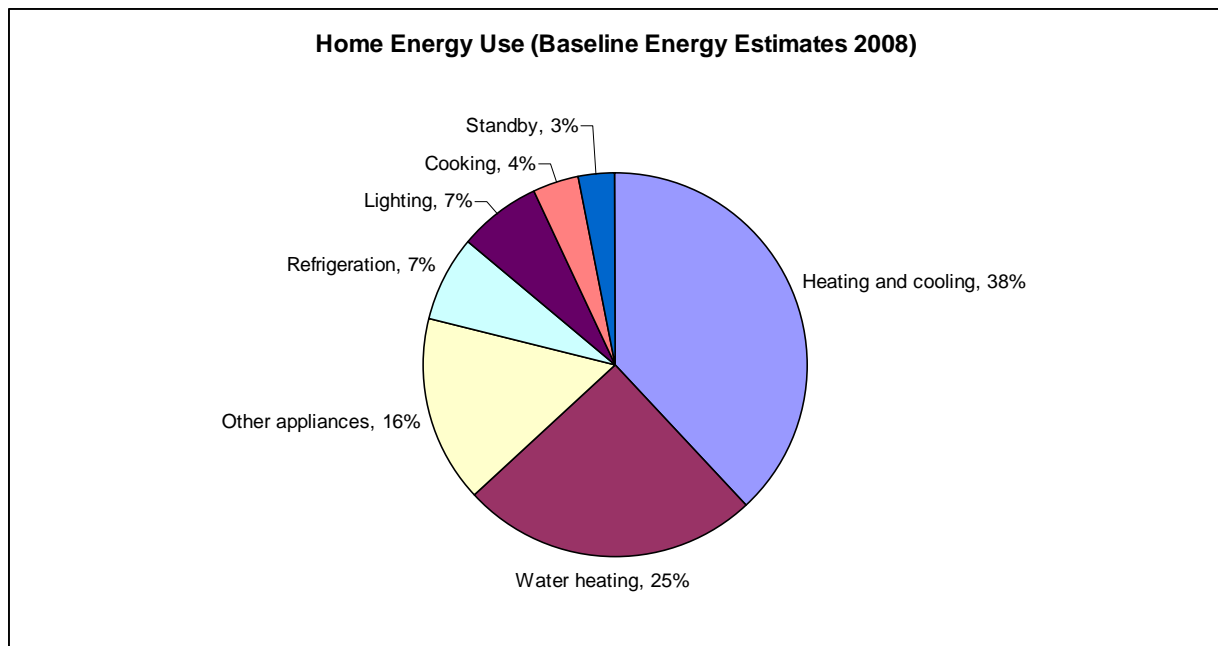
energy

Energy quite literally makes the world go round – but with the way we’re using fossil fuel energy, we could be sending the world into quite a spin! Fossil fuels, like coal, oil and natural gas are finite resources (they will run out) as they take millions of years to form. When fossil fuels are burned, they release greenhouse gases, such as carbon dioxide, into the atmosphere and contribute to climate change. There is much debate about the impacts of the climate crisis, ranging to catastrophic changes in temperature and sea levels, and increases in extreme weather conditions such as droughts, floods and storms. Though no one can say for sure what the future implications of our addition to fossil fuels will be, the transition to renewable energy sources, and adoption of creative ways we can reduce our energy consumption, has many benefits not only for our environment but our community and ourselves.

Household Energy Usage

Coal fired power stations generate 98% of the electricity we use in NSW, and households use 30% of the all the energy consumed by the state (1). Making our homes more energy efficient can have a big impact on helping reduce our overall energy consumption, reduce the demand for fossil fuels, and in the long run, often save you money.

The graph below shows where energy in the home is typically used. Heating and cooling our homes and heating water account for the most energy usage at 63%. Other appliances account for 16% of a household’s average energy usage, followed by refrigeration and lighting both at 7%, then cooking at 4% and standby energy usage at 3%.



Source: Your Home Technical Manual, 2008 (www.yourhome.gov.au)

energy

Home Energy Audit

The first step to making your home energy smart is finding out how much energy you use and where. Dig out your last energy bill, and have a look for the 'average daily usage' section. There should be a graph with columns showing your average daily electricity use over a number of months. Your average daily electricity use is measured in kWh (kilowatt-hours). Different power bills show different months. In the table below, enter the average daily electricity use for the months that appear on your bill (you shouldn't need to do any calculations, or work anything out). When you get energy bills in the future, you can then come back and compare your energy usage to the 'baseline' figures in the table below, and see what progress you've made.

Month	Average Daily Use (e.g. 15 kWh)

If you have use natural gas, in the table below you can record your household's average daily gas usage. This information can be taken from the 'Average Daily Use' graph on your Natural Gas bill.

Title of graph column	Billing period (e.g. 1 Jan – 31 March 2010)	Average Daily Use (Mj)
This bill		
Last bill		
Same time last year		

If you use propane gas cylinders, record the size and approximate number of cylinders you have used recently.

Timeframe	Number of cylinders used (e.g. 1.5)	Size of cylinder (e.g. 9kg)

Think about what appliances in your household are using energy, and how you may be able to reduce your energy bills – check the action checklist at the end of this chapter for some great ideas, or visit www.savepower.nsw.gov.au.

Appliance	Type	Number	Comment / ideas for changes
Hot Water System	Electric Storage		
	Gas Storage		
	Gas Instantaneous		
	Solar (rooftop or split)		
	Heat Pump		
Heating	Gas		
	Electric		

energy

	Other e.g. wood		
Cooling	Air conditioner		
	Other e.g. fans		
Lighting	Old-style incandescent bulbs		
	Standard halogen downlights		
	Compact fluorescent bulbs		
	Other		
Fridge	Family size		
	Bar or small fridge		
Freezer	Incorporated into fridge		
	Chest or stand alone		
Cooking	Gas oven		
	Gas cooktop		
	Electric oven		
	Electric cooktop		
	Induction cooktop		
	Other		
Television	CRT (traditional style tv)		
	Plasma screen		
	LCD		
Other			

Home Comfort

There are many smart design principles that can be incorporated into new homes to make them comfortable and affordable to run all year round, without the need for any heating or cooling from non renewable resources. However, many of us live in houses/apartments/units that have been built in ways that fly in the face of these helpful principles!

But there are lots of ways we can make modifications to our homes, and our habits, to improve our household energy efficiency. In the challenge action checklist at the end of this chapter, you'll find helpful ideas, many of which don't cost much at all, and can be done by renters and home owners alike.

“The charge for hot water - an unbelievably low \$7! I was sure there was some mistake. They had a family of five. There are only two of us and our hot water costs were seventy dollars! They had a split system hot water service. The cost saving was so great that we change to a solar system straight away, and we also realised that this would make a difference to the environment.”

Super Challenger

energy

Hot Water System Rebates

The common electric storage hot water systems many of us have use a lot of energy – about a quarter of the energy usage in a typical home. In our sunny climate solar hot water systems can provide up to 90% of your hot water for free, by using energy from the sun (3). Electric heat pumps are also a really efficient kind of hot water system. They act like a refrigerator in reverse, and use only a third to a quarter of the energy an electric storage system does.

Solar hot water systems and heat pumps cost more initially than electric storage tanks, though the ongoing costs of electric storage systems are more expensive. The rebates below help make the cost of purchasing a new solar hot water system or heat pump very affordable however be sure to check the conditions to make sure you are eligible.

- For residents with an existing electric hot water system, there is a \$1,000 rebate to switch to a solar hot water system, or a \$600 rebate to switch to an energy efficient heat pump system, through the Federal Governments Energy Efficient Homes Package. Visit www.environment.gov.au/energyefficiency or call 1800 808 571 for more details.
- A \$150 rebate from the NSW Government can be accessed for installing a hot water circulator with your new or existing instantaneous gas hot water heater. For more details see www.environment.nsw.gov.au/rebates, call 1300 361 967 or email rebates@environment.nsw.gov.au
- A rebate of \$300 from the NSW Government can be accessed for switching from electric storage to a gas hot water system with energy rating of five stars or higher. For more details see www.environment.nsw.gov.au/rebates, call 1300 361 967 or email rebates@environment.nsw.gov.au
- Renewable Energy Credits (RECs) can provide an upfront discount of around \$1,000 off the cost of a new solar hot water or heat pump system (more about RECs next)

Please note these rebates have varying expiry dates and are subject to change.

Renewable Energy Credits (RECs)

In addition to rebates, there is also the opportunity to receive a further cost reduction at the time of purchasing climate friendly technologies like solar hot water and solar power systems through the creation of what are called Renewable Energy Certificates (RECs).

RECs are a form of currency which recognises and certifies that renewable energy generation has taken place. The REC system has been created to aid in meeting targets set for reducing Australia's greenhouse gas production and increasing the proportion of Australia's electricity that is derived from renewable sources. Each REC represents an equivalent 1 megawatt hour of electricity generation from an accredited renewable energy source, or in the case of solar hot water heaters each REC represents the equivalent of 1 megawatt hour of electricity displaced by solar energy.

energy

Eligible technologies that may create RECs include solar hot water systems, heat pump hot water heaters, and small solar power systems, wind turbines or hydro systems. Each system is assigned a REC value which represents the number of megawatt hours displaced by the system over its lifetime. The value of 1 REC at the time of purchasing the system will determine the total REC value of the system. For example if your solar hot water system is entitled to 30 RECs, and the value of 1 REC is \$47, then the total REC value of the system is \$1,410.

Owners of solar hot water heaters or solar power systems can create RECs themselves through the Office of the Renewable Energy Regulator's internet based REC registry and do not have to sell them (their price may increase with time). However, most people find it more convenient to assign their right to create RECs to a Registered Agent in return for a financial benefit such as a discount at the time of purchase. For more information on REC's check out the Office of the Renewable Energy Regulator at www.orer.gov.au, or call (02) 6159 7700, or speak to your solar hot water or solar power supplier.

Free Sustainability Assessments

On 19 February 2010, the Government announced significant changes to the Green Loans Program and discontinued the loan component of the scheme. However through the Green Loan Program you are still able to access the free home sustainability assessments. This involves a qualified home sustainability assessor visiting your home to discuss your major energy and water systems, and options for energy and water savings - from the smallest behaviour changes to larger investments such as a solar hot water system or water tanks. Following this free assessment, householders receive a tailored report recommending the most effective changes for their home. Home owners and renters are eligible for an assessment, as long as they earn less than \$250,000 per annum, and are an Australian citizen or permanent resident aged over 18 years.

To book your free Home Sustainability Assessment, call the Hotline on 1800 895 076, or to find out more about the program, visit www.environment.gov.au/greenloans.

The Federal Government has recently launched a new 'Living Greener' website which offers a range of information on Government programs and financial support – visit www.livinggreener.gov.au.

We were sitting in our air-conditioned lounge room one evening, enjoying a cup of coffee. The TV was on but we weren't watching it. I began to feel cold so I went to fetch a sweater. Suddenly it hit me. How stupid was this? And that was the starting point. We began to question the way in which we used energy.

Super Challenger

energy

Embodied Energy

Though it's important to look at the energy we use in our homes, looking at the bigger picture, most of our energy usage is hidden in the production and distribution of all the goods and services we consume.

Embodied energy refers to the total amount of energy that goes into making something – including extracting the raw materials, transportation, assembling the product and the disassembling and decomposition of the product after it's finished with. Of all the things we consume, surprisingly, it's our food which has the most hidden energy input. The Power House Museum has put together a great display to show the life cycle of a packet of kettle chips (4). The chips are produced in Shepparton Victoria, but the raw materials used to create the chips and the packaging come from far and wide, and energy is required to produce and transport those components at all parts of the cycle. Looking into the energy involved in creating the packet of chips, we find (4):

- The potatoes are grown from different growers all along the east coast of Australia. Given the chips are not organic, fertilisers, pesticides and herbicides, which are made from petroleum, can be used in their production.
- The salt comes from South Australia, where it is obtained from sea water, and then crushed and sieved.
- Sunflowers are grown for the oil used to cook the chips. The oil is extracted in Newcastle, refined in Sydney and sent to Shepparton.
- The packet is made of:
 - Two layers of polypropylene film (made in Wodonga Victoria, from a gas which comes from oil). One layer of film is metallised in Sydney, the other is the printed on in Melbourne, then the two films are fused at a printery in Melbourne.
 - Inks, which are made in Melbourne, using nitro-cellulose base from India or China, pigments from Europe and the US, and alcohol made from Australian sugar.
 - Aluminium from Italy, which was probably made with some Australian bauxite. Creating Aluminum takes large amounts of energy from coal, oil and gas.
- Cardboard boxes made from 100% recycled paper are used to package the chips for transportation to retail outlets
- Electricity for all the processes is generated from burning coal mined in Australia, and the transportation is predominantly via trucks fuelled on diesel.

Phew! Imagine how different a life cycle would look for some yummy home-made chips, using organic potatoes grown in your own backyard or from a local farmer...

energy

Green Movement

At the first International Transport Forum focused on reducing transport's dependence on oil and CO₂ emissions and improving energy efficiency held in Germany 2008, some rather sobering facts were brought to the table. Like it's predicted if we carry along the business as usual approach, globally the number of cars is estimated to rise three fold from 669.3 million in the year 2000, to a staggering 2029.9 million in 2050. Carbon dioxide emissions from cars alone are set to rise by 91% from 2000 to 2050, while emissions from air transport are set to rise even more rapidly.

We Aussies are heavily reliant on private car travel, having more cars per person than any other country in the world except the United States. The average Australian family car will travel about 15,000 kilometers, generate almost six tonnes of greenhouse pollution and cost its owners \$13,350 each year (6). There are many solutions on both a personal and global level that can create a greener, more sustainable transport system – some more ideas on what you can do, check the Challenge Action Checklist at the end of this chapter.



It has been estimated that the amount of atmospheric pollution creating in mowing one domestic lawn with a two stroke mower would be the same as driving a well maintained car 200km.

Derek Wrigley, *Making Your Home Sustainable*

energy

Challenge Action Checklist

The actions below are simple, achievable and will have a measurable impact on your ecological footprint. Tick and date the actions you and your household will take.

- .. **Replace your electric hot water system with an eco friendly water heater**
Date: Watch your energy bills and carbon footprint shrink when you switch to solar hot water, or a heat pump. See the 'solar hot water rebates and special offers' section of this chapter for details of all the schemes that can help this be an affordable switch over.
- .. **Book your free home sustainability assessment**
Date: Through the new federal government Green Loans program, home owners and renters can book a free comprehensive home sustainability assessment, where a qualified assessor can help you identify how to reduce your energy bills. For more information or to book your home assessment, call 1800 895 076 or visit www.environment.gov.au/greenloans.
- .. **Turn electronic devices of standby**
Date: Save up to 750kg CO₂ and up to \$100 a year on your energy bills energy you're not even using by flicking appliances off at the switch instead of the remote
- .. **Walk or cycle short distances**
Date: What's good for the planet's health is also good for yours! Days like National Ride to Work Day in October can help give you the inspiration to get into bike riding – see www.bv.com.au/ride-to-work for more info!
- .. **Plan your everyday car trips**
Date: Plan those everyday trips in the car, to do three or four errands each time, rather than using the car more often for just one errand.
- .. **Use the cold cycle when washing**
Date: Using cold water rather than hot saves significant amounts of energy.
- .. **Switch to GreenPower**
Date: Support renewable energy by selecting 100% accredited GreenPower from your power supplier.
- .. **Adjust your thermostat**
Date: Every 1 degree = 10% difference in your bills and carbon emissions
- .. **Seal draughts**
Date: Save up to 25% of heat loss and gain. Remember you can get a special offer on 2 Raven door seals from North South West insulation with a Sustainable Illawarra special offer voucher, until August 2010. Visit www.sustainableillawarra.com.au or call 4227 7453 for your voucher.
- .. **Change your incandescent or halogen lights to energy efficient versions**
Date: There's lots of options out there now to change your standard light bulbs, and halogen lights to energy efficient models. Remember you can get 15% off energy efficient lights from Cosmo Lighting in Albion Park with a Sustainable Illawarra discount voucher until August 2010. Visit www.sustainableillawarra.com.au or call 4227 7453 for your voucher.

energy

.. **Plant a shade tree or vine - strategically!**

Date: If you have any windows that hot sun blazes through in summer, consider planting a deciduous tree or vine outside to provide shade in the hotter months, but let the sun through in winter.

.. **Get out the broom**

Date: Two stroke leaf blowers add to greenhouse gas emissions and local noise pollution. Instead, use a broom or rake to keep your garden tidy.

.. **Get rid of that old second fridge**

Date: Fridges over 10 years old use three times the energy of a new fridge. If you've got an old second fridge at home that you're still using, cut down to one fridge and contact the Fridge Buyback Scheme – they can remove your fridge for proper disposal, and even pay you \$35 if they have to move it down less than 6 stairs! For full conditions and more info visit www.fridgebuyback.com.au or call 1800 708 401

.. **Become a Green Energy Power Producer**

Date: Sustainable Illawarra has special offers with local businesses on home solar power systems, and next year NSW feed-in tariffs will start paying householder a premium for the excess green energy they feed back into the grid. Though the \$8,000 federal rebate has ended, the federal government is considering how it can support small scale energy producers, so keep an eye out for developments there, and remember Sustainable Illawarra project partners Green Smart Electrical and Earth Utility have great deals on solar power systems – see www.sustainableillawarra.com.au/Special-Offers.html for more info.

Let your clothes enjoy the sunshine

Date: Any appliances that produce heat need lots of energy to power them – rather than using a clothes drier, dry your clothes on the line

Plant out your lawn

Date: Reduce the need for mowing by turning some (or all!) of your lawn into a food garden, or native habitat garden for local wildlife

Look to the stars

Date: Appliances such as fridges and washing machines often come with a star rating showing their energy efficiency – the more stars, the more energy efficient the appliance. See www.energyrating.gov.au

It's now so easy for us to flick a switch to perform some task which consumes a kilowatt of energy in one hour, without sparing a thought that 0.9kg of CO2 is being emitted at the power station.

Derek Wrigley, *Making Your Home Sustainable*

energy

My Goals

In addition to going through the Challenge Checklist on the previous page, you might want to set some specific goals for you or your family. A good goal is achievable, has clear steps, and you can set yourself a deadline.

Example

- Goal** *Aim to cut household energy bills by at least 30%*
- Step 1** *Dig out our past bills and use the table in the Home Energy Audit section of this booklet to record our average daily usage figures*
- Step 2** *Identify where our energy is going by recording the various appliances we have in the table in the Home Energy Audit section of this booklet*
- Step 3** *Book a free home sustainability assessment through the Green Loans program to get expert advice on the best options to reduce our bills (call 1800 895 076 or visit www.environment.gov.au/greenloans)*
- Step 4** *Plan to implement the changes suggested in the sustainability assessment*
- Timeline** *Start this month aim to achieve 30% reduction within 6 months*

GOAL

Step 1

Step 2

Step 3

Step 4

Timeline

Comments

energy

GOAL

Step 1

Step 2

Step 3

Timeline

Comments

MY NOTES

Fridges over 10 years old use about three times the energy of new fridges. If you are using an old second fridge, cutting down to one fridge would save you an average of \$190 a year on your energy bill. Why not contact the Fridge Buyback scheme and have experienced removalists remove your old second fridge for free – they'll even pay you \$35 if there's less than 6 stairs to move it down! For full conditions and more info, call 1800 708 401 or visit www.fridgebuyback.com.au

energy

Contacts and Links

Your Home

www.yourhome.gov.au

A suite of online materials developed to encourage the design and renovation of homes to make them more sustainable and enjoyable. Excellent resources includes a Technical Manual, Buyers Guide, and Renovator's Guide.

Green Loans

www.environment.gov.au/greenloans or by calling 1300 778 451.

Visit this website for up to date information on the changes to the Green Loans program.

Save Power

www.savepower.nsw.gov.au

A really great site filled with power saving tips and a 'power pledge' you can take to help you reduce your energy bills.

Nabers

www.nabers.com.au

Allows you to find how energy efficient your home is, and gives you ideas on how you can reduce your energy bills.

Alternative Technology Association

www.ata.org.au/branches/illawarra

A not for profit national organisation, with a branch in the Illawarra, that aims to provide a strong voice for renewable energy and the idea of green living.

Fridge Buyback Scheme

www.fridgebuyback.com.au or 1800 708 401

Will remove your second working old fridge and may even pay you \$35 for it!

Energy Labelling

www.energyrating.gov.au

A government initiative which gives a star rating for the energy efficiency of various electrical products, allowing you to make an informed choice.

Green Vehicle Guide

www.greenvehicleguide.gov.au

A federal government initiative that allows you to compare new Australian vehicles based on greenhouse and air pollution emissions.

Living Greener Website

www.livinggreener.gov.au

A comprehensive website set up by the Australian Federal Government for more information on government programs and available financial support.

energy

Recommended Reading

The CSIRO Home Energy Saving Handbook

A comprehensive book on how to save energy, save money and reduce your carbon footprint.

This book is written by John Wright, Peter Osman and Peta Ashworth.

Making Your Home Sustainable: A Guide to Retrofitting

A comprehensive, practical guide by Derek Wrigley (2005), covering all possibilities available for retrofitting homes for comfort and energy efficiency.

Your Home Technical Manual

Covering solar passive design, heating and cooling, lighting, hot water, and solar power systems, with great examples of sustainable homes in all Australian states. See www.yourhome.gov.au

Sanctuary Magazine – Australia Leading Environmental Homes

www.sanctuarymagazine.org.au

Dedicated to sustainable house design, Sanctuary profiles Australia's leading environmental architects and designers, providing inspiration and practical solutions for sustainable homes.

ReNew Magazine

www.renew.org.au

Australia's longest running sustainable technology magazine. Features the latest in sustainable building practice, renewable energy and water conservation.

Recommended Viewing

An Inconvenient Truth

www.climatecrisis.net

A film that became a catalyst for action on climate change around the globe. Al Gore delivers his message of urgency and hope in face of the climate crisis.

Crude: The Incredible Journey of Oil

www.abc.net.au/science/crude

A fascinating insight into the history, economy and future of oil, filmed in 11 countries by ABC's award-winning Australian filmmaker Richard Smith.

The Truth About Climate Change

In this captivating BBC documentary, Sir David Attenborough undertakes a personal journey to discover how global warming is changing the planet he knows so well.

Who Killed the Electric Car

www.whokilledtheelectriccar.com

An intriguing documentary investigating the events that lead to the destruction of thousands of new, radically efficient electric vehicles in the United States.

energy

Glossary

Heat Pump	An energy efficient hot water system which works like a refrigerator in reverse and uses only a third to a quarter of the energy an electric storage system does.
Embodied energy	The total amount of energy that goes into making something – including extracting the raw materials, transportation, assembling the product and the disassembling and decomposition of the product after it's finished with. Helps to compare which products are a more sustainable option.
Standby energy	The energy used by appliances when they are turned off, but plugged into a power point which is on. Standby energy is a complete waste and can be removed by simply turning appliances off at the power point.
Renewable Energy Credits	RECs are a form of currency which recognises and certifies that renewable energy generation has taken place. The REC system has been created to aid in meeting targets set for reducing Australia's greenhouse gas production and increasing the proportion of Australia's electricity that is derived from renewable sources. Each REC represents an equivalent 1 megawatt hour of electricity generation from an accredited renewable energy source, or in the case of solar hot water heaters each REC represents the equivalent of 1 megawatt hour of electricity displaced by solar energy.

References:

1 – NSW Department of Environment, Climate Change and Water
www.environment.nsw.gov.au/households/energy.htm

2 – Energy Efficient Homes Package, Home Owner Insulation Program, Program Guidelines version 2, 2009 by the Department of the Environment, Water, Heritage and the Arts

3 - Energy Efficient Homes Package, Home Owner Insulation Program, Program Guidelines version 2, 2009 by the Department of the Environment, Water, Heritage and the Arts

4 – Ecologic – Creating a sustainable Future, The Powerhouse Museum
www.powerhousemuseum.com/education/ecologic/cycles.htm

5 – Discussion Paper Number 2008-13, Transport Outlook 2008 Focusing on co2 Emissions from Road Vehicles, Organisation for Economic Co-Operation and Development Joint transport Research Centre
www.internationaltransportforum.org/jtrc/DiscussionPapers/DP200813.pdf

6 – The Real Costs of Private Transport, The Australian Conservation Foundation
www.acfonline.org.au/default.asp?section_id=92



waste

What was the last thing you threw away? How did you dispose of it? How long will it take to break down in landfill – 5 years, 50 years or 500 years? Where did it come from? What resources went into making it? Could it have been avoided, or was it an essential product? How did it get to and from your home?

When our waste is so conveniently whisked away from our homes by the local Council rubbish collection trucks, or piped away into the sewer, these kinds of questions are not often on our mind. But as we increasingly realise the environmental, social and economical impacts of the staggering amount of waste we produce, these questions and creative solutions to these problems, are coming to the forefront.

Seeing Red

Each Wollongong household sent a whopping 14.2kg of waste to landfill each week in their red top bin, on average in 2008 (1). So what's this waste now sitting in our landfill made up of? Well:

- 38.9% was food and kitchen waste which could be composted
- 8.3% was soiled paper
- 6.1% was disposable nappies
- 17.7% was waste that could have been recycled (including green waste) (1)

When buried in landfill organic wastes like food scraps, biodegradable plastic bags and coffee cups, newspapers and garden wastes don't break down in the same way they do in a good compost pile. Deprived of oxygen, water, and aerobic bacteria, they can take a long time to break down – and when they do, they release nasty gases such as methane, which has a global warming potential 25 times that of carbon dioxide (2). So as well as creating rich 'black gold' you can use on your pot plants or in the garden, composting or worm farming your food scraps and organic wastes is a critical way to tackle climate change and reduce greenhouse gas emissions.

Refuse, Reduce, Repair, Reuse, Recycle

We often pride ourselves on recycling, and popping recyclable containers, newspapers and other wastes into recycling bins. And rightly so - recycling things into new products save valuable new resources, as well as energy that goes into creating new products. But an awful lot of energy goes into recycling. Think of all the energy it takes to pick a glass jar up from your recycling bin, truck it to the recycling facility, have it sorted, cleaned and sent to the processing factory that makes new glasses, melted down and moulded into the new product, sent to the factory that will use the new glass jar, then onto the wholesaler and the retailer...

With a little creativity, we can all embrace the principles of refuse, reduce, repair and reuse, and minimise tossing wastes into landfill and the recycling bin. See our challenge action checklist at the end of this chapter for some ideas!

“Our enormously productive economy....demands that we make consumption our way of life, that we convert the buying and use of goods into rituals, that we seek our spiritual satisfaction...we need things consumed, burned up, worn out, replaced, and discarded at a ever increasing rate”

Victor Lewbow - retailing analyst

waste

Addicted to Composting

Be warned – it can happen. Composting can become addictive, as the captivating transformation of your food and garden wastes into rich, dark compost takes places. Putting out your red top rubbish bin can also become a much easier experience, as they weight of your bin suddenly drops by about half, and fills up much more slowly – simply because you've found a much better place for your kitchen scraps.

Making your own compost is a lot easier than most people realise. There's many different composting styles – pick the one you think will be best suited to you and give it a go! Popular options include:

- Compost bins, which are enclosed on all sides and have a lid, but are open on the bottom to allow contact with the soil (such as the black plastic ones available from hardware stores). It can be useful to have two bins, so that when one is full and breaking down, you can start filling up the other bin.
- Open compost heaps contained in wooden or brick compost bays (usually with 3 or more sections). The compost is turned with a shovel from one bay to the next to aerate the pile.
- Tumblers or drums, which are turned over every few days to aerate the compost.

Bokashi bins, and worm farms are also popular kinds of 'cold composting' – more about them in the next section.

For a good compost, it's helpful to keep in mind the ADAM principles:

Aliveness – Compost heaps are living systems (and microbes are your best friends!)

Diversity – Variety is the spice of life - the more diversity, the richer the end product

Aeration – All life needs to breathe easy!

Moisture – Not too much, not too little – about as wet as a lightly squeezed sponge is good

Pretty much anything that was once part of a plant or animal can be composted. To create a 'hot compost' which breaks down really quickly, and can kill any seeds from weeds you may have added to the pile, you need to create a big pile all at once. However, for most people, adding small amounts of material to the pile on a regular basis works best – it just means your compost will break down slower. It's amazing how much your compost pile will 'shrink' as it breaks down into compost, so don't be worried that you will end up with more compost than you will know what to do with! The rate at which your compost breaks down depends on what you put in it, how it is created – it could be anywhere between 2 and 6 months.

waste

Some helpful tips for composting are:

- Keep a small bucket in your kitchen where you can add your food scraps, and then easily take them out to the compost bin. Food scraps, coffee grinds, tea bags, and egg shells can all be composted.
- Composts need a balance of wet, nitrogen rich materials and dry carbon rich materials. Things like food scraps and fresh grass clippings are nitrogen rich, while things like dry leaves, shredded newspaper, and broken twigs are carbon rich. It's really important to have a good mix of carbon and nitrogen materials – if you're just adding food scraps, the pile will be too 'wet' and may become smelly and not break down properly. It works best to add the carbon and nitrogen materials in alternating layers about 10cm thick, starting with the carbon layer.
- Adding a little water after creating each layer will help keep the pile nice and moist.
- If your compost bin has contact to the ground, keep it located in the same place, so that a good population of compost friendly microbes can build up in the soil.
- Items best kept out of your compost include meat and dairy products (they can attract vermin), glossy magazine paper, sawdust from treated timber, and large branches.

Wonderful worms, beautiful bokashi

Keeping a thriving population of wriggly compost worms, or using a bokashi bin system are two other popular methods of managing your kitchen wastes. These systems can be small and compact, making them popular with people living in apartments, as they can be kept in the house (such as under the kitchen sink) or on the balcony.

Worms used for turning food scraps into rich 'worm castings' are different to your garden variety worms - they gobble through food at a much quicker rate, and also reproduce much faster. Common compost worms are Tiger worms, Indian Blues and Red Wigglers. About 1,000 to 2,000 worms is a good number to start with. Check under 'worm farms' in the yellow pages for local suppliers. You can make your worms a comfy home with a commercial worm farm system, or you can use an old polystyrene box, or on a larger scale, an old bathtub.

Worms are sensitive creatures – they don't like to be too hot or too cold (20 to 25 degrees is perfect for them), so locate their home where they won't get cooked on a hot day. They also don't like acidic foods, such as onions, garlic or citrus peels. They'll munch through your fruit and veg scraps much quicker if the scraps are cut into small pieces. Some people even blend their scraps up in a blender and feed their worms a food scraps smoothie! It helps to add some shredded, damp newspaper or cardboard now and then also – they love a good carbon kick occasionally!

Bokashi bins work with a special odourless fermentation process activated by Bokashi, which is a mix of natural ingredients. You just pop your kitchen waste into your bokashi bin, then sprinkle a hand full of Bokashi over the waste, repeating this layering process until the Bokashi Bucket is full. You can drain off the liquid produced, and use it on your plants, and then once the bucket is full, you bury the wastes in the garden. For more information on composting, worm farming and bokashi systems, see our links and contacts section.

waste

The P words

Plastic and packaging. As much as marketers and retailers love them, consumers are increasingly turning their backs on plastic bags and opting for products with minimal packaging. But it can be a jungle out there as marketers try to 'greenwash' their consumers with eco friendly claims that just don't live up to expectations – like biodegradable plastic bags. A report commissioned by the Australia Government on the impact of biodegradable plastic bags in Australia found that there is probably little benefit obtained by using biodegradable plastics if they are disposed of in landfill, because the microorganisms needed to break down the bags cannot thrive in the oxygen depleted environment of landfill (3).

Environment Victorias DUMP (Damaging and Useless Materials in Packaging) awards are a fantastic example of the tide turning against the incredible 200kg of packaging waste every Australian generates on average in a year (4).

Since 2004, the DUMP awards have been awarding national awards to products voted to have the most obscenely wasteful packing .The 2009 Golden Dump Award went to Coles 5 pack tray of lemons. Though lemons have their own tough natural packing (the skin!), these lemons were placed on a plastic tray and then wrapped in plastic. Neither the tray nor the wrapping was listed as recyclable. As well as shaming products with needless and excessive packaging, Environment Victoria now awards a KEEP award alongside their DUMP award, to acknowledge significant improvements made by industry to reduce their packaging.

Some things just don't need to be sold in packaging at all – like bottled water. Australia has one of the highest standards of drinking water in the world available at the turn of a tap, yet in 2007, it was estimated Australians were using 314,000 barrels of oil a year, to produce the plastic bottles for their bottled water. As little as 35% of these water bottles are recycled, because many are consumed in public places where there are no recycling facilities (5). In July 2009, the village of Bundanoon in the southern highlands attracted world wide attention when it become the first place in Australia, and possibly the world, to place a ban on the sale of commercial bottled water.

So BYO water every time – a reusable stainless steel bottle will last you forever.

RUM (Return Unwanted Medicines)

Medicines should not be thrown in your red top bin, or flushed down the loo, as they can seriously harm our environment. The solution is the RUM program, run through your local pharmacy. Simply take your unwanted or out of date medicines to your local pharmacy and they'll ensure they are disposed of appropriately. See www.returnmed.com.au for more info.

waste

E-waste

The amount of electrical waste (e-waste for short) we produce is growing at an enormous rate. It's been estimated Australians produce 120,000 to 140,000 tonnes of e-waste every year! In a one-off grant funded Sustainable Illawarra e-waste collection day in April 2009, residents of Wollongong, Shellharbour and Kiama Council areas dropped off over 30,000 kg of e-waste – and 99% of this was able to be recycled.

It's important to keep e-waste out of our landfills, as it can contain hazardous materials, most of which can be recycled into new items. In July 2009, Wollongong Council introduced compulsory recycling of televisions and computers. This means residents are no longer able to dispose of televisions and computers in the landfill, or in the annual Council clean up. Instead, they can drop their computers off at Whytes Gully for recycling. As recycling e-waste is an expensive process, Wollongong residents are required to pay a fee between \$15 - \$40 for each television or computer item (for more details check the *waste depot fees and charges 2009-10* brochure available from www.wollongong.nsw.gov.au or by calling 4227 7185).

There are also some local charities which will accept donations of certain computers for reuse, such as Computer Bank Illawarra (www.cbi.org.au, 4284 8676). For a more detailed list (many places are in Sydney however), visit www.recyclingnearyou.com.au/computers/WollongongNSW.

Mobile Phone Recycling

There are many convenient and free ways to dispose of mobile phones for recycling through the fantastic Mobile Muster program. Lots of mobile phone shops have a 'Mobile Muster' collection bin where you can pop in your unwanted phone for free. Or you can pick up a post bag from participating Australia post outlets to send your phone in for recycling, or download your own postal label from www.mobilemuster.com.au. Visit the mobile muster website for more info, or call 1300 730 070.

The best thing we can do is try to minimise e-waste generation in the first place. Think twice about whether you really need that new electrical gadget (check our top questions for sustainable consumption in the Better Buying section of this booklet for more questions to consider). If you are committed to making a purchase, try to source it second hand – Internet purchasing sites and newspapers can be great for this. And when you no longer need an item, try to donate it to a charity, give it away to family or friends, or sell it, before sending it for recycling or into landfill.

Household Chemical Clean Out days

Household chemicals such as paints, pesticides, poisons, batteries, pool chemicals, cleaning products and florescent lights (including the new CFL bulbs) shouldn't be disposed of in your red top bin, as they can pose a threat to our environment. A couple times a year, the Department of Environment and Climate Change runs chemical clean out days in the Illawarra, and you can drop off household quantities for free. Check www.cleanout.com.au or call 131 555 to see when the next clean out date is schedule.

waste

ü Challenge Action Checklist

- .. **Compost or worm farm your food scraps – create soil & a backyard Carbon sink!**
Date: Many of us have been doing the right thing and diverting up to 50% of food and garden waste from landfill by composting and worm farming. Now there's research that tells us we're actually locking Carbon back into the soil by doing so – creating mini carbon sinks in the process. What a contribution to combating climate change, literally in your own backyard! If you haven't started yet, check with your local Council for free workshops or download a factsheet from the Sustainable Illawarra website
- .. **Put a No Junk Mail sticker on your mailbox**
Date: These are often available free from your local Council. Report any junk mail which is littered or delivered to a letterbox with a No Advertising Material sticker on it to the Distribution Standards Board on 1800 676 136 or at www.catalogue.asn.au/distribution
- .. **Seek goods with minimal packaging**
Date: At first, it seems really difficult to avoid, but it's really rewarding to find products that have minimal packaging, or that you can buy in bulk. Don't be shy about letting your retailer know what you think, and seek out Buyers Groups and Organic Food Coops.
- .. **Sort out your bin system**
Date: Get a multi bin system that works for you, and really make it easy to avoid unnecessary waste. Every 10 tonnes of recycling recovered is the equivalent of taking 4 cars off the road permanently.
- .. **BYO carry bags**
Date: The oil they're made from took millions of years to form, yet 7150 plastic bags are thrown away after a single use every minute. Take your own reusable bags – preferably made from natural materials like silk, cotton or hemp which can be cut up for rags and will biodegrade at the end of their useful life. You can even get handy small bags to put your fruit and veggies in (from places like www.onyabags.com.au or www.thefregiesack.com.au)
- .. **Participate in community clean up days such as Clean Up Australia Day**
Date: Join together with thousands of Australians across the country in the annual national Clean Up Australia day – visit <http://www.cleanup.org.au/au/> or call 1800 282 329 to find out when the next clean up day is.
- .. **Avoid wasting food**
Date: Australia Institute study found that we waste \$10.5 billion a year on things that we rarely or never use – and we throw away up to 1/3 of the food we buy! Planning meals, becoming creative with leftovers, and making a shopping list can all help.

“Previously we unthinkingly threw out vast quantities of garbage, with no regard for what happened to it. It was sort of ‘It’s out of our house off the block - so now it’s not our problem.’”

Super Challenger

waste

üChallenge Action Checklist

.. **Take your own mug to the café for takeaways**

Date: You'll probably end up with a bigger coffee! If you're having one takeaway coffee a day, you'll save over 200 disposable cups a year from going into landfill! Remember, even biodegradable cups won't break down properly in landfill, and instead create greenhouse gases such as methane.

.. **Donate items that you no longer need that still in good condition**

Date: Many local op shops and second hand stores accept donations of quality, unwanted goods. However, the goods they accept vary from store to store, so remember to check what donations are accepted. Contact details of many op shops and second hand stores in the Illawarra can be found in Sustainable Illawarra's op shop and second hand stores directory available at <http://www.sustainableillawarra.com.au/Better-Buying.html> or by calling 4227.

.. **Use rechargeable batteries**

Date: You can even find inexpensive solar-powered rechargers now...avoid single-use toxic batteries altogether

.. **Minimise consumption of all new non-essential items**

Date: Not exactly a 'economic stimulus' message, this one's about making a pact to 'compact'...challenge yourselves to avoid consuming new resources ...

.. **Use cloth nappies or a nappy service**

Date: The first disposable nappies ever made have still not broken down. Modern cloth nappies really well designed, easy to use, and will save you thousands of dollars over the years your child will need them. A great site for more info is www.nappynetwork.org.au.

.. **Share the newspaper**

Date: Yesterdays news is old news – and millions of newspapers are disposed of each year. Why not check the news online, read the papers in your local library, or share the newspaper with a neighbor, so you both don't need to buy a copy?

.. **Think before you print**

Date: Before you print off all those photos, documents or emails, think about whether they really need printing. When printing on office paper, print on both sides, and select recycled paper.

.. **Know your recycling**

Date: Do you really know what numbers can be recycled? In Kiama, Shellharbour and Wollongong areas you can recycle plastics with numbers 1,2,3,4,5,6 on the bottom, all colours of glass, newspapers, paper, cardboard, magazines, milk and juice cartons, steel cans (including aerosols). Check with your Council for more details, or visit <http://recyclingnearyou.com.au/>

.. **Use re-useable containers for storing food**

Date: Keep your leftovers in storage containers with lids instead of bowls with plastic wrap over the top, and rather than wrap your sandwiches, carry them in reusable lunch boxes.



waste

My Goals

In addition to going through the Challenge Checklist above, you might want to set some specific goals for you or your family. A good goal is achievable, has clear steps, and you can set yourself a deadline.

Example

- Goal** *Start to compost my kitchen scraps*
Step 1 *Look into the different options - borrow some books from the library and visit some websites (see the end of this chapter for some ideas!)*
Step 2 *Find out when the next Council composting workshop is and book myself in*
Step 3 *Set up my compost system and get composting!*
Timeline *Start researching next Saturday, and aim to be composting by the end of the month*

GOAL

Step 1

Step 2

Step 3

Timeline

Comments

Never doubt that a small group of thoughtful, committed citizens can change the world. Indeed, it is the only thing that ever has.

Margaret Mead



waste

GOAL

Step 1

Step 2

Step 3

Timeline

Comments

MY NOTES

“What would happen if we tried to go without rubbish collection for a month? How would we cope? Imagine the mess! What did we throw out that could be disposed of in different way? The thought certainly opened up our thinking about our families ecological footprints”
Super Challenger

waste

Contacts and Links

Composting and worm farming workshops

Contact your local Council to find out when the next workshop is schedule.
Wollongong: 4227 7111 Shellharbour: 4221 6111, Kiama: 4232 0444

Chemical Cleanout

www.cleanout.com.au | 131 555

The NSW Department of Environment and Climate Change regularly hold chemical clean out days in the Illawarra. On these days, you can drop off household quantities of toxic items including paints, florescent light bulbs, pesticides and batteries.

Recycling Near You

<http://recyclingnearyou.com.au/>

1300 733 712

A Planet Ark initiative, this helpful resource lets you search by area or product to find out what can be recycled in your area.

Clean Up Australia Day

www.cleanup.org.au | 1800 282 329

Find out how you can be a part of this annual national event.

Mobile Muster

www.mobilemuster.com.au

1300 730 070

Find out the many easy, free ways you can recycle your mobile phone.

Free Cycle

www.freecycle.org

A free exchange site where you can give away or receive useful items. The local Illawarra group has over 1,000 members – join at http://groups.yahoo.com/group/freecycle_illawarra

Rubbish Free New Zealand

www.rubbishfreeyear.co.nz

Find out how an inspiring New Zealand achieved a challenging goal of creating less than 1kg of waste each over a year from 2008-2009.

RUM (Return Unwanted Medicines)

www.returnmed.com.au

1300 650 835

Through this great program, you can safely dispose of unwanted medicines at your local pharmacy.

Zero Waste

www.zerowasteaustralia.org

www.zerowaste.org

Zero waste is a visionary goal to limit our use of the Earth's resources by reducing waste to zero. It challenges us to routinely reduce, reuse and recycle all of our waste. Join in this global movement!

International Composting Awareness Week

www.compostweek.com.au

An excuse to celebrate your love of composting, or give it a go if you haven't already! This site has some handy hints and fact sheets on composting.

waste

Recommended Reading and Viewing

Composting - The Ultimate Organic Guide to Recycling Your Garden - Tim Marshall (2008) explores how composting works, outlines its many benefits and shows how to build a compost and maintain it well.

Organic Growing with Worms – David Murphy (2005) lets you know all about worms and how to use them to your advantage in your backyard, on a farm, or as a commercial worm farmer, waste manager or conservationist.

Cradle to Cradle: Remaking the way we make things - William McDonough and Michael Braungart (2002) call for the transformation of industry to eliminate waste while creating goods and services that generate ecological, social and economic value.

The Story of Stuff

www.storyofstuff.com

A great 20 minute animation looking at our consumerist society.

Garbage Warrior

www.garbagewarrior.com

This film will give you a fascinating insight into the world of architect Michael Reynolds, who has spent the past 35 years creating eco-friendly homes known as 'Earthships' using wastes such as beer cans and car tyres.

Glossary

E-waste	E-waste is short for electrical waste, and includes all electrical goods and appliances.
Worm Castings	The fantastic natural fertiliser produced by worms, which you can use on your garden.
Bokashi	Bokashi is a mix a natural ingredients which activate a special odourless fermentation process. Bokashi buckets, which use bokashi, have become a popular form of home composting. For more information on the commercial bokashi mixes and buckets, see www.bokashi.com.au

References

- 1 - Waste Audit Results for Wollongong City Council, November 2008, APC Environmental Management
- 2 - Briefing Note Australia's Climate Change "Time Bomb": The Greenhouse Gas Legacy of Landfill and the Solution, August 2007, Resource Recovery Collaboration
- 3 - Biodegradable Plastics - Developments and Environmental Impacts
By Nolan-ITU Pty Ltd, 2002, commissioned by the Australian Government Department of Environment, Water, Heritage and the Arts, www.environment.gov.au/settlements/waste/degradables/faqs.html
- 4 - Environment Victoria, national DUMP and KEEP awards 2009, www.envict.org.au
- 5 - The real cost of bottled water, Jason Koutsoukis August 19, 2007, The Age newspaper



better buying

Can Shopping Save the World?

Well, not exactly.

Every single thing we buy, and service we use has some kind of ecological impact because of the resources used to create it. A sustainable future depends on all of us reducing the amount of stuff we buy that ends up as waste, or pollutes the systems on which life depends, or uses non-renewable resources. So despite recent Government incentives designed to stimulate the economy, we need to shop smarter – not harder – to ensure we have a future.

The Challenge Action Checklist can help you identify ways to use the principles of better buying to make sure your lifestyle choices are part of the solution to a sustainable future.

Ecological Footprint

An ecological footprint is a way of measuring the total amount of land required to supply all of the resources a person's lifestyle demands. A footprint can be applied at different scales, but no matter which way you look at it the results are alarming. As a global population, we are currently way outstripping the Earth's capacity to keep up with our consumption of natural resources.

And not everyone's getting a fair share of the Earth's natural resources. Australians have amongst the highest 'ecological footprints' of any nation. If every one lived like an Australian, we'd need an extra 3 planets!

This raises some tricky choices for us, and future generations, not least of which are the social and political consequences of an increasingly desperate grab for remaining resources. Can we legitimately continue to waste billions of dollars a year on things we don't use, when billions of people on Earth struggle to access enough food to eat and clean water to drink?

It's all connected. Fortunately, reducing our individual consumption is a way to reduce overall demand for natural resources, and have many other amazing positive effects. What can initially seem like a 'sacrifice' can turn into an opportunity to reconnect with nature, with each other and ultimately with ourselves.

There are a range of ecological footprint calculators that can help us to understand the impact of our lifestyles on the Earth. A few are listed below:

Big Foot www.powerhousemuseum.com/education/ecologic/bigfoot/mid

Ecological Footprint www.epa.vic.gov.au/ecologicalfootprint

My Footprint www.myfootprint.org



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Life Cycle Analysis

It might sound like a new form of therapy, but 'Life Cycle Analysis' is in fact a tool to assess the ecological impacts of a product, process or service throughout its lifecycle – from cradle to grave.

It offers us a set of questions to ask about a potential activity or purchase:

Material extraction

- Are the materials renewable?
- Where do they come from?
- Are they toxic?
- Is extraction energy or water-intensive?
- Does the extraction harm ecosystems or local communities?

Manufacturing

- Is the process resource intensive?
- Where does it take place?
- Is it polluting?
- Are the labour conditions ethical and fair?

Packaging

- Is it packaged?
- Can the packaging be broken down or reused?
- Can it be recycled?

Distribution

- How far does it travel before it reaches the shelf?
- How is it transported?

Use

- Is it toxic?
- Does it have any other impacts?
- How long will it last?
- Can it be upgraded or repaired?

End-of-life

- Must it be disposed of, and if so how?
- Can you 'close the loop' through recycling or reclamation of parts?



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Top Questions for Sustainable Consumption

Do I really need it?

Can I borrow or share?

What's the Life Cycle Analysis?

Is it local?

Is it good value and quality?

Ideas that Inspire

A funny thing is happening out there. Whilst demand for new stuff is on the rise there's also a very strong counter-movement led by folks – just like you – who are fed up with the high cost of consumerism. They're interested in spending time with each other, learning new skills, and reviving traditional crafts and culture. Here are some ideas...

Clothes Swaps are opening up a new world of fashion, fun and practicality – whilst keeping unwanted items out of landfill and reducing demand for resource-intensive new stuff. Friends, colleagues and neighbours get together to exchange quality unwanted clothing and accessories for free. They're happening in backyards and community halls all over the place! They're easy to organise, and you can make up the rules yourself. The possibilities are endless - toy swaps, book swaps...swap till you drop! For some handy tips on organising your own swap party, visit <http://recyclingweek.planetark.org/involvement/swap.cfm>

Craft-a-noons, knitting clubs, hours spent in the shed tinkering with your mate - there's a serious revival of interest in learning how to make things ourselves. WEA Illawarra, TAFE and other organisation run some fantastic, affordable practical courses in skills like sewing, cooking, garden sculpture, ceramics, felting, mosaic and wire work...get creative!

Cooperatives can be set up according to a set of principles focusing on providing a service, rather than a profit, for members. They are based on the values of self-help, self-responsibility, democracy, equality, equity and solidarity. Many people look to coops as an antidote to profit-driven businesses and have set up coops to provide food, labour and even financial services.

Freecycle is a web-based swap shop open to all who want to 'rehome' their goods rather than chuck them out...you can list or exchange anything for free. Check it out at http://groups.yahoo.com/group/freecycle_illawarra

Better Buying is not just about being a smart shopper – it's about 'buying in' to these issues and actively making lifestyle choices which support a sustainable future.



better buying

Challenge Action Checklist

The actions below are simple, achievable and will have a measurable impact on your ecological footprint. Tick and date the actions you and your household will take.

- .. **Shop with a list – and eat before you go**

Date: There is some evidence we tend to make unwise decisions about what to buy when we either don't have a plan, or are hungry! A list made at home helps to plan purchases, and avoid wasteful buys

- .. **ALWAYS take your own bags shopping, and say NO to plastic bags every time**

Date: The oil they're made from took millions of years to form, yet 7,150 plastic bags are thrown away after a single use **every minute** in Australia. Take your own reusable bags preferably, made from natural materials like silk, cotton or hemp which can be composted or used as rags for cleaning at the end of their life. Or be like a Nanna and use a trolley!

- .. **Shop at op shops and second hand stores**

Date: The Illawarra has a great number of op shops and second hand stores, many of which are run by organisations dedicated to community services.

- .. **Organise a clothes swap, a book swap – an anything swap!**

Date: Have a fun afternoon with friends or colleagues, and save money and resources at the same time. For some handy hints on running your own swap party, visit <http://recyclingweek.planetark.org/involvement/swap.cfm>

- .. **Support sustainable forestry**

Date: When buying furniture or timber goods, avoid timber which has been sourced from unsustainable forestry – check out the good wood guide at www.goodwoodguide.org.au

- .. **Be a green gifter**

Date: Vouchers for experiences (such as a massage, or tickets to the theatre or movies), are often greener options than material goods. And be creative in your gift wrapping – use scrap material, scarves, pretty tea towels, newspaper, re-used ribbon...

- .. **Minimise take away fast foods**

Date: Fresh food prepared at home is the most nourishing thing for your family and for the planet. It takes up to 2,400 litres of water to make one hamburger, not to mention the land cleared for grazing and resources used for disposable packaging. Many global chains have questionable corporate social responsibility records.

- .. **Support Fairtrade**

Date: Certified FairTrade products guarantee you that the purchases you have made will benefit the producer, their families, and the surrounding communities in the developing countries the goods originated from. Look for Fairtrade logo on cotton products, sports balls, coffee, tea and chocolate.

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- ..

Choose only quality products and services which will last

Date: Our landfills are overflowing with cheap, poorly made goods. Invest in quality and craftsmanship.

- ..

Choose food that is sustainably grown, seasonal, local and organic

Date: Visit local markets and talk to the growers. Support organic farming but beware of food miles – some imported organic food has a high ecological footprint. Work out what's in season by following prices or try the Sydney Markets guide http://www.sydneymarkets.com.au/produce/seasonal_produce.html.

- ..

Avoid harmful chemicals – in the home and garden

Date: Gardeners achieve amazing results following organic methods of pest management and soil improvement without using harmful chemicals. 'Green Cleaning' will bring you a spotless home without the dangerous fumes and unpleasant odours.

- ..

Cook from scratch

Date: Simple, fresh unprocessed foods have the lowest ecological impact. The popularity of cooking programs reflects a renewed interest in preparing and sharing food with family and friends, yet an alarming number of people lack the skills and confidence to cook themselves. Share your enthusiasm and recipes with others.

- ..

Use unbleached, recycled toilet paper

Date: Usually made from waste office paper, this product has not caused the destruction of a forest and costs the same or less than fancy brands.

- ..

Go natural

Date: Choose personal care products made with natural, organic ingredients, and steer clear of products made with synthetic, petrochemical ingredients. You could even have a go at making your own natural care products.

- ..

Read the label

Date: Unfortunately it can be difficult to get the information you need to make sustainable choices due to inconsistency in labelling laws. Look for 'Product of Australia' on all packaged or tinned food, as 'Made in Australia' means the product could merely have been assembled here. Check that products claiming to be organic carry certification symbol/s.

- ..

Choose Sustainable Seafood

Date: Our ocean's fisheries are threatened by over-fishing, pollution and poor aquaculture practices. We love our seafood, but if we want it to be around for our kids to enjoy we need to ask some hard questions and refuse to support fishing practices which are unsustainable. We need to ask: what kind of fish is it? Where's it from? How was it caught? The Australian Marine Conservation Society offers a great guide (see Links).

"If you bring food in from the veggie garden, take the time to relish in their satisfaction of the success of your efforts. I really look at the lettuce and the radishes, the onions and the beans- smell them and savour in their freshness"

Super Challenger

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My Goals

In addition to going through the Challenge Checklist above, you might want to set some specific goals for you or your household. A good goal is achievable, has clear steps, and has a start and finish date.

Example

Goal *To host a Clothes Swap with my friends and neighbours*
Step 1 *Spread the word, find a couple of people to help organise*
Step 2 *Pick a date and venue, work out the rules, organise delicious homemade snacks*
Step 3 *Clothes swapping time!*
Timeline *Start planning in early October for a clothes swap on first weekend of November. Then aim to hold 2 swap meets a year.*

GOAL

Step 1

Step 2

Step 3

Timeline

Comments

It's not too late at all. You just don't know yet what you are capable of.

Mahatma Gandhi



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GOAL

Step 1

Step 2

Step 3

Timeline

Comments

MY NOTES

Our personal consumer choices have ecological, social, and spiritual consequences. It is time to re-examine some of our deeply held notions that underlie our lifestyles. David Suzuki

better buying

Contacts and Links

Safer Solutions

www.safersolutions.org.au

The Total Environment Centre has developed a fantastic site with an A-Z of common chemicals, and safer alternatives for the home, garden and renovators.

Your Home

www.yourhome.gov.au

(03) 9639 1500

A suite of online technical guide materials developed to encourage the design and renovation of sustainable homes. Excellent resource includes a Technical Manual, Buyers Guide, and Renovator's Guide.

Ecospecifier

www.ecospecifier.org

Over 2500 listings of quality products for ecological and healthy building and renovation products and services.

Good Wood Guide

www.goodwoodguide.org.au

Helps you make informed environmentally responsible decision when buying wood and wood products.

Consumption Atlas

www.acfonline.org.au/consumptionatlas

Calculate the environmental cost of our spending with the Australian Conservation Foundation Consumption Atlas

Choice Online

www.choice.com.au

Independent advice, product reviews and advocacy from the Australian Consumer Association

The Guide to Ethical Supermarket Shopping

www.ethical.org.au | 0403 899 338

This independent site provides a comprehensive 'Guide to Ethical Supermarket shopping.' It evaluates the social and environmental impact of different companies, and let's you know which brands are a 'better buy' and which should be avoided.

Clothing Exchange

www.clothingexchange.com.au

The original site for organised clothes swaps, very inspiring.

WEA Illawarra

www.weaillawarra.com.au | 4226 1622

Take a course and learn new, practical skills.

NSW Department of Fair Trading

www.fairtrading.nsw.gov.au | 13 32 20

Extensive information on setting up a cooperative.

Australian Marine Conservation Society

www.amcs.org.au | 1800 066 299

Not-for-profit charity working to protect the oceans and make our fisheries sustainable. Publishes the Sustainable Seafood Guide.

NSW Department of Environment and Climate Change

www.livingthing.net.au

Links to great tips on sustainable living.

better buying

Recommended Reading

Wasteful Consumption in Australia

Clive Hamilton, Richard Denniss, David Baker (2005). This report from The Australia Institute analysis consumer spending on goods and services that are not subsequently used – a total of \$10.5 billion a year. View on-line at www.sustainableillawarra.com.au/pdf/Wasteful-Consumption-in-Australia.pdf

The Chemical Maze

Bill Statham. A guide to food additives and cosmetic ingredients

Living the Good Life

Linda Cockburn (2007). An inspiring tale of how one family embarked on an adventure to buy nothing for 6 months.

Confessions of an Eco-Sinner: travels to find where my stuff comes from

Fred Pearce (2008). A thought-provoking real life exploration into the stories behind everyday products in our lives – everything from gold rings and cups of coffee to T-shirts

Eco Chick: The Savvy Shoppers Guide to Ethical fashion

Matilda Lee (2009). Covers how you can create your own eco-friendly fashions through recycling and savvy shopping.

Organic Home, the Australian Guide to Clean, Green Living

Rosamund Richardson (2006) provides lots of helpful tips on green cleaning and creating a healthy home environment

Sustainable Baby

Debbie Hodgson

A comprehensive book with easy tips and information on how you can make earth-friendly choices as a parent or carer.

Recommended Viewing

The Story of Stuff

www.storyofstuff.com

A great 20 minute animation looking at our consumerist society.

The Meatrix

www.themeatrix.com

Uses award-winning animation to explore the realities of factory farming, and promotes ethical meat production.

Australians seem to live with a contradiction. They express concern about the environment yet live materialistic lifestyles that result in high levels of waste.

Hamilton, Denniss and Baker (2005)

better buying

Glossary

Swap party	An event where friends, colleagues or community groups get together to swap goods they no longer need.
Green Cleaning	An eco friendly, effective way of households cleaning with natural products such as bicarb soda and vinegar
Fair Trade	A trading partnership that operates on the principles of sustainable development and seeks to deliver better conditions for marginalised producers and workers.
Made in Australia	Substantially transformed in Australia, yet ingredients may be sourced from overseas
Product of Australia	Each significant ingredient or component has been sourced in Australia and all, or virtually all of the production processes taken place in Australia
Organic	Certification schemes ensure that organic farming does not use synthetic fertilisers or pesticides, animals are treated ethically, the soil is looked after, and food is free of genetically modified organisms.

Ecologically Sustainable Development (ESD)

ESD is about meeting the needs of the present without compromising the ability of future generations to meet their own needs. All Australian governments have committed to ESD, and recognise there are significant changes necessary to transition towards sustainable development. To find out more about Australia's efforts in ESD and global initiatives, visit the Federal Department of the Environment, Water, Heritage and the Arts at <http://www.environment.gov.au/esd/>

Green Cleaning

Keen to explore ways to reduce the 'chemical load' of your home, spend less money on cleaning products, and protect our waterways from harmful chemicals?

Safe, effective cleaners can be made from ingredients such as bicarb soda, vinegar and essential oils.

Helpful resources for more green cleaning ideas and inspiration are:

- www.safersolutions.org.au
- Organic Home, the Australian guide to clean, green living by Rosamund Richardson (2006)



sustainable food

What's Food Got To Do With It?

As we've gained greater knowledge about the impacts of our consumption, it's become clear that the choices we make about the food that we eat can have profound consequences not only for our own health and wellbeing, but for the environment, local communities, and the economy.

Choosing to be ethical about the food we eat is one of the **MOST** effective, health-giving, and delicious ways to contribute towards a more sustainable future. Let's enjoy eating our way to a deliciously sustainable future!

Ecological Footprint Of Food

An ecological footprint is a way of measuring the total amount of land required to supply all of the resources a person's lifestyle demands - everything from renovations to travel, to clothing and food. It comes as a surprise to many of us, but studies from the University of Sydney, show that **almost 60% of our ecological footprint**, is embodied in the food we consume.

It makes sense when you start to think about all the energy, water, chemicals, labour, transportation and other resources it takes to stock our supermarket shelves with a dazzling array of packaged products from all over the world.

Many foods have a high footprint because of:

- Long distance transportation
- Intensive processes used to manufacture the goods and their packaging
- Large amounts of water and energy used in production
- Areas of native vegetation cleared to grow grain crops or pasture for animals

Others foods, such as farmed salmon or prawns can harm aquatic ecology with the antibiotics and pesticides used. Genetically modified crops such as some soy beans, canola, corn and cottonseed oil, pose serious threats such as the loss of our food crops biodiversity, and potential to become weeds.

Battery hens, intensive piggeries and feedlot cattle raise animal welfare issues for consumers. Coffee, tea, and cocoa, which come mainly from developing countries, often have a poor ethical standards, with farmers being paid so little for what they produce, and the working conditions being unregulated. And as large, powerful corporations continue to expand, our food system is becoming concentrated in fewer and fewer hands.

The time has come to reclaim the stolen harvest, and celebrate the growing and giving of food as the highest gift and most revolutionary act

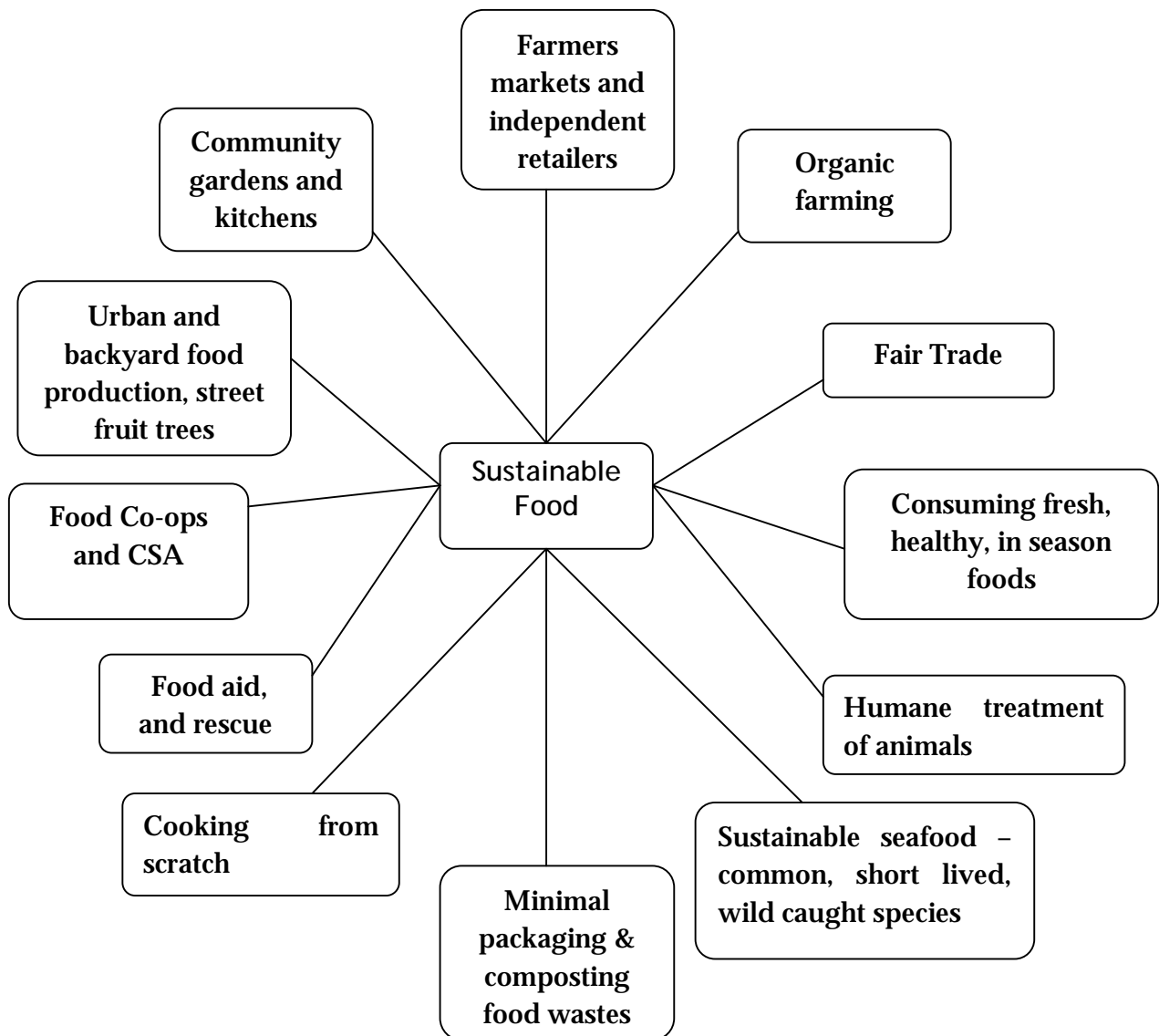
Vandana Shiva



sustainable food

So what's Sustainable Food?

Sustainable food is vibrant, healthy, food that is produced with the wellbeing of people, the environment, and communities, at heart. The diagram below shows the major pieces of the pie that make up a sustainable food system, and provides a helpful checklist for things you can think about in supporting sustainable food choices. If some of these terms are new to you, check the glossary at the end of this chapter for more details.



How do you 'value' fresh produce from the garden? Freshness and taste don't have a price tag on them.

Super Challenger

sustainable food

Understanding Food Miles

'Food Miles' is a way of measuring the distance food has travelled from the paddock to our plates. Globalisation, industrial agriculture, and government subsidies have contributed towards a massive increase in international trade in food. These factors have combined to provide the Australian market with cheap imports, yet the real costs of long-distance transportation of food on our environment, our health, and economies deserves a close look.

We even import and export identical products - sending oranges to California while we import them from Brazil! It might make our trade figures look good, but it's definitely not sustainable.

A 2008 study of an average shopping basket in Melbourne found that the items had travelled a whopping 70,803km – almost 2 times around the Earth. As we face up to the need to avert further climate change and the reality that we are fast running out of cheap oil, we urgently need to reduce our food miles. Sustainably grown, local food is key strategy for a low carbon future.

Backyard Food Growing

Whether it's growing a few herbs in a pot on the balcony, or transforming the whole lawn into a suburban food forest, growing food in the backyard is experiencing an enormous resurgence in popularity. As well as the joy of being able to enjoy your own delicious, fresh, healthy produce, growing organic food on your door step is about as eco friendly as you can get!

Planting some fruit trees, starting a veggie patch, or keeping some chickens, so you can enjoy your own home grown produce can be hugely rewarding. If you're just starting out, the most important thing is to start small, with just a few trees or a small veggie patch. Ask some green thumbed friends for advice, read some books (see our recommended readings at the end), join a local community garden or attend a gardening workshop and you'll build up your skills in no time.

Hardy fruit trees that are well suited to the Illawarra and great for beginners include:

- Citrus (orange, lemon, lime, grapefruit, mandarin)
- Figs
- Mulberry (you can get white varieties that won't stain your clothes!)
- Macadamias

Some great veggies to start with are:

- Lettuce (all year round)
- Silverbeet (all year round)
- Cherry tomatoes (spring and summer)
- Potatoes (spring, summer, autumn)
- Herbs like rosemary or thyme





sustainable food

Challenge Action Checklist

The actions below are simple, achievable and will have a measurable impact on your ecological footprint. Tick and date the actions you and your family will take.

.. Make your own lunch for work or school

Date: Save up to \$50 a week, along with a great deal of waste! Be careful to avoid multi-packs and other highly packaged items, opting instead to buy in bulk and use small containers.

.. Avoid wasting food

Date: An Australia Institute study found we waste \$10.5 billion a year on things that we rarely or never use. We throw away up to 1/3 of the food we buy! Plan meals and make a shopping list to save money, waste, greenhouse gas pollution, water, traffic, land and labour by only purchasing items you need.

.. Eat one less serve of conventional meat and one less serve of dairy per week

Date: Australians love meat and dairy products, and they can be part of a healthy and sustainable diet. However the ecological cost of production is very high. The message is not to overdo it, avoid highly processed fast foods where possible, and look for opportunities to support organic, local, sustainably farmed products. Of course, it's important to eat a well-balanced diet with a wide variety of foods. The National Health and Medical Research Council have produced simple dietary guidelines for adults which you can download at www.nhmrc.gov.au/publications/synopses/files/n29.pdf

.. Buy in bulk and minimise packaging

Date: It's really rewarding to find products with minimal packaging, or that you can buy in bulk. Don't be shy about letting your retailer know what you think.

.. Choose food that is sustainably grown, local and in season

Date: Discover local markets and talk to the growers. Work out what's in season by following prices or try the Sydney Markets guide www.sydneymarkets.com.au/produce/seasonal_produce.html. Support organic farming but beware of food miles – imported organic food can have a high ecological footprint.

.. Buy organic

Date: Farmers can achieve amazing results following organic methods of pest management and soil improvement, without using harmful chemicals. Check our glossary for logos to look out for when shopping.

.. Minimise take away fast foods

Date: Fresh food prepared at home is the most nourishing thing for your family and the planet. It takes up to 2,400 litres of water to make one hamburger, not to mention the land cleared for grazing and resources used for disposable packaging. Many global chains have questionable corporate social responsibility records.

.. Support Fairtrade

Date: You can know farmers are getting a fairer deal, and the development of local communities is being supported when you buy certified FairTrade products. Look for Fairtrade coffee, tea and chocolate.

sustainable food

Challenge Action Checklist

ü The actions below are simple, achievable and will have a measurable impact on your ecological footprint. Tick ✓ and date the actions you and your family will take.

..

Cook from scratch

Date: Simple, fresh unprocessed foods have the lowest ecological impact. The popularity of cooking programs reflects a renewed interest in preparing and sharing food with family and friends, yet an alarming number of people lack the skills and confidence to cook themselves. Share your enthusiasm and recipes with others.

..

Keep Chickens

Date: Chooks provide nutritious eggs and fertiliser for free, whilst making great pets and helpful workers in the garden.

..

Grow your own, choosing traditional and heirloom varieties

Date: You don't need a lot of time, space or money to grow some of your own food. Salad greens, herbs and many veggies will all grow well in containers. Traditional heirloom varieties represent the genetic diversity of our food and ensure that you can save seeds for planting next season. If you've got not space at all, consider joining or starting a Community Garden.

..

BYO water in a reusable bottle

Date: Bottled water is expensive, and ecologically disastrous. PET bottles are recyclable, yet take litres of oil and water to manufacture – not to mention the resources used to transport, extract, refrigerate and market something that you can get freely from a tap. And less than 60% of PET containers actually end up in the recycling! Install a water filter if you're concerned about water quality, and take your own safe polycarbonate, glass or stainless steel bottle with you wherever you go.

..

Compost or worm farm your food scraps – create soil & a backyard Carbon sink!

Date: Many of us have been doing the right thing and diverting up to 50% of food and garden waste from landfill by composting and worm farming. Now there's research that tells us we're actually locking Carbon back into the soil by doing so – creating mini carbon sinks in the process. What a contribution to combating climate change, literally in your own backyard!

..

Read the label!

Date: Unfortunately it can be difficult to get the information you need to make sustainable food choices due to inconsistency in labelling laws. However always look for 'Product of Australia' on all packaged or tinned food ('Made in Australia' means the product could merely have been assembled here) and ensure that food claiming to be organic has a certification symbol.

..

Choose Sustainable Seafood

Date: Our ocean's fisheries are threatened by over-fishing, pollution and poor aquaculture practices. Ask: what kind of fish is it? Where's it from? How was it caught? The Australian Marine Conservation Society offers a great guide (see Links).



sustainable food

My Goals

In addition to going through the Challenge Checklist above, you might want to set some specific goals for you or your family. A good goal is achievable, has clear steps, and you can set yourself a deadline.

Example

Goal *To enjoy a vegetarian meal at least one night a week*
Step 1 *Search cookbooks to find recipes we like*
Step 2 *Make a weekly shopping list*
Step 3 *Take turns cooking up a meal on 'meat free Mondays'*
Timeline *Start the first Monday in November and trial for the month*

GOAL

Step 1

Step 2

Step 3

Timeline

Comments

Did you know?

Animal products can have a very high ecological footprint, due to factors such as the amount of grain or pasture that needs to be grown for the animals. Every 150g serve of beef can take over 200 litres of water and create 5kg of greenhouse pollution to produce! Of course, it's important to eat a well-balanced diet with a wide variety of foods. The National Health and Medical Research Council have produced simple dietary guidelines for adults which you can download at <http://www.nhmrc.gov.au/publications/synopses/files/n29.pdf>. By choosing to go meat free at least one day a week, you'll be conserving water, land, and energy resources.

sustainable food

GOAL

Step 1

Step 2

Step 3

Timeline

Comments

MY NOTES

' You could almost see the life force growing. And later, when we made salad from their gift of vine ripened tomatoes, cucumbers and onions, our tastes buds made the decision for us and so our own vegetable growing experience began.'

Super Challenger



sustainable food

Contacts and Links

Food Fairness Illawarra

www.healthycitiesill.org.au/foodfairness

A community-based network actively promoting solutions to ensure adequate and healthy food for all.

Sydney Food Fairness Alliance

www.sydneyfoodfairness.org.au

An alliance active in promoting a socially, economically and environmentally sustainable food system in the Sydney region. Great fact sheets.

Australian City Farms and Community Gardens Network

www.communitygarden.org.au

Inspiration from around the country from people making new friends, unwinding, learning and growing food together.

The North Wollongong PCYC Community Garden

<http://thegardennorthgong.blogspot.com/>

Run by volunteers, they have a working bee and communal lunch on the first Sunday of each month.

Dapto Community Organic Farm

Here you can hire a certified organic veggie plot. Call Margaret (4272 5563) for more details or visit the farm at 29 Darkes Road Dapto on any Sunday between 10am - 2pm

True Food Network

www.truefood.org.au

If you are concerned about the impacts of genetically engineered food, you can find out more information here.

I Greenpatch Seeds

www.greenpatchseeds.com.au 02 6551 4240

The Lost Seed

<http://thelostseed.com.au> 03 6491 1000

Inspiring blogs of local backyard growers - GreenChange

www.greenchange.com.au - A suburban sustainability blog, featuring a Kiama 'Super Challenge' family

Happy Earth www.happyearth.com.au. Follow a young couple from Unanderra on their Adventure in Urban Sustainability.

Casa Famiglia – <http://casafamiglia-thefamilyhouse.blogspot.com/>

A suburban sustainability blog, featuring a Wollongong 'Super Challenge' family

Australian Marine Conservation Society

www.amcs.org.au | 1800 066 299

Not-for-profit charity working to protect the oceans and make our fisheries sustainable. Publishes Sustainable Seafood Guide.

Permaculture Principles

www.permacultureprinciples.com/

Find out about principles that allow us to creatively re-design our environment and behaviour in a world of less energy and resources.

Seed Savers Network

www.seedsavers.net | 02 6685 6624

Dedicated to preserving the genetic basis of tomorrow's food. Find your local seed saver groups to exchange seeds!

Suppliers of organic heirloom seeds Green Harvest

www.greenharvest.com.au 1800 681 014

Eden Seeds

www.edenseeds.com.au 07 5533 1107

Diggers Club

www.diggers.com.au 03 5984 7900

sustainable food

Recommended Reading

Organic Vegetable Gardening

A great introduction for beginners this book by Annette McFarlane includes planning, basic layouts, composting techniques, crop rotation, saving seed, pest control, what and when to plant for your climate zone as well as heaps of information on individual vegetables.

Fabulous Food From Every Small Garden

Mary Horsfall (editor of Grass Roots magazine) shows you how to grow food at home in even the smallest of spaces. Includes instructions on successfully growing food plants from seeds, improving the soil, organic pest and weed control and efficient watering methods. Order on-line at <http://www.publish.csiro.au/nid/20/pid/6089.htm>

The Australian Fruit and Vegetable Garden

Clive Blazey, the founder of the Diggers Club lays out a garden design incorporating crop rotation, with extensive growers notes for 100s of species.

The Ethical Guide to Supermarket Shopping

A handy pocket guide that evaluates the social and environmental impact of different companies, and let's you know which brands are a 'better buy' and which should be avoided. Available for FREE download from www.ethical.org.au or call 0403 899 338 to order your copy (only \$7).

ABC Organic Gardener magazine

An off-shoot of the popular ABC program *Gardening Australia*, filled with simple and inspiring ideas to get your edible garden blooming without harmful chemicals.

Discovering Fruit & Nuts

Susanna Lyle. An encyclopaedia of plants bearing edible fruits and seeds, this book is sumptuous enough to be a coffee table favourite.

The Seed Savers Handbook

Jude and Michel Fanton. The seminal guide to growing, selecting, harvesting and storing seeds of edible and useful plants in Australia.

The Permaculture Home Garden

Linda Woodrow. A great starting point for incorporating permaculture principles in your backyard.

Lawns Into Lunch

Jill Finnane. Inspiration for turning that water-hungry 'green cancer' into a productive paradise!

Backyard Poultry Naturally

Allana Moore. Packed with all you need to know about keeping happy, healthy, chooks in your backyard.

Harvest for Hope, a Guide To Mindful Eating

Jane Goodall – A fantastic insight into the global food system and ideas on how we can best create a healthier, more sustainable food system.

sustainable food

Recommended Viewing

Gardening Australia

Saturdays, 6.30pm on ABC1

Often have segments on growing fruit and vegetables

Costa's Gardening Odyssey

Tune into SBS at 8:00pm on Thursdays for a fabulously inspiring show taking you to community gardens and backyard veggie patches around the country. You can also view past the episodes on-line at www.sbs.com.au/shows/costa/watchonline/page/i/1/show/costa

The Meatrix

www.themeatrix.com

A short, engaging animation exploring the realities of factory farming, and promotes ethical meat production.

Store Wars

www.storewars.org

An amusing five minute mini-movie following the adventures of animated organic vegetable heroes Ham Solo, Chewbroccoli and Cuke Skywalker.

Power of Community: How Cuba Survived Peak Oil

www.powerofcommunity.org

This 2006 film has become inspirational all over the world for its exploration of the Cuban response to the collapse of the Soviet Union. Through the hardships and struggles, Cubans made a transition from a highly mechanised industrial agriculture system to one using organic methods of farming and local organic gardens.

Future of Food

www.thefutureoffood.com

Provides an excellent overview of issues being raised by genetically modified foods. It is both a guide for consumers, and a critique of the global food production issues which are driving debate.

Black and Gold – A film about coffee and trade

www.blackgoldmovie.com

In this eye-opening expose of the multi-billion dollar industry, Black Gold traces one man's inspiring fight for a fair price for Ethiopian coffee growers.

Our Seeds: Seeds Blong Yum

www.seedsavers.net

In September 2008 Seed Savers released "Our Seeds: Seeds Blong Yumi" a fifty-seven minute film that celebrates traditional food plants and the people that grow them.

Homegrown Revolution

www.homegrownrevolution.com

Homegrown Revolution is a short informational introduction to an amazing project that has been called a new revolution in urban sustainability. In the midst of a densely urban setting in

sustainable food

downtown Pasadena, for over twenty years, the Dervaes family have transformed their home into an urban homestead and a model for sustainable agriculture and urban living.

Glossary

Organic Certification schemes ensure that organic farming does not use synthetic fertilisers or pesticides, animals are treated ethically, soil is looked after, and food is free of genetically modified organisms.



Biodynamics A form of organic agriculture founded by Rudolf Steiner which pays particular attention to soil biology, cosmic rhythms and lunar cycles.

Hybrid seeds The first generation of two distinct and different parents of the same species, often grown for yield and marketed commercially. Seeds saved from a hybrid parent commonly do not inherit traits of the parent, or are sometimes sterile, so that growers must purchase new seed each year.

Heirloom seeds Grown and selected for desirable traits, they adapt to local conditions and can be saved for the next season.

Food Miles A measure of the distance food travels from source to consumer.

GMO Stands for Genetically Modified Organism, which means it has been subject to laboratory techniques to change its DNA

CSA CSA is an abbreviation for Community Supported Agriculture, and involves individuals pledging support to a farm operation. CSA's usually work by individuals paying up front for a weekly or monthly box of seasonal foods from the farm to be delivered to them.

Permaculture Co-conceived by David Holmgren and Bill Mollison, Permaculture is a highly influential set of ethics and principles which are applied to the design of sustainable human settlements. Applicable at many scales, the integration of edible food systems into urban areas and backyards is a key application.

Fair Trade Products usually associated with appalling conditions for workers and poor environmental outcomes are now available as certified 'fair trade'. Look for coffee, tea, chocolate, cocoa and sugar

"I will know that the world has awakened when I can type the word permaculture and it not is underlined in red."

Di Creasey



biodiversity

the B-word

When we talk about 'biodiversity', we're referring not only to the astonishing variety of life forms on our planet but also to the complex interconnections between them. This is sometimes called the Web of Life, and embraces the mind-boggling diversity of every living thing on Earth.

Biodiversity includes the variety of genetic differences between species (for instance wing patterns on butterflies, or the difference between an earthworm and an elephant) and within species (for instance eye colour in humans, or taste in tomatoes). It also includes the way in which different species coexist in 'ecological communities' and processes (like a rainforest or a coral reef; or the life beneath our soils).

As we gain greater knowledge about the likely impacts of climate change, it has become even more important to ensure that our ecosystems can adapt and be resilient by maintaining biological diversity.

We must conserve biodiversity to ensure that there is a future, which means making wise use of natural resources and safe-guarding the ecosystems which sustain us. Diversity really is the spice of life, providing us with the ecosystems on which life depends.

Biodiversity in the Illawarra

Our region is home to the most stunning natural areas, from gorgeous beaches to the grand escarpment, rainforest pockets, wetlands, coastal plains, woodlands, swamps and dozens of creeks and estuaries. This amazing diversity of ecosystems supports unique species of wildlife and plants.

The pressures of industry, agriculture and housing have impacted significantly on our natural areas, creating serious threats to local biodiversity. There are around 101 threatened or vulnerable species found in our region...rare ferns and orchids, bitterns and parrots, green and gold bell frogs and owls. There are entire vegetation communities that are the last refuges for many species upon which they depend, which are endangered. Small stands of ecosystems like Illawarra Subtropical Rainforest, Coastal Saltmarsh, Swamp Oak Floodplain Forest, Illawarra Lowlands Grassy Woodland, and Littoral Rainforest survive.¹

I have no other wish than a close fusion with nature, and I desire no other fate than to have worked and lived in harmony with her laws.

Claude Monet



biodiversity

Oh, Lawn

It's hard to imagine our suburbs without lawns, so iconic are those sunny rectangles of grass. Yet, if we're serious about a sustainable future, we need to take a serious look at the impact they're having.

For the most part, lawns are water hungry, chemical intensive and tend to encourage dominant pest species like Indian Mynahs to your backyard. Biodiversity conservation requires us to think carefully about the environments we are creating, so that we are not creating playgrounds for pests.

It really does begin in our backyards. The more we can do to promote local native species of plants and animals, the greater chance we have of protecting natural areas from invasion by pest species.

Why not throw off the drudgery, expense and noise of lawn maintenance forever! Reclaim your weekends, and spend time watching little birds feeding on your native plants or harvesting salad for lunch instead of wrestling with a machine.

Converting at least some of your lawn to a habitat garden which includes layers of native groundcovers, grasses, shrubs and taller plants, will not only provide a much-needed haven for local birds but also save time and money. Alternatively, our Sustainable Food section encourages you to turn your lawn into an edible garden.

If you're worried about losing space for backyard ball sports, think about inviting your friends to enjoy the local park instead ... if you do want to keep a small patch of grass, ask your local nursery about the most drought-tolerant variety.

Did you know?

Of the estimated 15-30 million species of animals on Earth, over 90% are BUGS? Yes, 'invertebrates' make up the largest – and most neglected – group of living things on the planet.

We depend on them to break down waste, clean our water and do a million other things we barely understand. Avoiding chemical pesticides and fertilisers, composting, and creating diverse gardens are all things we can do at home to support these very helpful and often invisible friends.

biodiversity

ü Challenge Action Checklist: what can you do?

Want to help conserve biodiversity? These simple actions below will help get you started, but beware...once you see the difference you're making, you'll be hooked!

Tick ü and date the actions you below and your household will take.

.. **Plant local native species in your garden**

Date: Wherever you can, use plants that are native to your area – not the other side of Australia! They will be best adapted to our unique soils and climate, and so require less water and care. They'll also provide much-needed habitat and food for local fauna, helping to 'connect' our fragmented local bushland, like a jigsaw across our backyards!

.. **Avoid weedy plants that can escape into natural areas**

Date: Responsible gardeners are mindful not to make matters worse for our urban bushland, which is already struggling to resist the invasion of weedy plants. Grow Me Instead is a great resource to help you find non-invasive alternatives.

.. **Use unbleached, recycled paper products**

Date: Support the recycling industry and buy recycled paper products - this includes loo paper! Many paper products are manufactured from virgin timber pulp, leading to the destruction of forest ecosystems and pollution of the environment through chemical bleaching and processing.

.. **Keep your cat in at night, and put 3 bells on its collar**

Date: Cats are very skilled hunters, and can cause great problems for native birds, lizards and other animals. The bells help to give prey warning of the cat's approach.

.. **Avoid harmful chemicals – be an ecological gardener**

Date: Gardeners achieve amazing results following organic methods of pest management and soil improvement without using harmful chemicals. Find out more by reading ABC Organic Gardener magazine or check out our Links.

.. **Build a frog pond, make a lizard lounge, plant a butterfly garden...**

Date: Make your next pet a native animal! Frogs and lizards will quickly move into your place if you create the right home. They'll pay you back by controlling insects. It's easy and rewarding to create simple habitats from recycled materials.

.. **Grow some native bush foods**

Date: Many wonderful indigenous plants can also provide healthful food...try Lillypilly, Davidson Plum, Black Apples, Macadamias or our hardy native spinach - Warrigal greens.

.. **Join a local bush restoration group**

Date: Get hands-on experience in actively restoring our threatened ecosystems. Learn new skills and share your interest with others. See Contacts and Links for details.



biodiversity

My Goals

In addition to going through the Challenge Checklist above, you might want to set some specific goals for you or your family. A good goal is achievable, has clear steps, and you can set yourself a deadline.

Example

Goal *Improve biodiversity in my garden – attract more birds and beneficial insects*
Step 1 *Check out the resources and books suggested in this workbook*
Step 2 *Book in to attend a free Sustainable Illawarra biodiversity workshop*
Step 3 *Make a plant species list and purchase local native plants*
Step 4 *Create a local native garden bed in the front yard*
Timeline *Start researching in mid January 2010, aim to have created new local native garden bed by the end of February 2010.*

GOAL

Step 1

Step 2

Step 3

Timeline

Comments

Small is beautiful... many natives like Grevilleas and Callistemons have been bred from non-Illawarra species by nurseries for their big, showy flowers. They're gorgeous – but they also favour birds whose beaks are large enough to access the nectar. Little birds and insects don't stand a chance, and aggressive larger birds tend to dominate. Think about choosing local natives. They're better suited to our soil and climate, their flowers might be smaller and form might be denser and bushier to support little birds and insects.



biodiversity

GOAL

Step 1

Step 2

Step 3

Timeline

Comments

MY NOTES

“My priority was to keep garden work to a minimum, so I planted lots of natives, that saved on watering an also provided a habitat for the birds.”

Super Challenger

biodiversity

Links

AABR- Australian Association of Bush Regenerators

The Association's aim is to foster and encourage sound ecological practices of bushland management by qualified people, offers resources such as training, events, and bush regeneration services.

BushCare Wollongong

www.wollongong.nsw.gov.au/environment/bushcare.asp or 4225 2638

Individuals, community groups, industries and schools can become involved in helping conserve and restore our unique local biodiversity.

LandCare/BushCare Shellharbour

www.shellharbour.nsw.gov.au or 4221 6111

Become involved in helping to restore our unique biodiversity.

Landcare Illawarra

www.landcareillawarra.org.au

Provides opportunities to be involved in environmental repair activities across the Illawarra.

Conservation Volunteers Australia

www.conservationvolunteers.com.au or 4228 9246

Provides a range of local, national and international opportunities to be involved in conservation projects.

Greenplan - Wollongong Councils Botanic Gardens Nursery

www.wollongong.nsw.gov.au/environment/greenplan.asp or 4225 2636.

Ask here for local native plant options. Open only to Wollongong ratepayers, 7:30am - 2:30pm on the 3rd Friday of the month from, & special sale days.

Shellharbour City Council Wholesale Nursery

www.shellharbour.nsw.gov.au or

4221 6191

Located at 132 Industrial Road, Oak Flats & open to the public (not restricted to Shellharbour rate payers) 7:30am - 3:45pm Monday to Friday.

Habitat Ponds

0409 600 625

Local wildlife guru Peter Nolan can design, build and install frog ponds and water features for your garden.

Backyard Buddies

www.backyardbuddies.net.au

Has helpful facts and tips on encouraging wildlife to your garden.

Birds in Backyards

www.birdsinbackyards.net

Helps you create a bird-friendly backyard, and identify birds.

Bugwise

www.bugwise.net.au

Support the workers of soil creation, waste disposal and pollination!

Safer Solutions in your Garden

www.safersolutions.org.au

A wealth of information on gardening and cleaning without chemicals.

Frogs Australia

www.frogsaustralia.net.au

Give a frog a home!

NSW Threatened Species

www.threatenedspecies.environment.nsw.gov.au

Find out more about NSW threatened species and what you can do to help.

WIRES

www.wires.org.au 1300 094 737

Contact WIRES if you find an injured wildlife, or would like to volunteer to rehabilitate injured animals.

biodiversity

Recommended Reading

Habitat Garden

Peter Grant (2003) shows you how to create gardens that attract wildlife and are suited to the climate, water and soil conditions of your local area.

Attracting frogs to your garden: Creating an ideal habitat for native frogs in your own backyard

Kevin Casey (2005). A wealth of information on transforming your backyard into a welcoming habitat for attracting native frogs, with tips on providing food, identification, and constructing a frog pond.

Wild Neighbours: the humane approach to living with wildlife

Ian Temby (2005). Fascinating insights into how our wild urban neighbours live - their habits, favoured habitats and diets - and helpful advice on humane solutions to potential problems such as possums on the roof or marauding cockatoos.

Nest Boxes for Wildlife: A Practical Guide

Alan and Stacey Franks (2004). Contains detailed plans and tips on installing a range of bird and mammal nest boxes.

Wollongong's Native Trees

Leon Fuller (1995). An invaluable guide for identifying trees in the Wollongong district.

Illawarra Remnant Bushland Database

www.southerncouncils.nsw.gov.au/vegetation/map_index.htm

These databases provide a range of species lists from the Illawarra region, and are a great source of information for identifying species that grow naturally in your locality. Just click on a map in your area, and the green numbered 'polygons' will tell you where the flora survey was undertaken. A number reference will take you to the species list.

"The more clearly we can focus our attention on the wonders and realities of the universe about us, the less taste we shall have for destruction."

Rachel Carson

biodiversity

Glossary

Biodiversity	The variety of all living things and organisms, and the ecosystems that they form.
Web of Life	All living things are connected in a fragile and complex balance. The 'web of life' is a term used to describe the amazing and interconnected diversity of all living things, the ecosystems upon which they depend, and their interdependence on each other.
Threatened species	In NSW threatened species, populations and ecological communities are protected by the NSW Threatened Species Conservation Act (with the exception of fish and marine plants). These species are listed on the schedules of the Threatened Species Conservation Act. In NSW 1,035 individual species, populations and ecological communities are threatened with extinction.
Ecological Community	A description of all of the organisms living within a specific habitat
Local Natives	Australia's a big country, with a diversity of plant life. Plants sold as 'native' may be indigenous to Western Australia, or tropical Far North Queensland. Local natives are found growing wild in your area, and are best suited to your soil and climate, providing food and shelter for wildlife.

References

1 NSW Department of Environment and Climate Change NSW Threatened Species (viewed November 2008)

The most important thing we can pass on to our children is our enthusiasm and our sense of wonder at being in nature and experiencing, engaging in and sharing the natural world with our children.

- Richard Louv, author of "Last Child in the Woods" on Nature Deficit Disorder



Super Challenge

Journeys Towards Sustainability

In the Beginning....

Is it possible for ordinary people in their own homes to make a real difference to improving our environment and saving resources? Sustainable Illawarra certainly believed that this could be achieved and set out to support 150 households from across the region to achieve their own sustainability goals.

The lucky Super Challenge households came to be a part of the program by responding to a call for Super Challengers placed in local newspapers, on the Sustainable Illawarra website and on the radio. The selected households identified three sustainability goals they would like to achieve over the 12 months of the program. Participants were encouraged to consider all aspects of sustainable living in their home – water and power usage, goods and services, waste disposal, food choices and preparation, packaging, backyard biodiversity and transport. By far the most popular sustainable living goal was to starting growing veggies in the backyard!

Super Challengers were supported by Sustainable Illawarra with a \$200 sustainability starter kit containing eco-friendly goodies of their choice, such as compost bins, reusable shopping bags or vouchers for veggie seedlings and fruit trees. Participants were encouraged to take part in the many Sustainable Illawarra workshops and events being held, and were invited to special 'Super Challenge' events, where they could meet and network with other Super Challengers. They also completed three surveys to help them track their progress, and have cause to celebrate their achievements! Stories of the Super Challengers journeys towards sustainable living were showcased on the Sustainable Illawarra website, in local newspapers, and even in an honours thesis undertaken by a student from the University of Wollongong.

This chapter honours the achievements of the Super Challengers. It presents their experiences and lifestyle changes as they attempted to live with greater concern for the environment and an increased awareness of how their everyday lifestyle choices can help create a brighter, more sustainable future for the Illawarra.

"A very comprehensive program, providing lots of opportunities to participate and get support to achieve environmental goals."

Super Challenger



Super Challenge

Journeys Towards Sustainability

Showcasing sustainable living in the suburbs

Treating all your sewage on-site, managing a permaculture garden and being self-sufficient for both energy and water isn't something you normally associate with a suburban house. Nor is the proposed aquaponic system that provides yabbies, perch and vegetables, while cooling the house at the same time. But tucked away amongst a sea of standard 'McMansion' houses there it is – a showcase of sustainable suburban living on the outskirts of the greater Sydney region.

"We set out to build a modern, comfortable home packed with eco ideas, designs and technologies," Scott Rowe explains enthusiastically. At first impressions, his home doesn't look much different to any other house in this new residential area in Shellharbour.



Scott gestures proudly towards his roof. "We've always said that the answer is on our roof. Our rooves can provide the solution to the energy and water crisis our country is facing. Up there sits a 300 litre solar hotwater tank, a 1kW solar power system soon to be upgraded, and guttering that feeds a 40,000 litre underfloor water tank".

The average four person house in NSW guzzles through about 1,000 litres of water a day. The Rowe's family home, with Scott, his wife Karen, and their two young children, aren't even connected to the mains water supply.

"With smart design and clever use of technology, we've been able to create a sustainable home without any sacrifice in living standards at all. Scott smiles as we enter the lounge room, with a large flat screen LED LCD television in the corner. "Actually I'd say our living standards are as good as your average household, and without the stress of expensive energy and water bills!"

Scott's has an intriguing set-up to maintain a comfortable temperature in his home. As well as featuring solar passive design that takes advantage of natural heating and cooling from the sun and wind, Scott has installed ducting into the roof above and into the garage below.



Super Challenge

Journeys Towards Sustainability

The small 18 Watt fans draw hot air out of the ceiling in winter and cool air into the home from the sunken garage in summer. Strategically placed aquaponic tanks in their design will also cool the air drawn into the home. “The aquaponics system is valuable not only for cooling, but as a growing space for vegetables, fish and yabbies for us to eat,” Scott adds. “We’ve also designed an extensive permaculture garden in the backyard to provide additional food.”

All this means that while a similar household uses an average of 25kWh of electricity produced from coal fired power stations each day, the Rowe’s use an average of 10-12kWh power that is further offset by solar power generation.

Indeed it’s this integration of both ‘high tech’ sustainable technology and ‘low tech’ practices like growing food and composting, which has the Rowe’s house turning heads.

It was the GreenTECH Australia ‘Green Build, Design and Technology expo’ in 2005 that inspired Scott and his family to pursue their dream of building an eco home. For their efforts, the Rowe’s eco home was shortlisted as a finalist in the GreenTECH Australia 2008 Eco House of the Future Competition.

It was however, the more humble beginnings which initially sparked their interest in green living. “In our previous home we installed a water tank when the water restrictions kicked in, so we could still wash our car. We became so interested in monitoring the level of water in the tanks, it sparked us to think about sustainable living in broader terms.”

With his background in applied science, and horticulture, Scott set about designing their dream home. While the Rowe’s eco home sits on a 1370 square metre block, a house like theirs could be built on any suburban block.

“People often feel overwhelmed by the scale of our environmental crisis and the solutions required. But the last thing we want is for people to visit our place and leave thinking ‘that’s just too much – I could never do that.’ We want people to leave feeling empowered to know that if they make just one change – start to compost their food scraps, or get a small water tank - then they’re helping us all move towards a sustainable future.”



Super Challenge

Journeys Towards Sustainability

The Rowe's don't even pay for connection to the sewer system. They've followed in the footsteps Michael Mobbs, who is well known in the sustainable design world for converting his terrace house in inner Sydney into a self sufficient home, where not even the sewage and stormwater leave the property.

"Managing your own black water treatment system's not everyone's cup of tea" Scott admits. "But we wanted to show it's not as intimidating as it sounds, and it is possible and safe, even in suburban and high density city areas."

The Rowe family open their house to the public on National Sustainable House day every year, and are all too happy to share their experiences of designing and living in their eco home. To find out more about Scott's eco home visit www.ecohomeshellharbour.com



"Often houses which aim to showcase sustainable living over look the fact it's the food we consume which is the largest contributor to our ecological footprint. By producing a significant amount of their own food, the Rowes are doing more for the environment than installing solar panels. But it's the way the Rowe family has embraced all of these green practices and technological solutions, that makes their house such an outstanding show-case of environmentally friendly living in the suburbs."

Alison Mellor- Sustainable Illawarra project Manager



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Vanessa Ford and family on the right road

Vanessa, her husband and two young sons live in the house they purchased a few years ago. Their story is typical of young parents setting up their first home and faced with the need for almost immediate renovations. They purchased the house from an elderly lady who had organised the property to suit her own needs. Much basic work needed to be completed to change the interior to suit their own lifestyle. More natural light was needed and so the living areas were opened up and a new kitchen installed. This also created more space and made it possible for Vanessa to monitor their children whilst she is working in the kitchen.

“We also replaced the carpet in the bedrooms and had the floors polished in the living areas, repainted most of the walls and put in a lot of extra storage. Renovating the house took a lot of our time and energy and several sustainable projects had to be put on the back burner for a while. Although to keep our energy bills down we did a few minor things like installing ceiling fans, insulation in the roof and blackout curtains. These changes have really improved how the house is heated and cooled. Our one major sustainable change was to install a solar hot water system which we find very efficient and cost saving.”

Outside further planned projects include the installation of a rainwater tank, planting of a veggie garden and more fruit trees. “We plan to grow some of our personal favourites, including some herbs.”



“Vanessa was honest enough to confess: “On the first day, I was standing under the shower thinking how wonderful it was to have all this free hot water, when my conscience kicked in and I remembered that I was supposed to be conserving the water as well!”

Vanessa Ford



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Footsteps of the Finlay Family

David Finlay, his wife and three young children are great examples of a family determined to reduce their use of non-sustainable resources. David explained that he had always been 'green at heart' and had a strong belief in responsibility and stewardship of resources.

"I have always been curious about manufactured items, and where the component parts originated and how much energy they took to manufacture. If we purchase a new television set, how many non-renewable resources were used up before the finished item comes into our home. Even at their young age, I often challenge my children with such questions."

David and his wife decided to investigate the possibility of growing some of their own food. They had no previous experience and turned to mentors for advice. They had relatives who were willing to share knowledge and know-how. And so a basic vegetable garden was established. Soon, however, David's love of organisation led to modifications to the system.



"We decided to grow from seed – but at first this was time-consuming and led to several failures. We'd come home from work and forget to water the seedlings and they'd wilt and were often unrecoverable. So I set up a system, a mini-nursery of plastic trays, each with 198 cells. Then I installed timed spray-mist irrigation. There was no more need for constant attention - and sometimes - 'Oh, I forgot to water them – hot day and dead seedlings.' The seedlings loved the system and thrived, with no losses.

In winter, we move the seed nursery to a position near a brick wall, to encourage earlier germination. Sure, there was a financial outlay in establishing the system but now it is in place, it will function indefinitely. It was well worth the investment."

The family's next venture was in backyard chooks. Once again there were initial outgoings but advice was available from other Super Challengers and once set up, there were many benefits. Apart from providing food, there was reduced waste, as food scraps were recycled, and the children had the opportunity to learn about the care of other creatures.



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“We Don’t Do Plastic” - The Story of the Kirk-Downey Family

On one occasion, Tracey and her daughter were at the supermarket checkout. Tracey’s friend was behind them in the queue and they were enjoying a quick chat. Her turn came and the checkout girl was packing the groceries when her daughter called out loudly: “We don’t do plastic!” and Tracy realized that she had been so busy talking, that her green bags were still in the trolley.

After joining the Super Challenger Programme, one of Tracey Kirk-Downey’s first experiments was with composting. Though already familiar with the waste management system in theory, it was involvement in Sustainable Illawarra that triggered action.

“I guess I’m addicted to composting now. It’s really exciting to see the whole natural system at work, with so very little effort from us. The worms and microbes are busy doing the job!”

Tracey was surprised at how much of their kitchen waste no longer goes into the garbage bin. She admitted that previously they used to ‘trawl neighbours’ bins looking for spare rubbish space!

Even the family’s pet is doing her part, providing guinea pig poo and used litter for the compost bins.

Tracey commented that as they started to make adjustments to live more sustainably in the home, it was as though each change led to another. Separating compostable rubbish from the rest of their waste materials made for greater awareness of just how much non-organic waste comes into the average home and is eventually discarded and ends up in landfill.



“So much food comes in unnecessary packaging – polystyrene trays under supermarket meat, for example and even under fresh fruit and vegetables. We now try as much as possible to buy meat from the local butcher and fruit and vegetables from markets and I cook from scratch as much as time allows.”



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Tracey made some interesting points about plastic bag usage, pointing out that many of us had for years re-used the bags around the home, for holding rubbish or to carry wet bathers home from the beach. When it was realized what an environmental hazard they created – “We had to wean ourselves away by finding other ways to deal with messy or wet situations.”

Now the family car holds a supply of green bags. Once again, new habits had to be formed, remembering to take the bags from car to supermarket or store. Tracey gave herself a personal punishment if she forgot the bags – taking the groceries unpacked from check-out to car and then packing them into the green bags herself.

This led to a discussion about how involved her children were in sustainability in the home. Tracey’s children attend Mt St. Thomas Primary School, which strongly encourages understanding and practice of sustainable and environmental concerns. Such lessons learned at school certainly seem to carry over into the home. The children are careful to turn off taps, to switch off unnecessary lights and to dispose of waste carefully.

Some final thoughts from Tracey – “Set yourself realistic goals, have a go and do the best you can. Above all, don’t beat yourself up when you don’t succeed at meeting your goals for every minute of the day.- it is bit like a diet, if you fall off the wagon for a day or so, don’t give up –just get back on track!”

“There is no doubt that our children learned a lot from our involvement in the Sustainable Illawarra project but we also learned much from our children about ways in which to tackle environmental problems.”

Super Challenger



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Once upon a time in a Magical Food Forest....

Alison Mellor and Richard Walter purchased a weatherboard cottage with a large garden, typical of the post-war 1950's period. Passionate about sustainable living, they took up the challenge to see how far it could be achieved in the suburbs of Wollongong. Their plan was to retrofit the house and to develop a food forest, making their lifestyle as sustainable as possible and to achieve this whilst both working fulltime and with limited capital.

They did have two advantages. Both had knowledge of sustainable principles and experience in organic gardening, gained during a year spent working on organic farms and later inspired by the PCYC Community Garden in North Wollongong. They also had supportive families, willing to help out, especially in the house renovations.

They took time to plan carefully, looking at every detail of their projected changes, seeking information; sourcing materials and plants. Once they started, the work often seemed chaotic, but Richard explained that at all times they knew where they were heading and had a plan for how to reach their destination.

Inside the house, the carpet was removed to reveal the timber flooring; an old air-conditioner was taken out; a wall was opened up between the kitchen and lounge, to let in more light and enable more social interaction; a skylight was fitted in the bathroom; the roof and some walls were insulated; a solar HWS was installed. Finally, all interior walls were repainted using BioPaint. They changed their electricity supplier to 100% Green Power.



Photo by Dean Dempsey- Cloud Face Photography

The changes to the house seem extensive for only one year of occupation but the garden transformation was even more remarkable. The block had a wide concrete driveway leading to the garage at the rear of the house; there was a swimming pool and lots of open lawn. These were all removed to make way for the food forest. Working on permaculture principles, the gently sloping block was sculpted to form swales to control and conserve water - a first priority.



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Nothing was wasted. Even the old driveway concrete was used in large pieces to form pathways. Green manure crops were planted to add nutrients to the soil. Then the planting began - a wide range of vegies and herbs and over 100 fruit trees! A composting system was established and a worm farm. Water tanks hold 18,000 litres of water for garden and laundry. Future plans include a chook and duck house. It seems impossible that two people, even with family help, could accomplish so much in so short a time. Alison explained: "We worked every spare hour we had, evenings and all weekends. We always knew that the first year would be the most intensive, so we were prepared for the effort."

Most of us would be daunted by the task and the sheer physical energy needed to see the project through. But Richard and Alison inspire us, not to follow directly along their path but to take perhaps a few short steps. Richard's final comment: "Every act towards sustainable living is valuable."

'Our planetary home should be so regarded. Efforts to safe guard and cherish the environment need to be infused with a vision of the sacred'

UNION OF CONCEREND SCINTIST, *'Preserving and cherishing the earth'*



Super Challenge

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The Dreams of the Young

One of the most absorbing and rewarding aspects of the Super Challenge project involved children. They brought to the program a fresh perspective and a spontaneous awareness of the natural environment and our impact on it.

They related to the Sustainability Challenge with enthusiasm and a genuine concern. Their responses were innovative and creative and continually surprised us all.

We decide to follow up on this reaction from parents by looking at the special qualities that children bring to sustainability in the homes and then seeing examples of their thinking in practice in actual home situations.

Children react to sustainability issues in an emotional way. They really care. It is an instinctive reaction and they want to be a part of the solution. Children love challenges. They find them stimulation and exciting. Their minds open up and possible solutions to problems pour out. Some of their ideas may be unrealistic but amongst their thoughts will be some solutions which are practical and really work.

Children's curiosity endless and insatiable. They love to find out new information and will store facts in their memory at an amazing rate. Even very young children want to know far more than we realise and become very excited about the answers to their questions.



"Our ten year old agreed to look after all the garden tools. We showed him how to protect them by oiling the metal parts against the rust and how to store them correctly. He became the official 'tool man'. He sanded and painted all the handles bright yellow to avoid loss, and went crook on me when he found a trowel I had left on the compost heap."

Super Challenger



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Sustainability from the Senior Citizen Perspective

Talking to Senior Citizens about their lifestyle and attitudes to sustainability in the home provided a new perspective. As we listened to their stories, some gems of wisdom were shared, as they explained the ways in which they conserve resources and use practical, workable solutions to many of our current challenges to living with a low impact on the environment.

It soon emerged that, for many senior citizens, sustainability has been part of their lifestyle for many years, perhaps since childhood. There was seldom any money to spare and so ingenuity had to replace over-use of resources. Several of the people interviewed made the point that ecology, per se, had not been their main impetus. But now that the need for sustainability was becoming so vital, they were able to assess their lifestyle and consider just how they managed to live with such a low environmental footprint. As the senior citizens explained how they used resources in their own homes, many sound ideas emerged. Basically, every resource was used wisely and carefully and nothing went to waste. Recycling and creativity were laced before new purchases. As far as possible, their home was a closed circle, with every resource used to its full capacity. They are cost conscious, conservation minded and creative.

They made several points about the unnecessary cost that can occur in acquiring and caring for clothing:

"I Op Shop, not because I feel deprived at not buying from retail stores, but because it is the sensible way to acquire an attractive wardrobe that suits my needs. Today's families, in my opinion, wash their clothes too often. This all takes time and uses energy and the garments wear out sooner. Sometimes hanging clothes on the line for a while to 'air freshen' is all that is needed."

Food purchase, preparation and disposal of waste were also discussed. The pantry principle was used by all our responders. It was their sustainable food store. Basic staples were always ready at hand to make nourishing meals without having to go to the supermarket too often. Not making a list before going to the shops would usually result in extra purchases.

Cooking from scratch was practiced as a basic routine. Though acknowledging that today many people have limited time for food preparation, our seniors maintained that with a little forethought, home cooking was still possible.



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“What about a slow cooker? It does not take long to put in the basic ingredients and then that is all you have to do. Depending on family size, you may even be able to prepare enough for two meals.”

Using uncomplicated recipes was also a recommended habit. “You don’t really need ten ingredients to make a great casserole or a tasty dessert.”

Doing things for yourself was a high priority. They challenged other households to make a list of all the jobs and responsibilities around the home, which are performed by paid workers, that is, contracted out. We might argue that this saves us time but it was pointed out that outsourcing work, apart from the financial cost, takes away your control of the jobs and so you are not aware of the wasteful products being used, the environmental impact and use of power and other resources.



Doing things for ourselves then raised the question of repairing items, making do and recycling resources for other purposes. The valid point was made that unit living often made this difficult with no free space for DIY projects. Nevertheless, every broken item was carefully checked to see if it could be saved.



Conserving one’s personal health was considered a part of sustainability. Good diet, adequate exercise and regular health checks were seen as a means of avoiding costly drugs and treatments, of enabling older people to stay living in their own homes and continuing their sustainable living habits. Our senior citizens were sympathetic towards the extra problems faced by young people in today’s world and praised the younger generation for their environmental awareness and responsibility as they make adjustments to live with greater sustainability in their homes.



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Be inspired...

The stories that we have shared with the families and individuals that have participated in the Super Challenge event are an inspiration to everyone that has been thinking about taking on the challenge, or has already taken small step or even large bounds in their lives already. In reflection it has taught them that making changes can be daunting, but it has been a great networking exercise where like minded people were given the opportunity to share their experiences with each other and learn from them.

As our Super Challengers become more involved, through events organised by Sustainable Illawarra, they realised how much support and information was available to help them make changes. They met people who had already begun to live more sustainably and were willing to pass on practical advice. Such contacts also helped reinforce their own early efforts.

"We loved it because once we started thinking 'sustainability' for our goals, it became natural to think that way about so many other things too."

Super Challenger

Our Super Challengers encourage everyone to try things out of their comfort zone, to be willing to experiment and try alternatives. They felt that many solutions came from being flexible and willing to adapt. All changes, even small ones are extremely important in becoming sustainable at home. The Sustainable Illawarra team hope that by reading these inspirational stories of the Super Challengers, you too will be inspired to take the next step in your own journey towards sustainability.

