



**DDB<sup>o</sup>**

Each of us can  
take small steps  
to reduce  
global warming.

## the little green guide

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replaced one  
regular light bulb  
with a CFL,  
it would eliminate  
90 billion pounds  
of greenhouse  
gases - the same as  
taking 7.5 million  
cars off the roads.

# global warming: a problem with solutions

After years of debate, scientists now agree that we are indeed heating up the planet.

When we burn fossil fuels - such as oil, coal, and natural gas - to run our cars and light up our homes, we pump carbon dioxide into the atmosphere. This thickens the heat-trapping blanket that surrounds our planet, causing global warming.

The effects are devastating - melting glaciers, rising sea level, changing ocean currents, shift in weather patterns, irreversible alteration of the eco-system and the extinction of plant and animal life, to list but a few.

Unless we take corrective steps now to curb global warming, our way of life, our planet and our children are all in grave danger.

Each of us can play a positive role by making simple changes to our lifestyle. There is a lot we can do.

Read on to find out how you can make a difference.

“We have not inherited the earth from our ancestors.

We have borrowed it from our children.”





## is your car running efficiently?

A well-tuned car with properly inflated tyres burns less fuel (your mileage could improve by about 3%), thus reducing pollution and saving you money at the pump. Saving four litres of fuel, for instance, keeps about nine kilograms of carbon dioxide out of the atmosphere. If you have two cars, drive the one with better mileage.

## drive less

Less driving means fewer emissions. When you can, skip the drive. Make use of the public transport system, walk or bicycle. Besides saving fuel, walking and biking are good for you.

## plan your trips

Avoid making multiple trips by doing all your errands at once. Clubbing trips can reduce fuel consumption and toxic emissions. Your car also runs most efficiently when the engine is warm.

## slow down

Driving at 120 kmph uses about 13% more fuel than driving at 105 kmph. Rash driving means more braking and less efficiency.

## is there another way to get there?

Is it within walking distance? Can you carpool or make use of public transport? A 10% increase in the use of public transport would save about 540 million litres of fuel a year.

## don't warm-up

Unless the temperature is below freezing, you don't need to warm-up your engine. In cold weather conditions, you could warm-up for a minute. Gentle driving is also a good way to warm-up the car.



## tank-up at night

Spilled fuel evaporates and adds to air pollution. As far as possible, tank-up in the evening or night to reduce loss due to evaporation.

## maintain your car

A clogged air filter can increase fuel consumption by as much as 10%. Regular maintenance can extend your car's life and improve fuel efficiency.

## don't get stuck in traffic

Driving during peak hours means frequent use of brakes. This increases fuel consumption and accelerates wear and tear. If possible, avoid the peak hours.

## align/rotate your tyres

Wheel alignment and rotation of tyres at regular intervals extends the life of the tyres, keeps your car running efficiently and saves fuel.

## check your tyre pressure

Besides making driving extremely unsafe, under-inflated tyres drastically lower the mileage and increase wear and tear.

## shift to higher gears

In an automatic car, accelerate gradually to keep your car in a higher, more efficient gear. When driving a car with manual transmission, shift to higher gears as soon as possible.

## get rid of the roof rack

Removing your car's roof rack can increase your fuel efficiency. Unless you frequently use it, the costs are likely to exceed the benefits.



## buy a low-emission vehicle

When buying a new car, choose one that offers good mileage and is low on emissions. Car emissions account for nearly 33% of air pollution in the United States.

## use the vents

Air-conditioning increases your fuel consumption by as much as 20%. Rolling down the windows reduces efficiency too. So turn down the air-conditioning and whenever possible, use the vents.

## pool a car

Manufacturing and maintaining automobiles releases a lot of greenhouse gases. Pool a car with a friend or relative. Car pooling saves fuel, saves money, reduces traffic congestion and reduces emissions.

## switch it off

If your car is going to be idling for more than a couple of minutes (and this includes dashing off to the ATM), turn off the ignition. If this is not possible, at least switch off the lights and air-conditioning.

## avoid overloading your car

A 50-kilogram load in your car increases fuel consumption by about 2%. So make sure you're not lugging along unwanted stuff in your boot.



### replace incandescent light bulbs with CFL bulbs

Especially those that burn the longest each day.

Compact fluorescent light (CFL) bulbs are designed to produce the same amount of light as regular light bulbs, while using just about 25% of the energy. They also last ten times longer and give off 70% less heat.

Each switch you make helps clean the air, curb global warming and cuts down your electricity bill. Replacing just one 60-watt incandescent light bulb with a CFL will save you \$30 over the life of the bulb. The cost of a CFL bulb is higher, but the energy savings more than make up for it.

If every household replaced one regular light bulb with a CFL, it would eliminate 90 billion pounds of greenhouse gases - the same as taking 7.5 million cars off the roads.

Visit [www.energystar.gov](http://www.energystar.gov) for help with the wattage of CFL bulbs.

### turn it off

Switch off the lights when you leave a room. Turn off the air-conditioners if you're not going to be around for a while. Remember to turn off your television, video player, music system and water heaters when you're not using them.

Don't leave your computer switched on or on stand-by 24x7 just because you want it up and running instantly. The extra minute it takes the computer to boot up in the morning, does not drastically impact your lifestyle in any way - and you save energy. If one million people shut down their office computers overnight, we could eliminate up to 45,000 tons of carbon dioxide per year.

If you need to use your computer frequently or if you cannot shut down your system completely, turn off the monitor - you will save 60% of the energy used by the whole system.

Switch off your cell-phone charger after charging your phone. It is estimated that only 5% of the energy used by cell-phone chargers is used to charge phones. Which means a staggering 95% is being wasted when they're left switched on.

# conserve energy



## unplug

Even when you're not using electrical devices, they continue to draw energy. This accounts for up to 10% of household electricity usage. Unplug all the appliances (mixers, televisions, DVD players, computers, etc.) when not in use.

## buy energy-efficient products

Home appliances now come in a range of energy-efficient models. Replacing an old refrigerator or an air-conditioner with an energy-efficient model cuts down your energy consumption and electricity bills.

When shopping for a new appliance, find out how much energy it uses. Look for the Energy Star label on new appliances. Energy Star appliances meet strict energy guidelines and they keep utility bills low. Visit [www.energystar.gov](http://www.energystar.gov) for more information on energy-efficient products.

## switch to solar power

Electricity production generates greenhouse gases. Solar power is an eco-friendly option and it works with existing hot water and air-conditioning/heating systems.

## check your computer settings

Changing your computer's power-saving settings can decrease the amount of electricity it uses. Computers use up to 70% less electricity when you put them to sleep as compared to using a screensaver.

## check your A/C filter

Cleaning or replacing your air-conditioner filters at regular intervals increases its efficiency.

## conserve energy



### use less air-conditioning

Turn down the the air-conditioner at night. Keep temperatures moderate at all times. For instance, in winter, set your heater thermostat to just two degrees lower than what you need (lesser heating). In summer, adjust your cooler settings to two degrees higher (lesser cooling). This alone could eliminate up to 900 kilograms of carbon dioxide each year.

Adding insulation to your walls and attic can lower your heating/cooling costs by more than 25% by reducing the amount of energy you need to heat/cool your home.

### use air-conditioning efficiently

Keep the doors and windows closed when air-conditioning is on.

### cut down your electricity usage

Avoid the elevator on your way down, if you can. Take the stairs instead. Besides being a healthier alternative, it can cut down energy usage.

## grow more trees



Trees are an integral part of the natural atmospheric exchange cycle but there aren't enough to fully counter the increase in carbon dioxide levels caused by automobiles, manufacturing and other human activities. Slash-and-burn farming practices, intensive livestock production and logging have destroyed 90% of the native forests in the United States.

A single tree absorbs approximately one ton of carbon dioxide during its lifetime. Growing more trees and protecting forests is a big step on the road to curbing global warming.

It's important to plant trees that are native to your area because they neither require heavy irrigation, nor do they introduce pests.

## plant more trees around your home

Shady trees can drastically reduce the need to cool your home in summer, thus cutting down your energy consumption.

Certain varieties of trees can even keep you warm in winter. Deciduous trees shed their leaves when it's cold, allowing the sun's rays to function as a heater.

## consider bamboo the next time you're landscaping your backyard

Bamboo absorbs more carbon dioxide and generates 35% more oxygen than an equivalent stand of trees.

The background is a light green color with various patterns. There are several recycling symbols (three chasing arrows) scattered throughout. There are also various flower shapes, some solid green and some light green. The overall theme is environmental and recycling.

**Recycling a stack  
of newspapers  
only four feet high  
can save a tree.**

**Every ton of  
recycled paper  
saves enough  
electricity to power  
a three-bedroom  
house for a year.**

# reduce, reuse, recycle



## avoid products with excess packaging

Especially the ones that come with moulded plastic and other material that cannot be recycled.

## avoid individually packed items

Buying products in bulk/economy-size packaging will help reduce waste substantially.

For instance, buy one large bottle of water instead of many smaller ones. Or one large bag of chips instead of several smaller bags. Not only is this more economical, but you also help reduce waste. If you cut down your household garbage by 10%, you can eliminate about 600 kilograms of carbon dioxide annually.

## junk your junk mail

Eliminating unwanted mail is easier than you think. You can cancel catalog subscriptions, ask companies not to give out your address. Even if you recycle, reducing is always better.

## reduce your paper usage

405,000 trees are felled annually to produce the paper required to send everyone in America, their phone bills. You could save a lot of trees by going paperless with your bills.

Opt for online bank statements. Most companies that we deal with - cable TV, phone, electricity, credit cards - have an online statement/bill-payment option. It's easy, convenient and you'll save paper, envelopes, cheques, postage stamps and postage.

Paper accounts for more than 70% of office waste. Print out emails (or documents) and photocopy only if it is absolutely necessary. If possible, print/copy on both sides of the page before tossing it in to the recycling bin.

# reduce, reuse, recycle



## reuse paper

You could collect discarded sheets with single-side printing and use the other (blank) side to print out internal/personal documents. Or you could staple these sheets together to make a notepad and use it for your weekly grocery list.

## have a garage sale

Is your attic, basement or closet overflowing with stuff? Do you rarely use your gadgets? Consider selling them or exchanging them with your friends.

## use the library

Why buy a book you might read just once when you can borrow it for free? Most libraries have a good collection of books, magazines and music. If you do need to buy books, then buy used books whenever possible. You could also exchange books with your friends and sell the books you no longer need.

## share

Sharing reduces energy consumption and pollution from mining, manufacturing, packaging and transporting new goods. If you use your tent, ladder or video player just once in a while, consider lending it to others. Some communities have a shared tool shed. Or, you could team up with a friend to buy rarely used items.

## avoid disposables

Choose reusable products over disposables. Avoid using paper/plastic/foam plates and cups.

When eating out, choose to dine-in, rather than take-away. Coffee drinkers could consider investing in a reusable hot cup instead of opting for disposable cups.

# reduce, reuse, recycle



## say 'no' to plastic bags

Shops often provide plastic bags, even for just one or two items. If you do not need a bag, make sure that you tell them so.

Globally, we use as many as one million new plastic bags every minute at a cost of 8.8 billion litres of oil a year. Get into the habit of taking cloth bags to the grocery store. While there may be times when you would need a couple of extra plastic bags, it would be a whole lot less than before.

## reuse plastic bags

Avoid throwing away plastic bags unnecessarily. Take them with you when you go shopping. Reuse them for packing. You could also use them as garbage bags.

## recycle

Recycle paper, plastic, newspaper, glass and aluminum cans. If there isn't a recycling program at your workplace, school or in your community, start one. By recycling half of your household waste, you can save about one ton of carbon dioxide annually.

Examine ways to increase your recycling rate. Get your family, friends, co-workers, community and local businesses to recycle.

## buy recycled products

Producing paper, glass and metal products from recycled material cuts down energy consumption and greenhouse gases by as much as 70-90%, besides saving resources.

Every kilogram of recycled paper cuts down carbon dioxide emissions by 3.6 kilograms. Recycling a stack of newspapers only four feet high can save a good-sized tree.

Every ton of recycled paper saves enough electricity to power a three-bedroom house for an entire year.

Buy recycled paper whenever you can.

# reduce, reuse, recycle



## recycle unusual items

Did you know that electronics, batteries, ink cartridges and cell phones can be recycled?

Visit [www.greenerchoices.org/recyclingcenter.cfm](http://www.greenerchoices.org/recyclingcenter.cfm) to find out more.

## reduce electronic wastes

There are various environmental concerns about the production and disposal of electronic wastes such as CDs/DVDs and their packaging. CDs are non-biodegradable and pose a health hazard when they end up in landfills. In Hong Kong alone there are an estimated 200 million CDs in circulation.

### **Reduce the number of CDs that you use.**

If you're using CDs for data storage, consider using DVDs instead - you can store more data on a DVD, thereby reducing the number of discs you need. Buy CDs on spindles if you don't need jewel cases.

### **Use rewritable CDs.**

If you don't need permanent backups use rewritable CDs (CD-RWs) instead of CD-Rs. Reuse CDs by using the 'Write Session' or 'Multisession Disc' feature during the CD writing process.

### **Use reusable media.**

If the file sizes are small, use floppy disks, memory cards or portable USB disks/drives. Better still, use email.

### **Download your music on to portable players.**

By purchasing/downloading music online you can help conserve the oil consumed in transporting CDs to and from the music stores.

### **Rent audio/video CDs/DVDs.**

If you use CDs and DVDs primarily for music and movies, rent them or purchase used ones. It reduces the number of discs that need to be manufactured and disposed off. If you have unwanted music CDs, give them away.

There are some innovative uses of discarded CDs - drink coasters, Christmas tree decorations, etc.

Visit [www.essortment.com/recyclecd\\_rvhk.htm](http://www.essortment.com/recyclecd_rvhk.htm) or [www.make-stuff.com/recycling/cd.html](http://www.make-stuff.com/recycling/cd.html) for more tips.

The background is a light green color with various decorative elements. There are several stylized flowers in different shades of green, some with white centers. There are also several recycling symbols (three chasing arrows forming a triangle) scattered throughout. The overall theme is environmental and water conservation.

**A tap leaking at  
the rate of one  
drop per second  
can waste around  
10,000 litres of  
water annually.  
Leaving the tap  
running while  
brushing can use up  
20 litres of water.**

save water



## install low-flow showerheads

You'll use half the water without decreasing performance. Low-flow showerheads can also save a lot of hot water and about 160 kilograms of carbon dioxide yearly.

## turn down the heat

Turn your hot water heater down to 120°F (about 48°C) and see hot water costs go down by as much as 50%. For every 10 degrees that you lower your hot water heater, you can reduce your energy consumption between 3-5%. This lessens emissions produced by your energy provider and also helps extend the life of your water heater.

## use insulation

Wrap your hot water heater in an insulating blanket if it is more than five years old. This additional insulation will help lock in the heat and reduce the need to keep reheating the water, thus reducing your energy use by up to 9%.

## use less hot water

Wash your clothes in warm or cold water to reduce your use of hot water and the energy required to produce it. This alone can save at least 230 kilograms of carbon dioxide annually in most households.

## fix leaking taps

A tap leaking at the rate of one drop per second can waste around 10,000 litres of water annually. Make sure that leaking pipes or taps are fixed immediately.

## check your dishwasher settings

Use the energy-saving settings on your dishwasher. Let the dishes air-dry.



## turn it off

When you brush your teeth, you could be using more than 20 litres of water if you leave the tap running.

So while brushing your teeth, shaving, shampooing the dog or washing your car, turn off the water until you actually need it for rinsing. Also, turn off dripping taps. You'll reduce your water bill and help conserve a vital resource.

## use the shower

Avoid bathing in the tub and keep your showers short.

## fit existing taps with flow restrictors

This drastically reduces the amount of water flowing through the tap while increasing the force with which the water passes through.

## use your dishwasher/washing machine efficiently

Run your dishwasher or washing machine only when you have full loads. Half loads use the same amount of water.

## avoid washing dishes under a running tap

Instead, use two basins – one for soapy water and the other one for rinsing.

## avoid rinsing fruits/vegetables under a running tap

Use a bowl instead and reuse the water in your garden.

save water



## don't use running water to thaw frozen food

Take it out from the freezer and leave it in the refrigerator overnight or use the microwave instead.

## harvest rainwater

This can then be put to a variety of uses such as washing clothes, washing the car, watering the garden, etc.

## avoid watering plants during the day

Water evaporates faster during the day. Water plants at night or early in the morning.

## use water sensibly

Don't use a hose to wash your car. Instead, use a bucket.

Use a broom to sweep away leaves rather than washing them away with a hose.

Do not discard water that you can use in your garden. For example, place a bucket under a dripping air-conditioning unit and use what you collect to water plants.

go organic



## switch to organic produce

Besides being good for you, organic produce also helps fight global warming. Organic farms capture carbon dioxide from the air and trap it in the soil.

## avoid harsh cleaning products

Most cleaning products we use, besides being way too harsh, are petroleum-based. So by switching to natural products you not only make your house less toxic, you're using less oil. For instance, you could use baking soda, vinegar or lemon to sparkle your kitchen sink. Also, there are many brands of eco-friendly cleaners available in the market.

## compost everything

Not only does composting kitchen and yard waste invigorate soil, but it also reduces methane gas emissions. Composting serves as a kind of carbon sink, storing carbon in the soil instead of in the atmosphere.

## become a vegan

The international meat industry generates roughly 18% of the world's greenhouse gas emissions. If you gave up beef once a week for a year, you would help save over 30 kilograms each of animal feed and topsoil and about 182,000 litres of water.

Grain production for animal feed requires transportation (fossil fuels), farmland (deforestation) and extensive use of pesticide. Also, livestock produces methane - a harmful greenhouse gas, 21 times more potent than carbon dioxide.

## minimise waste



## avoid food wastage

Food/grain production requires vast farmlands (which means massive deforestation), water, electricity, fuel, pesticide and a host of other resources.

An average family of four wastes food worth \$600 a year. Avoid preparing excess food at home or ordering in excess at restaurants. Besides being a waste of money, food waste is a colossal waste of resources which could have been utilised better.

## reuse and help reduce garbage

Transporting and incinerating garbage releases carbon dioxide. Landfill garbage also produces methane.

Reuse. For instance, reuse wasted printer stationery or plastic bags as described earlier.

# spread the word



## educate your community

Share information about recycling and energy conservation with your friends, neighbours and colleagues.

## support the cause

Support measures at the local, state and national level that:

- Make automobiles go further on a litre of gas
- Accelerate the use of clean, renewable energy sources such as solar and wind
- Increase energy efficiency and conservation

## encourage others to conserve

Politicians and policy makers can have a dramatic effect - positive and negative - on climate change. Let them know that you care. Encourage them to enforce policies that are good for the environment.

## be pro-active

Find and report ways to reduce waste and inefficiencies in your job, whether you work in a restaurant, factory, farm or office.

## practice voluntary simplicity



### less is more

Many people find voluntary simplicity to be a fulfilling and an environmentally kind way to live.

For example, switch to non-aerosol/CFC-free sprays. Aerosol sprays release CFCs into the atmosphere which eat away the earth's protective ozone layer thereby exposing us to the sun's harmful UV rays. Avoid aerosol cans that do not carry the ozone-friendly sign.

Swap ideas such as these with others.

# acknowledgements

Compiled and designed by Pravin Amudan with inputs from the following sources:

- [www.liveearth.org/crisis\\_solutions.php](http://www.liveearth.org/crisis_solutions.php)  
(The Live Earth Global Warming Survival Handbook)
- [www.liveneutral.org/co2\\_reduction\\_tips](http://www.liveneutral.org/co2_reduction_tips)
- [www.worldwise.com/reccdsanddv.html](http://www.worldwise.com/reccdsanddv.html)
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(The Environment Society of Oman)
- Times of Oman – Thursday Magazine  
(March 20-26, 2008; page 22)

Special thanks to Eihab Maqbool Al Saleh (OHI Group of Companies), George Thomas (Giffin Graphics), R. Prabakaran and Senthil Nathan (Oman Printers and Stationers), Vinu George, Nandita Divakaran, Badr Al-Qassabi, Salim Al-Ajmi, Mariam Al Ghafry and Dhiyab Al Maskary.

Kudos to The Environment Society of Oman (ESO) for initiating the Recycling Drive in Muscat. Founded in March 2004, ESO is a non-governmental organisation that aims to help raise awareness about various environmental issues.

Those interested in joining ESO or knowing more about its projects and activities, visit [www.environment.org.om](http://www.environment.org.om)

Produced in the Sultanate of Oman by  
Advertising & Publicity Co. LLC (DDB Oman),  
P.O. Box 889, P.C. 100, Muscat, Sultanate of Oman.

Printed by

Oman Printers and Stationers Ltd. Co. LLC.

Printed on 100% recycled paper from Arjowiggins (Conqueror Smooth/Satin: 100% Recycled Wove - Brilliant White - Recycled 160g).

To keep the ink consumption during the printing process at a minimal, this booklet has been designed and printed in a single colour with 70% tint.

This booklet is available in English and Arabic. For more copies, email [thelittlegreenguide@yahoo.com](mailto:thelittlegreenguide@yahoo.com)

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MM/4/1343/2009



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Support the cause and spread the word.