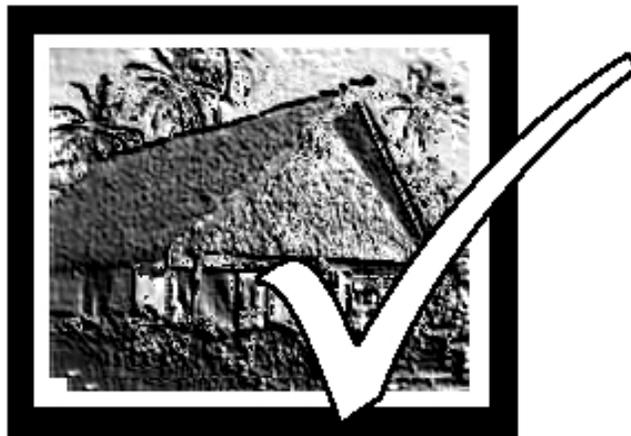


Making Small Hotels and Resorts Environmentally Sustainable: A Simple Checklist for Fiji Operators

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INTRODUCTION

This guide is designed to provide simple ideas for actions that you can take when setting up and operating a small hotel or resort that will make it simpler for you to save energy and reduce damage to the environment. If you require more detailed information, there is a list of publications and organisations you can contact at the back of the booklet.

There are eight main subjects in this guide:

- 1) Construction and Building Design
- 2) Saving Energy
- 3) Saving Water
- 4) Reducing Rubbish and Litter
- 5) Reducing Pollution
- 6) Managing Gardens and Landscapes
- 7) Choosing Suppliers and Contractors
- 8) Involving Staff and Local Communities

There is also an appendix with some design and construction tips.

Most of these guidelines are simple to follow and can help you take the initiative without having to rely on outside help to begin.

Why go Green?

The protection of our environment is the greatest challenge of our generation. It is a challenge in which the tourism industry has an important role to play.

Visitors to the South Pacific expect to be in clean and beautiful surroundings. Dirty beaches and littered roadsides destroy the image of our country and do not encourage people to come back. Many tourists are now very educated about environmental issues, and do not want to stay in places where these are not considered.

Hotel and tourism organisations around the world are taking action; here in the Pacific we need to work even harder to create good environmental management to encourage tourism, and to run our businesses simply and cleanly.

Going Green helps you to:

- Reduce running costs
- Improve customer loyalty
- Improve the image of your operation
- Compete better within the tourism market
- Improve relationships with staff and the local community

The issues:

1. CONSTRUCTION AND BUILDING DESIGN

A lot of damage can be caused during the building phase of a project – there is not much point in planning an environmentally friendly resort and then destroying your environment during the building of it. Environmentally sustainable planning starts before construction. Designing buildings with an environmental start will avoid many problems later on.

2. MINIMISING ENERGY USE

More efficient use of energy and fuel reduces air and water pollution, and also keeps your costs down – it makes sense all round! Many hotels waste a lot of power because they have never looked closely at how it is being used.

3. MINIMISING WATER USE

Water is a scarce resource on many Pacific Islands, and water conservation should be a very important environmental goal. Water is scarce on many outer islands, and expensive on the main ones. Also, fresh water running into the sea from hotel drains can kill corals and impact your coral reef.

4. MINIMISING RUBBISH AND GARBAGE

Rubbish and litter is a huge problem in the Pacific. It can totally spoil a tourist's stay, ruins the natural look of the environment, and often causes harmful pollution. Waste disposal is a major problem, especially in outer islands, and needs to be properly and seriously managed.

5. MINIMISING DISCHARGES AND EMISSIONS

All hotels and small resorts produce a number of discharges which have the potential to pollute air, land and water.

6. LANDSCAPE MANAGEMENT

Gardens and neat landscapes are important to hotels and resorts. However, too many times people cut down the local trees and plants, and bring in plants that are not native to the area.

7. SUPPLIERS AND CONTRACTORS

As well as your own environmental management, you must look at who you buy your products from. If you are buying from firms that damage the environment, you are partially responsible for the damage they do. Look for firms who have good environmental management policies of their own.

8. STAFF AND LOCAL COMMUNITIES

The resort environment cannot be separated from its surrounding environment. You cannot keep your grounds clean and beautiful if the area around you is polluted and littered. Therefore, it is in the interests of all operators to take part in efforts to improve the surrounding local environments and to educate and assist the local communities to make their own improvements.

HOW TO DESIGN YOUR PROGRAMME

Go at your own speed

Although most of these suggestions are very simple to put into place, you cannot expect to suddenly become “Green” overnight. Be prepared to make small changes and developments, so that you can manage them easily and keep them running over a long period of time. It is important to manage it at a pace that is right for you and your staff.

Start at the beginning

If you are building a new hotel or resort, you can use these guidelines in your design and start off on the right foot from the very beginning. If you are already operating, or thinking of altering existing buildings, but want to make your project more environmentally friendly than it was originally, look over what you already have, and then slowly make changes as it becomes practical. Move slowly towards your ideal – every step you take is an improvement.

Begin at the top

Without commitment at the top, there is little chance of success. The hotel manager or owner must be fully committed to the ideas, and pass that commitment on to the staff. It is a good idea to appoint a “Leader” or “Champion”; somebody who is already interested or knowledgeable about environmental issues. He or she can provide the energy and make sure that everyone understands and keeps working on the new ideas and plans.

Plan your actions

Look carefully at what you want to do, make a list of the problems that you can see, and plan the order in which you want to do things. The checklists contained in these guidelines will provide you with things to consider and the actions you can take. Some actions can be taken at once, with immediate benefits, others may require some money or time investment.

An initial plan could include the following:

- Look at what you have now, or what you had planned
 - List the ways in which you could improve this according to these guidelines
Make two lists – one that could be done for no or very little cost, and one that would need money or time invested
- List the issues of concern and decide which of the actions are most urgent and need to be done first
 - List the things you would have to do to make the changes happen
These could be changing the ways things are done, buying new equipment, staff training, etc.
- Decide who will be in charge of making the changes happen
- Set some definite targets or deadlines by which to have things done

MAKING IT HAPPEN

Once you have made your plan identifying the actions you want to take, and a rough timeline to do it all, you need to make sure that everyone involved understands and is committed to your aims and plans. This should not be taken for granted; changes in routines and introducing new ways of doing things can sometimes be a problem (sorting rubbish, minimising water use, using new cleaning materials, etc., might be resisted)

Train your staff

All staff need to have the programme explained carefully to them, and will probably need on-the-job training for new products and routines. Encourage the staff to become involved and to make suggestions for improvements. They often have a better idea of small changes which may be needed.

Keep the staff informed of progress; for instance put up water or electricity consumption results on staff notice boards. Leadership and support is vital. The manager or the appointed champion must be completely involved especially in the early days.

Review your progress

Reviewing progress will be the only way that you can determine whether or not your plan is being successfully implemented and your aims are being met. To review progress you will need to monitor - for instance energy and water should be monitored on at least a weekly basis to identify where energy or wastage is occurring.

Especially in the early days when difficulties are likely to arise, it may be important to schedule regular meetings with staff to review progress made and help sort out problems as they arise.

CHECKLISTS

1. CONSTRUCTION AND BUILDING DESIGN

WHAT TO DO	HOW TO DO IT	CONSIDERATIONS
<i>Protect your reef and beach</i>		
Prevent damage when landing building materials	<ul style="list-style-type: none"> ✓ Do not allow boats to anchor on coral areas ✓ Float materials in at high tide, instead of dragging at low tide 	<ul style="list-style-type: none"> ⇒ Identify suitable landing area and channel where boats can land without coral damage ⇒ Inform all boat captains ⇒ Mark channel with buoys
Do not build jetties without proper advice	<ul style="list-style-type: none"> ✓ Where possible, do not build jetties at all. Essential jetties should be floating docks, or wooden piles, not solid rock. 	<ul style="list-style-type: none"> ⇒ Jetties change the ways currents flow and can result in total loss of beach sand if wrongly placed
Do not allow sand and mud to run onto reef during digging	<ul style="list-style-type: none"> ✓ Build at least 30-60m back from the high tide mark. ✓ Do not mix concrete on beaches. ✓ Leave high ground or a strip of vegetation between the digging area and the coast, or erect barriers between your excavations and the sea. ✓ Do not construct earth roads close to shore or on steep angles ✓ Do not build on steep slopes 	<ul style="list-style-type: none"> ⇒ This will also help to reduce coastal erosion and sea wall problems ⇒ Run off will choke corals ⇒ Do not make your barriers out of the dug-out sand, as this will add to the problem – erect wooden fences or woven coconut walls ⇒ Seal roads, and have drainage that carries water away from the coast ⇒ Can cause soil erosion

WHAT TO DO	HOW TO DO IT	CONSIDERATIONS
<i>Preserve native trees, plants, wetlands and mangroves</i>		
Avoid filling in or altering the course of wetlands and mangroves	✓ Construct around features or choose alternative sites	⇒ Important habitats will be destroyed and flooding may increase
Keep your trees	✓ Do not clear all trees during construction ✓ Retain and modify original vegetation around site	⇒ The trees will protect against coastal erosion
Protect your plants	✓ Store building materials in one place not several spots ✓ Provide well marked paths ✓ Set one place aside to mix concrete	⇒ Plants underneath building material piles will be killed ⇒ This minimizes damage ⇒ Mixing concrete at random spots kills plants
<i>Situate buildings to minimise damage to them from environmental factors</i>		
Set hard structures back from beach and shoreline	✓ Build at least 60m back from the beach	⇒ This minimizes damage from storm and coastal erosion
Elevate structures in flood-prone areas	✓ Piles may be used	⇒ Piles allow water to flow through with less damage
<i>Design structures to fit in with environment</i>		
Choose appropriate designs from buildings	✓ Local and traditional designs are adapted for the environment ✓ Use locally obtained native building materials	⇒ Traditional designs also give the guests a more local experience ⇒ These require less maintenance and cost less to transport
Avoid construction in areas of cultural or archaeological importance		



Time spent in proper planning can save years of corrections.

Practical suggestions for building designs can be found in the Appendix at the end of the Checklist.

2. SAVING ENERGY

WHAT TO DO	HOW TO DO IT	CONSIDERATIONS
<i>Cooling rooms</i>		
Use natural ventilation	<ul style="list-style-type: none"> ✓ Large areas of wooden louvre windows ✓ Open louvres on shady side ✓ Close louvres on sunny side ✓ Use glass windows that can open fully ✓ Close curtains or build shades over windows on sunny side 	<ul style="list-style-type: none"> ⇒ Mosquito screening important ⇒ Mosquito screening important
Use fans - avoid Air Conditioning	<ul style="list-style-type: none"> ✓ Ceiling fans 	<ul style="list-style-type: none"> ⇒ Position over beds especially important
If you must use Air Conditioning It must be as efficient as possible	<ul style="list-style-type: none"> ✓ Clean filters regularly ✓ Close doors and windows at all times to keep cold air in ✓ Set thermostats to 23 – 25°C to avoid over-cooling 	<ul style="list-style-type: none"> ⇒ Use a key-tag system that shuts off A/C when guest leaves room ⇒ A/Cs must be protected against sun, saltwater and wind
<i>Lighting rooms</i>		
Make the most of daylight	<ul style="list-style-type: none"> ✓ Large areas of windows ✓ Clean all glass and screens often 	<ul style="list-style-type: none"> ⇒ Mosquito screening important
Make the most of your light fittings (shades and bulbs)	<ul style="list-style-type: none"> ✓ Place light fittings where they shed the most light in the room ✓ Use smaller bulbs in bedside lights ✓ Clean light shades regularly ✓ Use energy-saving fluorescent bulbs 	<ul style="list-style-type: none"> ⇒ Avoid lights that are just for display ⇒ Should be moveable to aid reading ⇒ Save energy, last longer, keep room cooler, cheaper over a long time
Turn off unused lights	<ul style="list-style-type: none"> ✓ All staff should be trained to turn off lights when leaving a room 	<ul style="list-style-type: none"> ⇒ Turn off any that guests have left on when they go out

WHAT TO DO	HOW TO DO IT	CONSIDERATIONS
<i>Hot water</i>		
Water heaters	<ul style="list-style-type: none"> ✓ Do laundry in cold or cool water ✓ Use full loads in washing machines and driers ✓ Set showers to lower temperature ✓ Drain and flush hot water tanks every 6 months 	<ul style="list-style-type: none"> ⇒ Also better for clothes ⇒ Washing half-loads is inefficient ⇒ 50 or 60°C is fine ⇒ Reduces build up of deposits
Solar Power	<ul style="list-style-type: none"> ✓ Use Solar power for lights and hot water. It is expensive at first but cheaper than electricity over time 	<ul style="list-style-type: none"> ⇒ Simple solar water heaters can be home made using plumbing pipes on the roof.
Other hot water systems	<ul style="list-style-type: none"> ✓ Use Solar power first and then “top up” with other power source 	<ul style="list-style-type: none"> ⇒ Gas (LPG) heaters are better than electric
Insulate hot water pipes	<ul style="list-style-type: none"> ✓ Wrap pipes to avoid heat loss between heater and user 	
<i>Other equipment</i>		
Fridges and freezers	<ul style="list-style-type: none"> ✓ Use chest freezers (top-opening) ✓ Clean door seals regularly 	<ul style="list-style-type: none"> ⇒ Opening doors on cupboard style loses cold air ⇒ If doors do not close properly, replace seals
Kitchen and office equipment	<ul style="list-style-type: none"> ✓ Make sure staff always turn off equipment after work 	<ul style="list-style-type: none"> ⇒ Especially gas burners in kitchen
<i>Buying equipment</i>		
Buy energy efficient equipment	<ul style="list-style-type: none"> ✓ Look for labels and ask for information 	<ul style="list-style-type: none"> ⇒ If your supplier cannot get this information, think about using a different supplier
Do not buy equipment that is larger than you need	<ul style="list-style-type: none"> ✓ Make sure you buy the correct size generator, water heater, fridge etc for your purpose 	<ul style="list-style-type: none"> ⇒ Generators that are too big for the job are just wasting fuel

3 SAVING WATER

WHAT TO DO	HOW TO DO IT	CONSIDERATIONS
<i>Collect rainwater</i>		
Collect rain from roofs and store in closed tanks	✓ Put gutters around all roof edges, and direct into a storage tank.	⇒ Roofs and gutters must be cleaned regularly
<i>Stop leaks and deliberate wastage</i>		
Make sure all leaks are stopped quickly	<ul style="list-style-type: none"> ✓ Train staff to report all leaks and send someone to fix them at once ✓ Fit "water guns" to hosepipes so that they stop running immediately after use 	<ul style="list-style-type: none"> ⇒ Dripping taps, running toilet cisterns and leaking pipes waste a lot of water ⇒ Replace any that start to leak <p>1 dripping tap wastes 25 litres of water a day!</p>
Do not use water unnecessarily	✓ Sweep paths and floors instead of washing down with a hosepipe	
<i>Watering gardens</i>		
Use grey water from bathrooms	✓ Showers and bathroom sinks can be plumbed so that the water runs directly onto the garden instead of into the septic tank	⇒ Do not do this with kitchen sinks, where waste food could cause problems
Use efficient watering systems	✓ Water using a drip-system or directed pipes	⇒ A system of narrow pipes with small holes by plants saves a lot of water.
<i>Toilets and showers</i>		
Reduce the amount of water used by toilet flushing	<ul style="list-style-type: none"> ✓ EITHER buy two-flush or low-flush toilets, OR put a large stone or water-filled bottle in the cistern of a regular toilet to take up space ✓ Consider toilets that do not use fresh water 	<ul style="list-style-type: none"> ⇒ Do not reduce it so much that the flush doesn't work – experiment to get the right size stone or bottle ⇒ Salt-water flush systems and no-water composting toilets are available
Reduce the amount of water used by showering and washing	<ul style="list-style-type: none"> ✓ Fit water-saving shower heads ✓ Fit spring-loaded taps in sinks, that turn themselves off after use 	<ul style="list-style-type: none"> ⇒ Use low flow devices on showers- (less than 12 L/min) and taps (6 L/min), ⇒ This is good for public rooms

WHAT TO DO	HOW TO DO IT	CONSIDERATIONS
<i>Kitchen</i>		
Make efficient use of water for dish washing	<ul style="list-style-type: none"> ✓ Do not wash under a running tap, use washing up bowl ✓ If using dish washers, always wait until you have a full load. Do not wash half loads or just a few pots. 	⇒ Dish washers use a lot of water – it is better to wash by hand, or buy the new more water-efficient ones.
<i>Swimming pools</i>		
Reduce spills and leaks	<ul style="list-style-type: none"> ✓ Have pool re-surfaced every year ✓ Use a design where spills over the lip are channeled back into the system ✓ Consider having a salt-water instead of fresh-water pool 	
<i>Laundry</i>		
Make efficient use of washing machines	✓ Try not to wash half loads- wait until there is a full machine before operating	
Reduce washing of guest linen – Let guests decide how often towels and sheets are changed	✓ Put cards and signs up asking guests how often they want their towels and sheets changed (See examples below)	⇒ Not doing daily laundry saves water AND energy



Example of laundry sign for a backpacker hostel:

Here at Paulo's Backpackers, we are concerned for our environment and try not to waste water and energy. We hope that you will help us to do this by reducing unnecessary laundry.

We provide fresh sheets and towels when you arrive, and again every Monday and Thursday.

If you need your towels and sheets changed more often than this, please let us know. There will be a small charge of F\$1 per item for laundry done on extra days.

Thank you for your concern and help.



Example of laundry card for a resort or hotel:

Here at Beachfront Resort, we are concerned for our environment and try not to waste water and energy. We hope that you will help us to do this by reducing unnecessary laundry.

If you do not need to have your towels changed today, please hang them on the bathroom rail. If you would like them changed, please leave them on the bathroom floor.

If you are happy to keep your bedsheets another day, please put this card on your pillow. If you would like your bedsheets to be changed, please leave this card on your bedside table.

Thank you for your concern and help.

4. REDUCING RUBBISH AND LITTER:

 **RETHINK**  **REDUCE**  **REUSE**  **RECYCLE** 

WHAT TO DO	HOW TO DO IT	CONSIDERATIONS
<i>Reduce the Rubbish you buy</i>		
Reduce the amount of rubbish that comes to you	<ul style="list-style-type: none"> ✓ Stop buying packaging you don't need ✓ Avoid products that have a lot of useless packaging ✓ Use cloth bags instead of plastic ✓ Buy in bulk instead of small packets ✓ Do not use single serve portions of anything – buy large containers and put it into small re-usable jars or pots. ✓ (This looks a lot nicer too) ✓ Use rechargeable batteries instead of regular ones – it comes out cheaper in the long run too 	<ul style="list-style-type: none"> ⇒ 20-30% of a hotel's solid waste is packaging ⇒ Preferably in refillable or returnable containers ⇒ For example do not buy single packages of jam, butter, sugars, cereals, biscuits, sweets, milk, salt, pepper, coffee/tea/drinking chocolate, shampoo, etc ⇒ Batteries are one of the worst kinds of rubbish – when thrown away the acid in them kills plants on land and corals in the sea
Cut down on disposable plastic and paper	<ul style="list-style-type: none"> ✓ Do not buy one-use plastic or paper plates and cups, or Styrofoam food boxes. Do not use plastic knives, forks or spoons. ✓ Do not wrap anything in plastic film – get re-usable plastic containers with sealed lids instead ✓ Do not buy anything that comes packaged in Styrofoam (Polystyrene) ✓ Use cloth napkins instead of paper 	<ul style="list-style-type: none"> ⇒ Use thick plastic or pottery plates and cups, and metal knives, forks and spoons that you can rewash ⇒ Plastic film is used all over the islands and is totally unnecessary ⇒ Styrofoam (Polystyrene) never breaks down, and is permanent

WHAT TO DO	HOW TO DO IT	CONSIDERATIONS
<i>Recycle and Re-use</i>		
Reduce your use of new materials	✓ Try and buy things made from recycled materials whenever possible	⇒ This works for both plastic and paper
Save paper	<ul style="list-style-type: none"> ✓ Use both sides of a piece of paper - use old letters and notices for office notes and scrap paper ✓ Re-use envelopes ✓ Use as few forms as possible – make one form do where you had two before. ✓ If you have a computer, use email as much as possible instead of letters and faxes ✓ Use cloth napkins instead of paper 	⇒ You do not need to print out every email – most can be read and answered without using any paper
Re-use old material	<ul style="list-style-type: none"> ✓ Recover and repair damaged furniture ✓ Keep old uniforms and use them for “dirty” jobs or where staff are not seen by guests ✓ Reuse worn sheets and tablecloths – cut them up and make them into pillowcases, napkins, cleaning rags etc. ✓ Give anything that cannot be adequately repaired or reused to the local community or staff members 	<ul style="list-style-type: none"> ⇒ Old towels can be made into facecloths or cleaning rags ⇒ Just because it doesn't look nice enough for use in the hotel does not mean it isn't useful to someone
Send whatever you can for recycling	✓ Some glass and plastic bottles can be sent back to the manufacturer and made into new products. Where possible, do this	⇒ There is very little recycling in the South Pacific. If necessary join up with other operations to organize collection etc

WHAT TO DO	HOW TO DO IT	CONSIDERATIONS
<i>Rubbish Disposal – NEVER let rubbish into the sea or rivers</i>		
Use public dumps and tips	<ul style="list-style-type: none"> ✓ If there is one available, always send your rubbish to a public dump or tip. ALWAYS try and send Hazardous Waste to a proper tip (see below) 	<ul style="list-style-type: none"> ⇒ Not all are well-run or may be a long way off, but it is still better than starting your own tip
If you do not have a public tip, make sure that you create your own properly	<ul style="list-style-type: none"> ✓ Split rubbish into different types for proper disposal ✓ Food waste – can be sent to feed local pigs ✓ Clean vegetable and fruit waste (no fats or oils) can be added to compost heaps (see gardens) ✓ BURN paper and cardboard ✓ BURY plastics ✓ Hazardous waste needs to be buried in a special dump that is NOT near any water or gardens. This one place should be the only one used for this type of rubbish 	<ul style="list-style-type: none"> ⇒ Get advice from your Local Authority on a suitable site. It should be more than 10m above the water table and not located in flood-prone areas. ⇒ NOT BURIED ⇒ NOT BURNED - can give off poisonous gases ⇒ Hazardous waste includes batteries, spray cans, pesticide cans, paint cans, oils etc. DO NOT BURN - there is a risk of explosion



The Problems with Plastics:

- Plastics take a very long time to decompose
- Buried plastics will stay the same for many years to come
- Most plastic cannot be easily recycled
- Some plastics slowly release poisons into the food or liquids they hold
- When burned, many plastics release highly dangerous gases
- Outboard engines can suck plastic bags into their water inlets and overheat
- Turtles often eat floating plastic bags, choke and die
- Seabirds have been found choked inside the plastic rings that hold 6 drink cans together



5. REDUCING POLLUTION

WHAT TO DO	HOW TO DO IT	CONSIDERATIONS
<i>Detergents</i>		
Reduce phosphate levels in waste water	<ul style="list-style-type: none"> ✓ Only buy NP (No Phosphorous) or LP (Low Phosphorous) detergents – examples are Simple Green (from Cost U Less) and Black and Gold (from MH) 	⇒ Phosphates from regular detergents get washed into the sea and feed seaweed growth, which kills corals and fish.
Reduce chlorine levels in waste water	<ul style="list-style-type: none"> ✓ Use as little bleach as you can - boiling water will sterilise cloths and plates ✓ Do not use bleach to keep paths or decks clear of slime – scrub or water blast instead 	⇒ Chlorine in streams and seas kills shrimps and fish
<i>Solvents and Spirits</i>		
Reduce solvents getting into the soil and water	<ul style="list-style-type: none"> ✓ Use water-based paint not spirit-based ✓ Make sure waste paint is disposed of in well-sealed containers that cannot leak ✓ Dispose of all oils, spirits, fuel and batteries carefully and properly in sealed containers to special dumps ✓ Label all waste solvent containers carefully 	<ul style="list-style-type: none"> ⇒ Spirit and spirit-based paints leak to soil and poison plants ⇒ Sprit-based paint burns very easily and cause explosions and fires ⇒ As batteries rust, acids are released into soil and sea ⇒ Do not mix different solvent or spirits – you may cause explosion or poisonous gases
<i>Gases</i>		
Reduce the amount of CFC gases you release into the environment	<ul style="list-style-type: none"> ✓ Do not buy more spray cans than necessary – instead use hand pumps, solid products or look for “No CFCs” sprays ✓ When buying new fire extinguishers ask for “Halon-Free” ✓ Dispose of old fridges and air conditioners properly – take to a tip or have the cooling fluids taken out by a professional ✓ When buying new fridges and freezers ask for “environmentally friendly” 	<ul style="list-style-type: none"> ⇒ CFCs contribute to Global Warming (e.g., aerosol sprays, fire-extinguishers, solvents, foams) ⇒ CFCs in the cooling fluids are released into the environment if they are allowed to rust and leak

WHAT TO DO	HOW TO DO IT	CONSIDERATIONS
<i>Motor exhausts</i>		
Reduce the amount of poisons that your cars and boats put out	<ul style="list-style-type: none"> ✓ Carry out regular engine maintenance ✓ Use lead-free petrol ✓ Buy products from local suppliers to reduce the amount of transport needed to get things to you ✓ If possible buy 4-stroke outboard boat engines instead of 2-stroke – they do not put exhaust gases into the water 	<ul style="list-style-type: none"> ⇒ This also will make your engine last longer, and use less fuel ⇒ They are more expensive to buy, but pay for themselves by lasting longer and using less fuel
<i>Fuel storage</i>		
Avoid fuel leaks into the ground	<ul style="list-style-type: none"> ✓ Avoid underground storage tanks, or line such tanks properly 	<ul style="list-style-type: none"> ⇒ Cracked tanks let water into the fuel, and fuel into the ground
Build a proper fuel storage depot	<ul style="list-style-type: none"> ✓ Provide a concrete floor, shady roof, wire mesh walls and a lockable door to your fuel store. Keep it away from heat and fire sources. ✓ Keep different types of fuel in clearly marked drums ✓ Provide proper fuel pumps to avoid spills during pouring 	<ul style="list-style-type: none"> ⇒ Keep rain and sun away from fuel storage drums. Allow plenty of air circulation. No smoking in the area.
<i>Take precautions</i>		
Make a spill containment plan	<ul style="list-style-type: none"> ✓ Have a properly thought out plan and equipment available for an emergency spill – absorbent powder for mopping up fuel etc. 	<ul style="list-style-type: none"> ⇒ Get suggestions from the OHS for your situation
Find out what is poisonous in the things you use	<ul style="list-style-type: none"> ✓ Many regularly used materials are very poisonous. (See list below) Get a “Material Safety Data Sheet” from the supplier to find out the details 	<ul style="list-style-type: none"> ⇒ If the supplier cannot produce a “Material Safety Data Sheet”, consider changing your supplier to one who can.



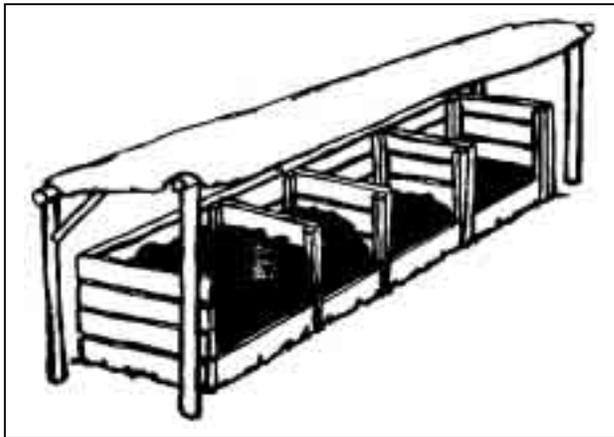
Poisons and acids found in normal-use products

Acids, adhesives, air conditioning refrigerants, automobile supplies, batteries, drain cleaners, disinfectants, dyes, glues, grease and rust solvents, lawn products, metal cleaners, polishes, medicines, paints, paint thinner, paint strippers/ removers, pesticides, oven cleaners, plastics, starter fluids, wood preservatives, wood cleaners, polishes.

6. MANAGING GARDENS AND LANDSCAPES

WHAT TO DO	HOW TO DO IT	CONSIDERATIONS
<i>Use local plants</i>		
Do not clear out all local plants and trees and plant foreign ones	<ul style="list-style-type: none"> ✓ Use local plants wherever possible in your gardens 	<ul style="list-style-type: none"> ⇒ Foreign plants make everywhere look the same, use more water and are less cyclone and salt resistant
Keep shade trees over roofs		
Make an attraction of your local species	<ul style="list-style-type: none"> ✓ Plant species that attract local birds and butterflies ✓ Use labels to explain what the plants are and how they are traditionally used 	<ul style="list-style-type: none"> ⇒ Foreign plants may not provide food and shelter for local animals ⇒ Tourists like to learn about local plants and customs
<i>Water and weed your garden wisely</i>		
Reduce water use in your garden	<ul style="list-style-type: none"> ✓ Do not build pools, waterfalls and fountains ✓ Avoid large grass lawns – plant flowerbeds with local plants instead, or look for special drought-resistant species of grass that need less water ✓ Do your watering at night, not during the day ✓ Use grey water from bathrooms to water gardens 	<ul style="list-style-type: none"> ⇒ These waste water and can breed mosquitoes ⇒ Grass needs a lot more watering than other plants and loses a lot of water through evaporation ⇒ This reduces water lost through evaporation from sun ⇒ Plumb shower drains to run straight out into the garden
Use drip or spot irrigation instead of watering the whole area	<ul style="list-style-type: none"> ✓ Run thin pipes over your garden, and drill small holes next to the plants you want to water. A small amount of water can then be used to water the plants without wastage 	<ul style="list-style-type: none"> ⇒ You can buy drip irrigation systems that use 30 – 70% less water than conventional irrigation systems

WHAT TO DO	HOW TO DO IT	CONSIDERATIONS
<i>Water and weed your garden wisely (continued)</i>		
Reduce use of chemicals and fertilisers	<ul style="list-style-type: none"> ✓ Pull up weeds instead of spraying pesticides ✓ Use old coconut husks to cover soil between plants in flowerbeds ✓ Use natural pest control methods ✓ Make compost out of grass clippings, weed and food waste (see box below) and dig into soil instead of using chemical fertilisers 	<ul style="list-style-type: none"> ⇒ Pesticides get carried to the sea when it rains and kill corals and fish ⇒ This will stop weeds growing and reduce water loss ⇒ Fertilisers get carried to the sea when it rains and make seaweed grow, which kills corals and fish



Compost Piles:

Cardboard, Paper, Grass clippings, Weeds, Garden waste, Fruit and Vegetable food scraps (not oil or fat), can be shredded or cut up into small pieces, and made into a compost heap.

In time these will make rich natural fertiliser that can be dug into gardens.

Making a Compost Pile:

Composting can be done in a pile at the end of a garden without a bin. However, in resorts, bins make the process look much neater and cleaner. It also can speed up the break down of the materials.

A good size is 1.5 Metre x 1.5 Metre x 1.5 Metre. Several bins can be put side by side as shown in the illustration above (from Greenpeace). Walls can be wire fence or concrete block, a floor that lets air though will speed up the process.

All materials should be torn up into small pieces, and mixed well. Layer rich “green” materials like kitchen waste, fresh plant cuttings etc with drier “brown” waste such as shredded coconut husks, paper and cardboard. Add a little garden soil so that there are natural bacteria in the mix.

The heap should be dug and turned over regularly, at least once a week, to stop methane gas forming. If you can add worms to the compost heap after 3 weeks, they will speed up the break down. The heap will get warm after each time it is turned over. When it stops getting warm, the process is finished.

This will form a rich soil that can be dug into gardens instead of chemical fertilisers.

7. SUPPLIERS AND CONTRACTORS

WHAT TO DO	HOW TO DO IT	CONSIDERATIONS
<i>Only deal with suppliers and contractors who can provide environmentally friendly products</i>		
Work with suppliers and contractors who have adopted an environmental policy	<ul style="list-style-type: none"> ✓ Choose suppliers who deliver in reusable crates ✓ Choose suppliers who refill packaging containers ✓ Choose suppliers who are open about environmental aspects of their products and services 	⇒ If suppliers cannot answer your questions, ask them to find you more information, or change to another supplier who can
<i>A summary to use when looking for product suppliers</i>		
Avoid products made with, or containing, environmentally harmful materials i.e. ozone depleting substances or toxic chemicals	<ul style="list-style-type: none"> ✓ Avoid halon based fire extinguishers ✓ Avoid CFC based refrigerators and chillers ✓ Avoid phosphate or chlorine based cleaning chemicals, ✓ Avoid vehicles running on leaded petrol ✓ Avoid CFC based aerosol sprays 	
Avoid over-packaged products and suppliers	<ul style="list-style-type: none"> ✓ Avoid single-serve packages for catering and guest rooms (e.g. condiments, beverages, bathroom amenity products) ✓ Avoid disposable or single use products, e.g. paper cups, napkins ✓ Avoid disposable packaging cases, e.g. cardboard boxes 	
Buy water conserving equipment	<ul style="list-style-type: none"> ✓ Buy two-level flush conserving toilets ✓ Buy conserving laundry washing machines ✓ Buy aerators or low-volume shower heads ✓ Buy flow restrictors for taps 	
Buy energy efficient equipment	<ul style="list-style-type: none"> ✓ Buy efficient computers ✓ Buy efficient photocopiers ✓ Buy efficient light bulbs ✓ Buy efficient laundry washing machines and driers ✓ Buy timers and sensors for switches 	
Buy in bulk and only what you need	<ul style="list-style-type: none"> ✓ Bulk buy bathroom products ✓ Bulk buy cleaning chemicals ✓ Bulk buy kitchen and bar supplies 	
Maximise use of reusable, recycled and recyclable products	<ul style="list-style-type: none"> ✓ Buy rechargeable batteries ✓ Buy recycled toilet paper for staff areas ✓ Bulk buy kitchen and bar supplies ✓ Use recycled paper for photocopying and notes ✓ Buy plain paper fax machines and use the back sides of used paper in them (Heat treated fax paper fades quickly in hot climates anyway) 	

8. INVOLVING LOCAL STAFF AND COMMUNITIES

WHAT TO DO	HOW TO DO IT	CONSIDERATIONS
Staff		
Include all staff in the environmental policy	<ul style="list-style-type: none"> ✓ Put up posters to remind staff of actions they can take to reduce environmental impact ✓ Provide incentives for staff to reward new ideas for good environmental practice ✓ Undertake awareness training sessions on environmental topics ✓ Organise staff and/or local community clean-ups/or equivalent functions 	<ul style="list-style-type: none"> ⇒ Make sure posters are in languages the staff can easily understand ⇒ An informal kava session is fine for this
Local community		
Engage in improving environmental facilities for the local communities	<ul style="list-style-type: none"> ✓ Provide improved waste disposal facilities and education for the communities ✓ Assist local communities to conserve and manage 'tourist attractions' on their land 	<ul style="list-style-type: none"> ⇒ Start a communal dump and encourage the community to separate wastes as discussed in "Rubbish Disposal" ⇒ E.g. beaches, waterfalls, historic sites, forest walks or recreation areas
Get local people involved in environmental programmes	<ul style="list-style-type: none"> ✓ Organise a local "Clean-Up Day" ✓ Run awareness programmes ✓ Provide educational materials for schools and community halls ✓ Employ local people for special cleans ups 	<ul style="list-style-type: none"> ⇒ World Environment Day is June 5th



One example of community involvement can be seen on the Coral Coast. The Shangri-La Fijian Resort and Cuvu district in Fiji have formed a mutually beneficial partnership facilitated by a local organisation Partners in Community Development Fiji (PCDF). Community discussions have been supported by the resort to develop a marine resource management plan.

Three main reserves have been set up to increase the health of the reef and fish stocks. One is in front of the resort where coral and giant clams have also been "planted". PCDF has also worked with the resort to develop artificial wetlands to remove nutrients from resort waste rather than allowing them to enter the reef area.

APPENDIX:

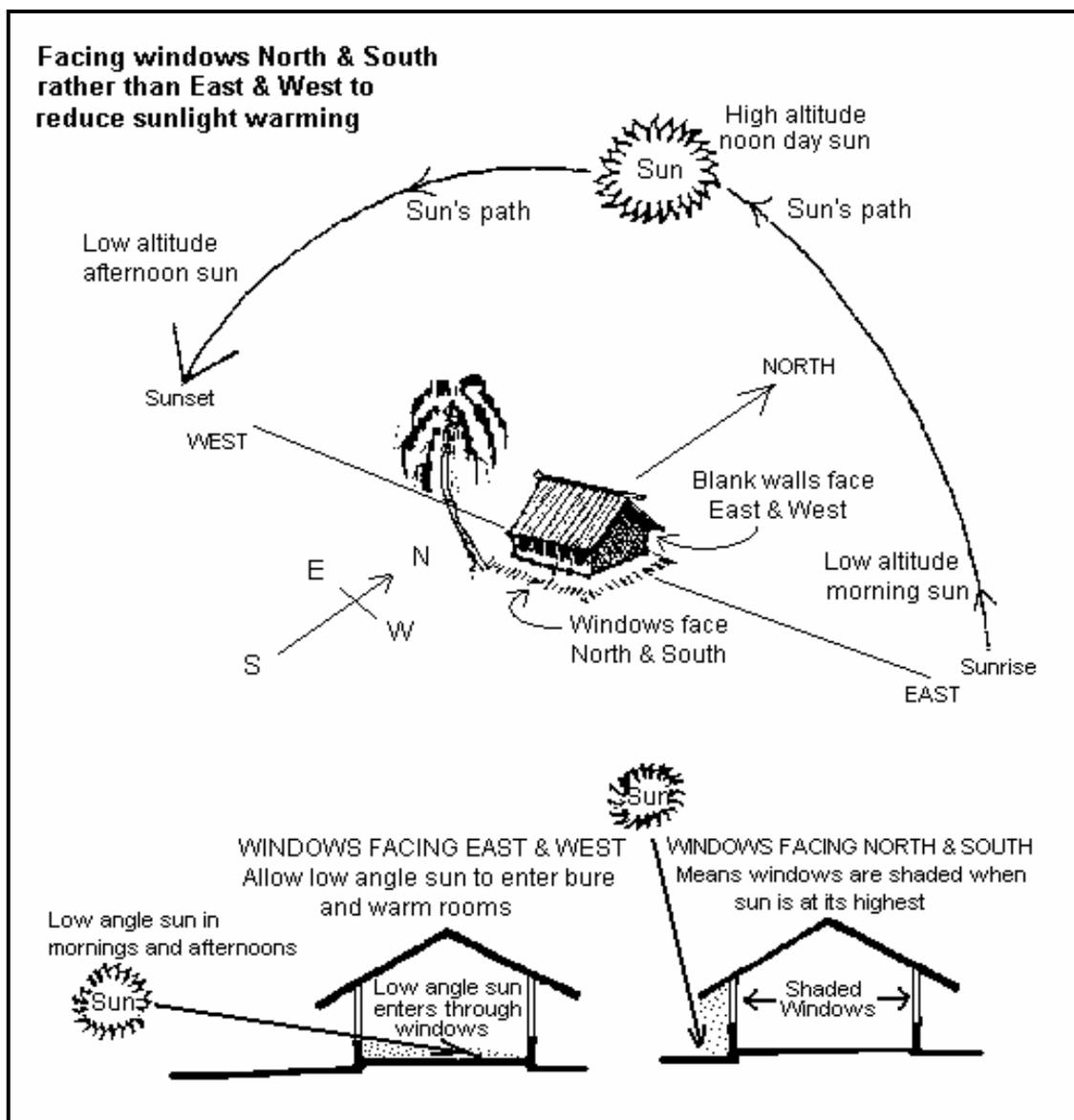
Practical examples for design, siting, and construction:

1. Design and build bures for cooling efficiency:

Locate windows and longest walls on the North and South faces of the building

- Windows that face East or West allow sun to enter and heat the room during early morning and late afternoon.
- Windows that face North and South and that are well shaded will prevent too much heating from the sun.

Fig. 1: Location of windows for best cooling



Build steep roofs with long eaves hanging out from the roof

- This provides more shade over windows than roofs that stop where they meet the wall.

Make windows large, or make walls out of full-length louvers that can be opened

Avoid partition walls that stop breeze flowing though

- Single rooms stay much cooler than walled off ones.

Fig 2: Traditional design that shades windows and allows a good flow of cooling breeze.

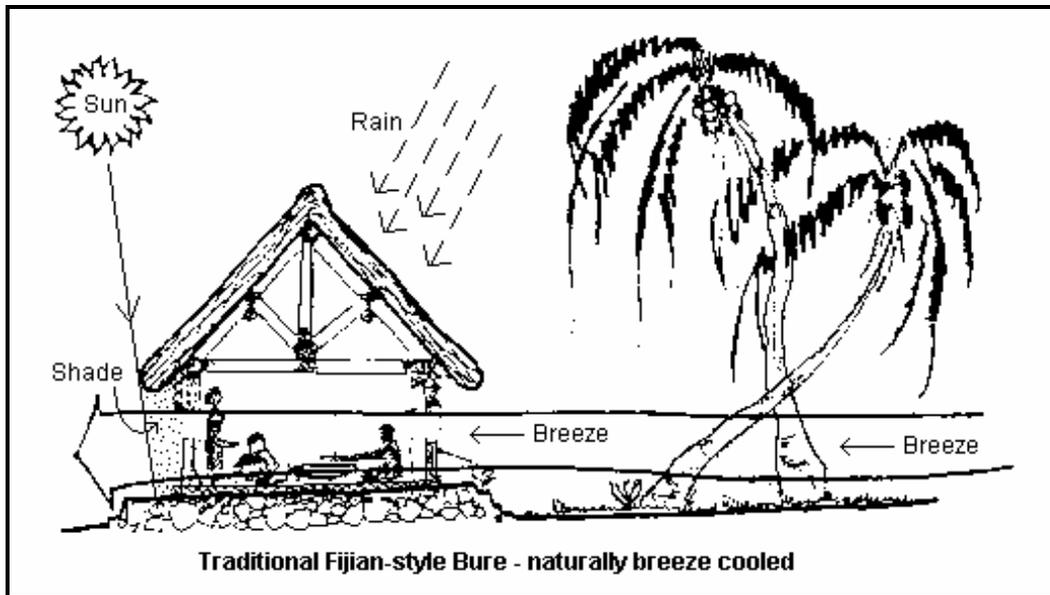
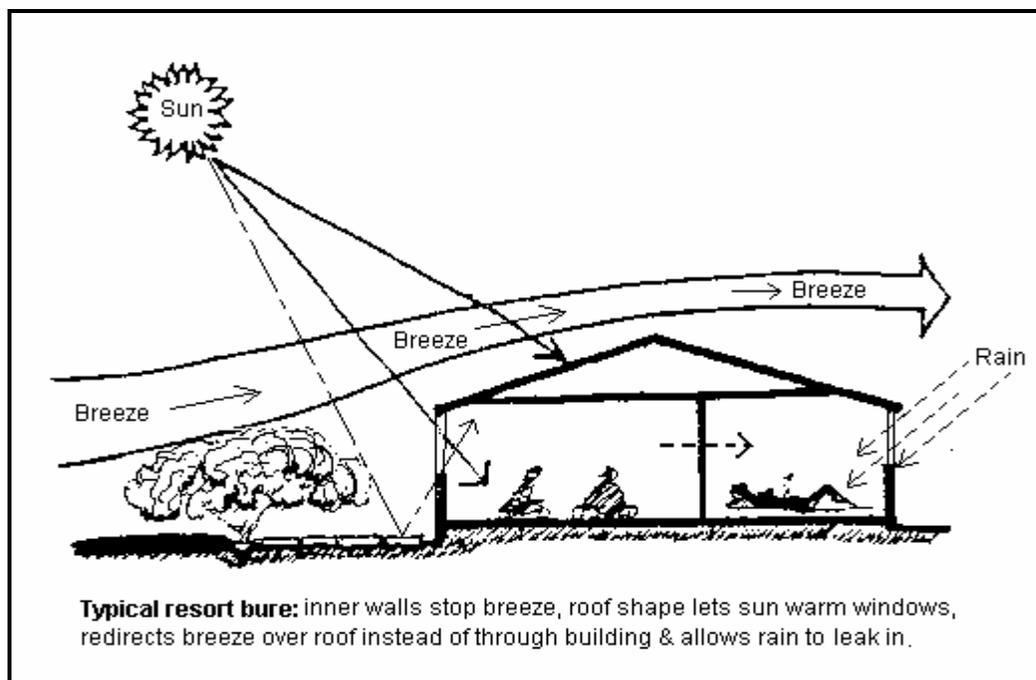


Fig 3: Non-traditional design that heats up quickly and prevents cooling airflow.



Make your roof a light colour, preferably using a matt paint.

- o Dark roofs absorb heat and make the inside of the bure much hotter.
- o Roofs that reflect the sun also reflect heat and are much cooler inside.
- o However, because metal roofs (tin or aluminium roofing iron) are very shiny, the reflections can dazzle people looking at it. This can be avoided by painting the roof with non-shiny white paint, or thatching with loose thatch that stops dazzle, but still has airspaces between the tin and the leaves.
- o Tight packed thatch on top of tin might actually keep heat in.

Fig 4: Dark roof absorbs heat and creates a hot room inside

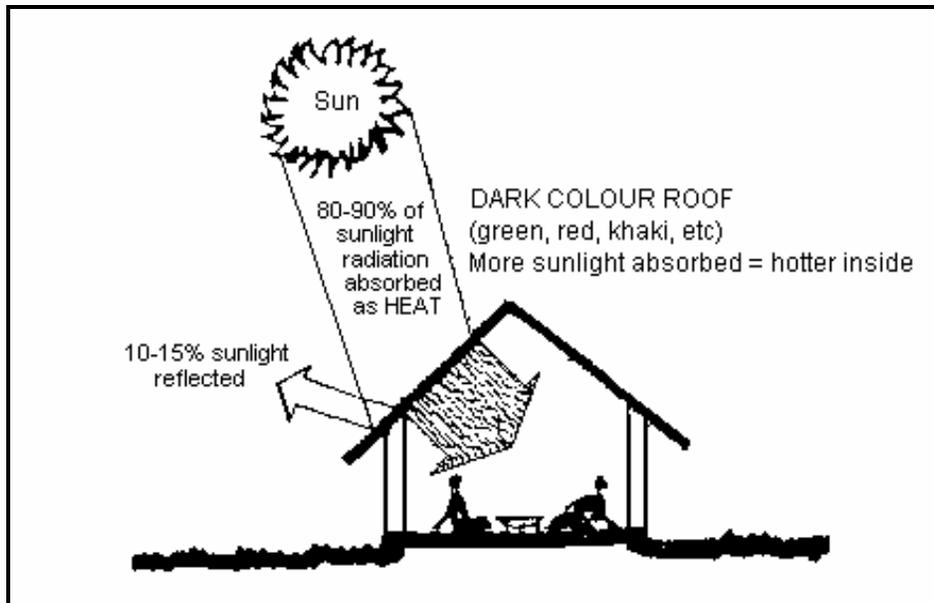
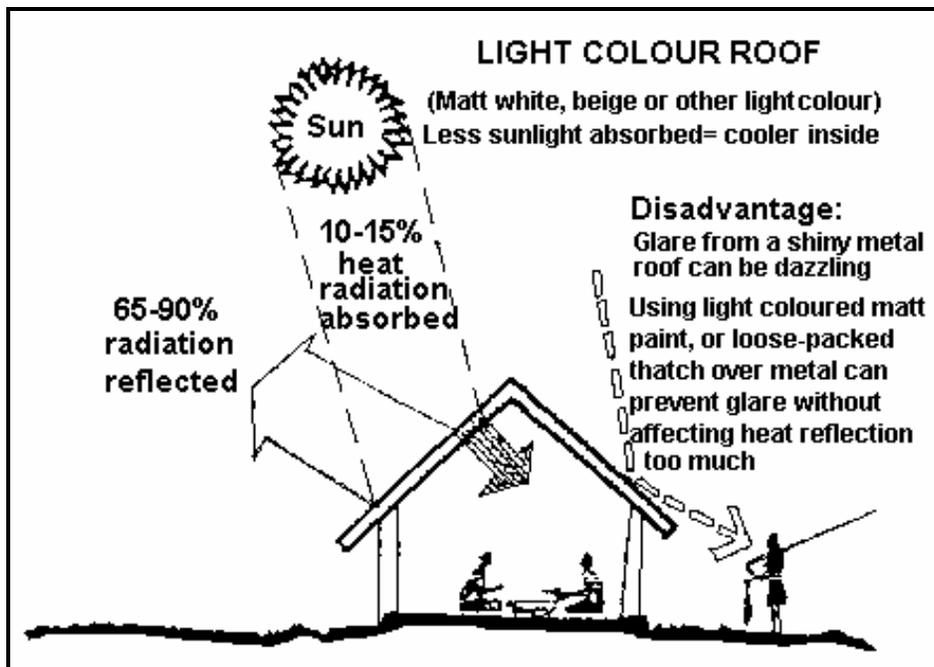


Fig 5: Light roof reflects heats and stays cooler inside



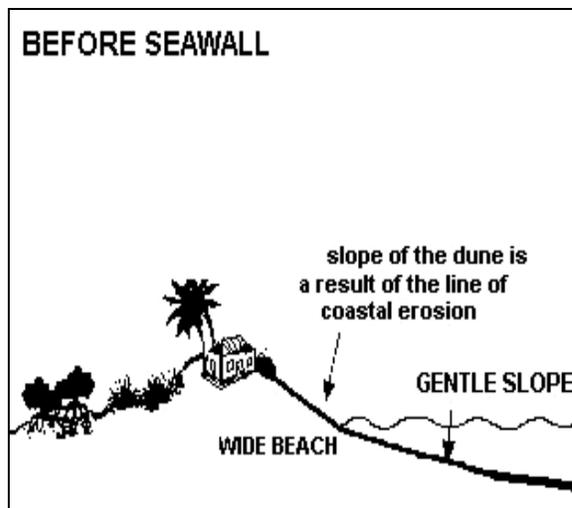
2. Avoid coastal erosion by not building sea walls, and by building structures further back from the shoreline:

Build sloping walls if you must have a wall. It is better to not have a wall at all.

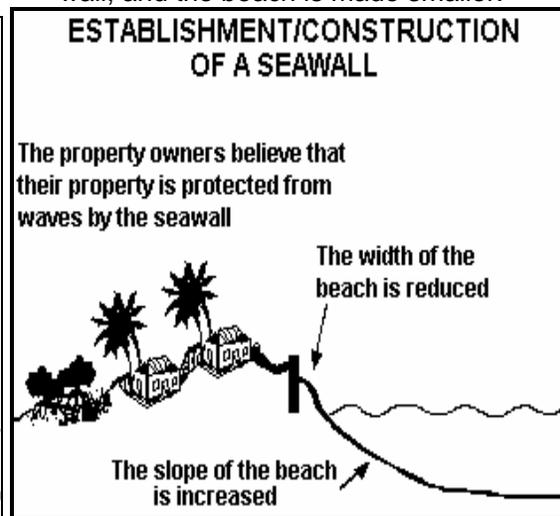
- Upright walls lead to more beach erosion.
- To avoid the need for a sea wall, build further back from the beach (at least 30 metres) and leave natural sand dunes and existing vegetation to protect you from the waves and long term costal erosion.

Figure 6: The long-term consequence of building an upright sea wall:

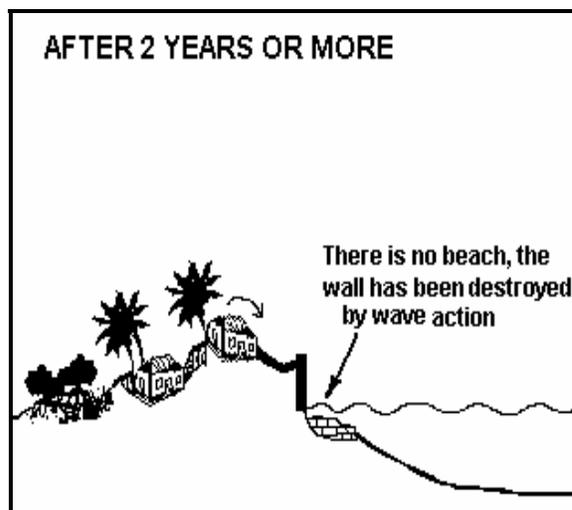
6a) Coastal erosion can cause an increase in the slope of the beach



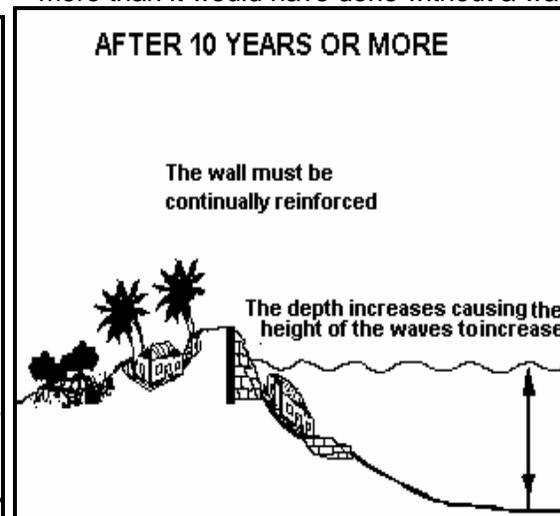
6b) If an upright wall is built, the increased energy of the waves breaking against it removes more sand from the base of the wall, and the beach is made smaller.



6c) Over time, more erosion removes the last of the beach, and the wall collapses.



6d) The problem continues, with beach sand being continually removed, and walls being continually rebuilt, so that the beach erodes more than it would have done without a wall.



3. Place boreholes to avoid contamination:

Drill borehole wells away from places that can allow salt water or sewage contamination.

- Wells should be as far back from the sea as possible, and not so deep that they tap into salt water under the sand. Wells drilled too close to the sea will let salt water enter and will not provide drinkable fresh water.
- Wells should not be downstream from septic tanks, or sewage contamination will enter the water supply. Fijian health legislation states that all wells must be at least 60m away from any dwellings, and therefore septic tanks.

Fig 7: A well dug too close to the sea and downstream from a septic tank.

This would give salty water or water with bacteria in it that can cause disease.

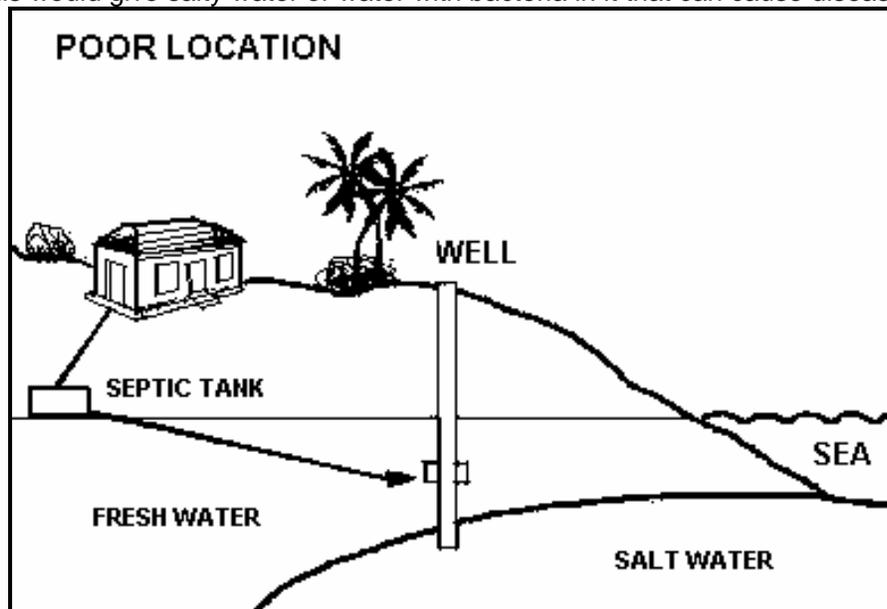
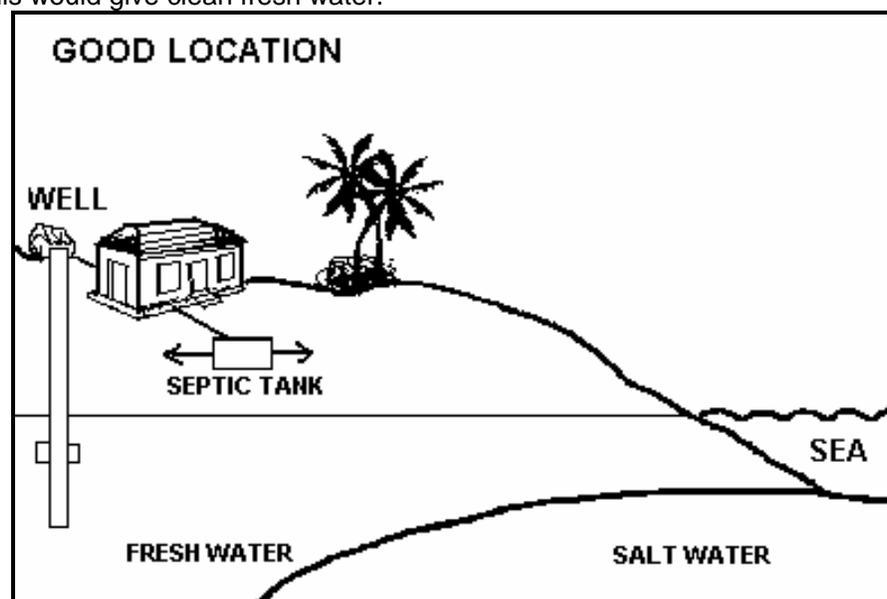


Fig 8: A well placed far away from the shore and septic tanks.

This would give clean fresh water.



4. Place septic tanks to avoid pollution of sea and groundwater.

Build septic tanks well away from the shore.

- o Do not site closer than 30m from seashore or stream.
- o Septic tanks should be behind bures, not between the bures and the sea.
- o Septic tanks should not be so deep that they pollute groundwater.
- o Find out what kind of bedrock you have, as this will affect how deep you should put your tank.

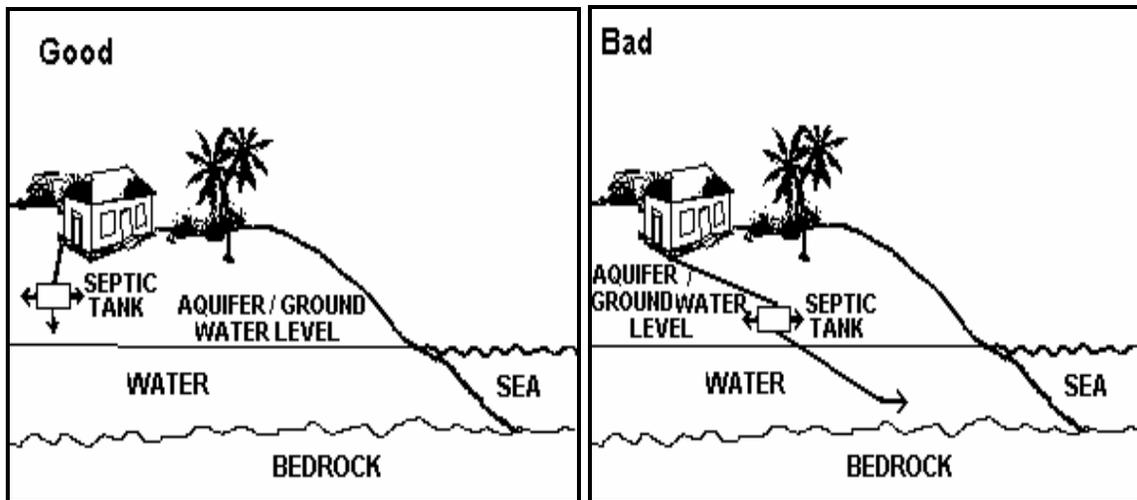
Fig 9: Good placing of septic tanks leaving sea water clean and bad placing polluting sea water.

9a) GOOD PLACEMENT

If there is water underground, shallow septic tanks will not pollute it.

9b) BAD PLACEMENT

If there is water underground, deep septic tanks will pollute it, and the sea.

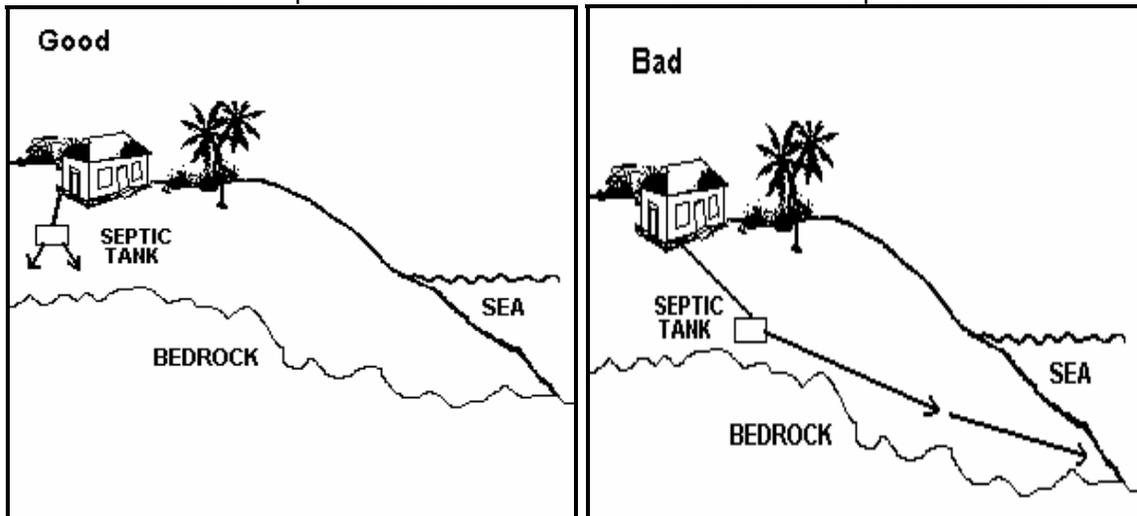


9c) GOOD PLACEMENT

If there is rock underground, shallow septic tanks built behind bures will mean waste stays in the soil and does not pollute the sea.

9d) BAD PLACEMENT

If there is rock underground, deep septic tanks built near the sea will allow sewage to wash down and pollute the sea.



5. Design your toilet system to be as clean and non-polluting as possible:

The problem with many Fijian “Septic Tanks”:

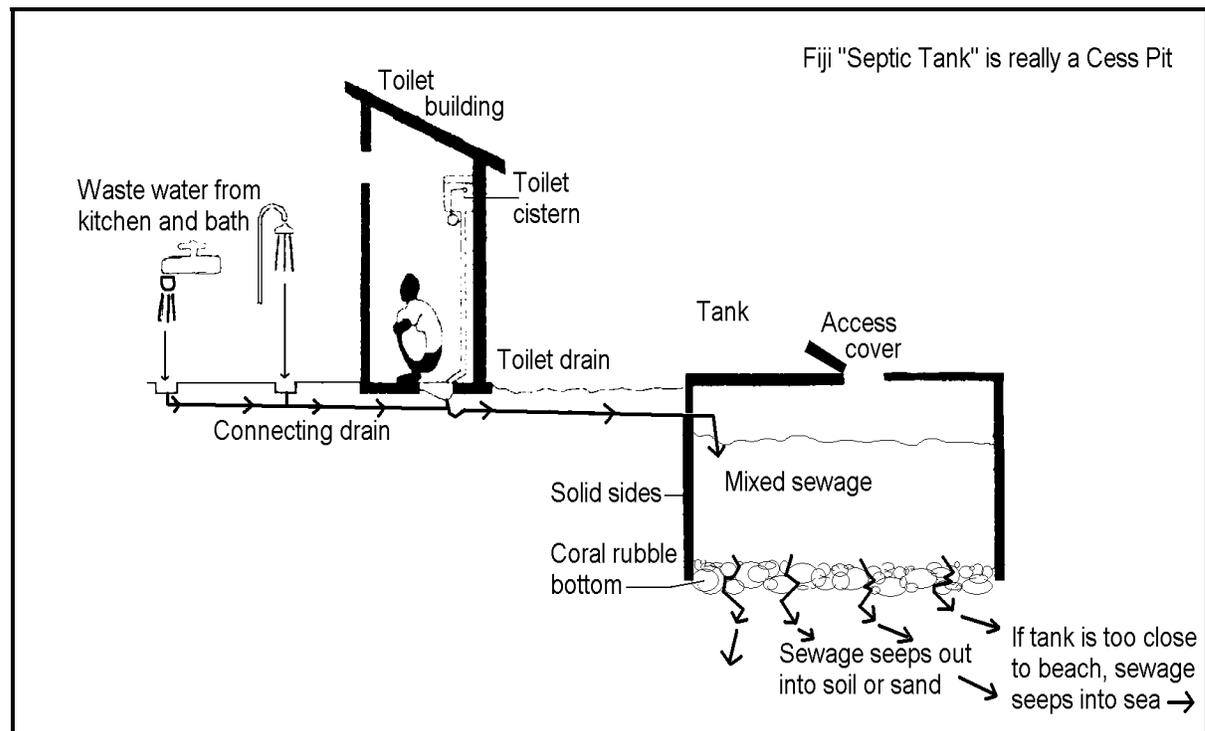
Many of the toilet systems in use in Fiji drain to what are referred to as Septic Tanks, but are really Cess Pits that offer no sewage treatment at all.

Toilet pits in Fiji have open bottoms usually lined with broken coral (the harvesting of which damages the reef) through which sewage seeps out into the soil or sand.

When this system is used near a beach, or where there are more toilets than the environment can bear, the untreated sewage flows out through the sand directly into the sea, where it stops proper coral growth and encourages the growth of seaweeds.

In areas of resort development, or where villages have grown larger than normal, this affects the entire health of the reef and the fish life.

Fig 10: Fiji-style Cess Pit sewage disposal tank.

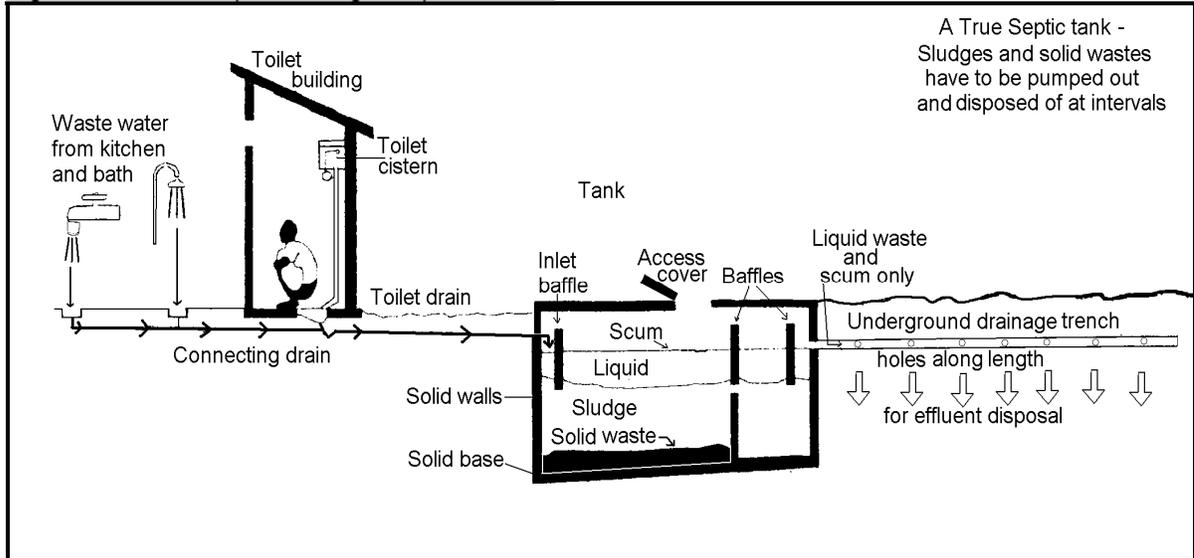


Alternatives to Cess Pit toilet systems:

Build a proper Septic Tank.

They are simple to build, but require a system to empty out solid waste and sludge at regular intervals. The tank allows solids to settle out and be kept back, while water can be channeled out into a wastewater garden using an underwater drain. Water from showers and kitchens can also be recycled into the gardens using this method.

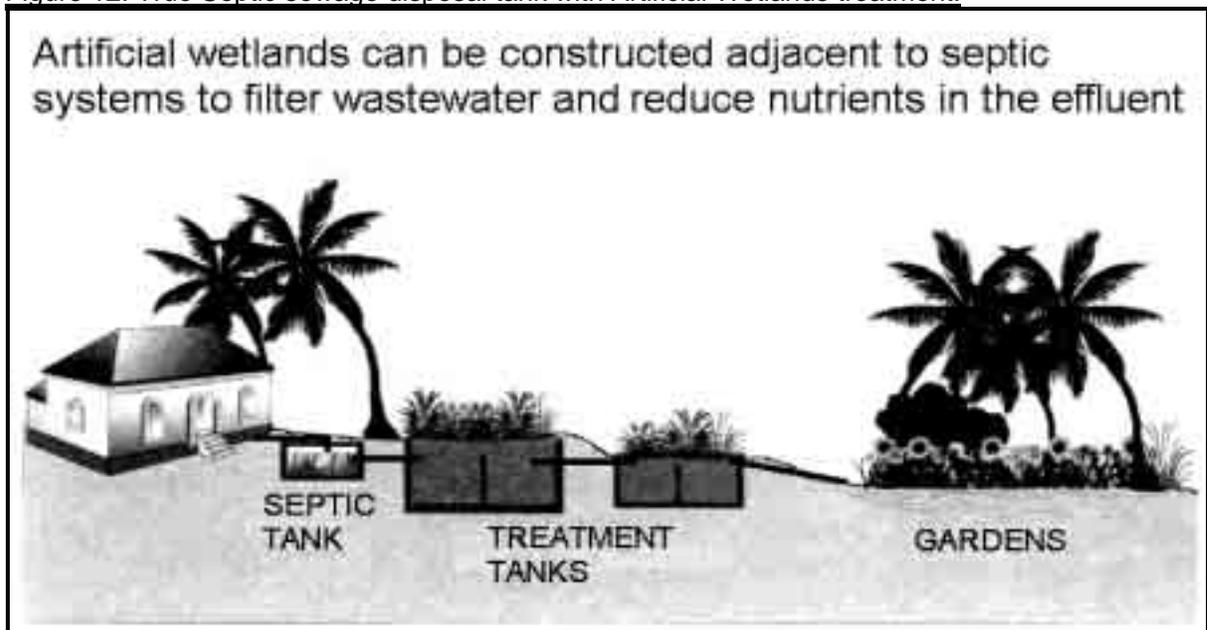
Figure 11: True Septic sewage disposal tank.



Construct Artificial wetlands.

Once the water runs out of the septic tanks it can be run through tanks or ponds where plants can use the nutrients and further clean up the water before it goes out into the ground. An artificial lake filled with water plants such as water hyacinths can be very pretty and very effective.

Figure 12: True Septic sewage disposal tank with Artificial Wetlands treatment.



Use Composting toilets.

Composting toilets use much less or no water than regular toilets, and allow waste to be used as garden fertiliser instead of entering the water system. They are therefore much less polluting than normal toilet systems. They take a little more design and work than flush toilets, but the environmental benefits are huge.

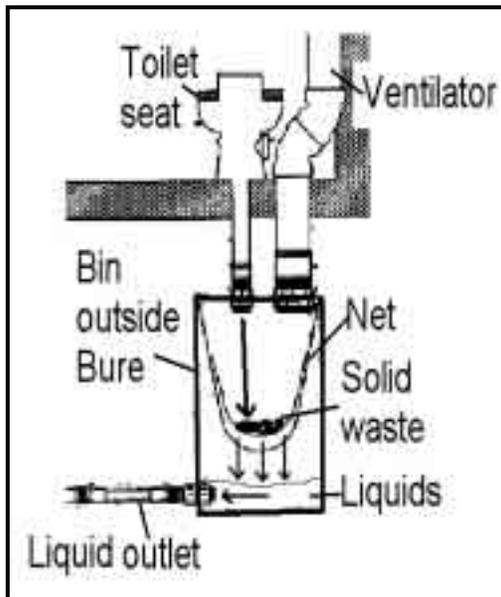
There are many designs of composting toilet. An excellent book called “The Composting Toilet System Book” gives “a practical guide to choosing, planning, and maintaining composting toilet systems, an alternative to sewer and septic systems”. It is by David Del Porto and Carol Steinfeld, published by The Centre for Ecological Pollution Prevention (CEPP), Chelsea Green Publishing Company. The ISBN number is 0-9666783-0-3 The following example is from this book, and is a system already in use at Lalati Resort, on Beqa island, in Fiji, which has proved very successful, with no drop in bathroom standards.

CEPP Container Net Batch System:

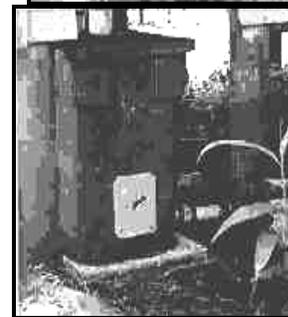
In this system, waste falls into simple rubbish “wheelie-bins”, where the liquid waste falls to the bottom and is sent to flower gardens, and the solid waste is caught in a net. Dry materials are added to it – this includes coconut matting, potato peel, popped popcorn (really!), stale bread etc. Bacteria are added to the mix.

The bins are changed about once every 3 months, depending on use. The waste container is taken away and left for a few months for the solids to break down. The end result is a non-smelly, dry, soil-like substance that can be dug into gardens as a very good fertilizer.

Fig 13: Basic design of a Container Net Batch Composting Toilet system



Photos of system components in use – toilet seat, netting in bin, and bin outside bure.



Total material costs to construct each system (not including the toilet seat) is about US\$60.

Plans for this particular design are available for US\$30 from:

The Centre for Ecological Pollution Prevention (CEPP), PO Box 1330 Concord, Massachusetts 01742-1330 USA

Tel USA 978 318 7033

Email EcoP2@hotmail.com

Website www.cepp.cc

Some Environmentally Friendly Detergent Suppliers:

<u>Name of Detergent</u>	<u>Company</u>	<u>Website/ Link</u>	<u>Size/ Cost in U.S.\$</u>	<u>Benefits</u>
Black and Gold	Black & Gold	(MH Supermarkets)		Low Phosphate
Crystal Simple Green	Simple Green	http://www.simplegreen.com/products/industrial/product2.html (COST U LESS)	12 bottles, \$14.95. Each bottles weighs 9.33 lbs	Non toxic, Non-ionic, biodegradable,
Eco Detergent Environmentally Safe Complete Detergent	Kor-Chem Inc	http://www.kor-chem.com/	100/Pounds: \$59.95	Phosphate free and environmentally safe.
Detergent Surfactant	Kor-Chem Inc	http://www.kor-chem.com/	Detergent Surfactant - Strong Surfactant for Commercial Use - (6) 1 Gallon. (6/Gallons:\$77.22)	Strong surfactant for commercial programs. Non acidic. Phosphate free.
Laundry White Item 06697	Watkins Laundry Detergent	http://www.watkinsonline.com/default.cfm	\$11.49 for 5 lb. box	Phosphate free, biodegradable
Smart Choice liquid laundry detergent	Smart Choice	www.gardenmarketiga.ab.ca/online/cat218_1.htm - 40k	2.9 litre for \$6.05	Phosphate free and environmentally safe.
Fuller 86 Liquid Laundry Detergent	Fuller Brush Laundry detergent	http://sneakykitchen.com/fullerbrush/fuller_products/laundry2.htm	\$19.99 for 129 fl oz.	Phosphate free, use only 1 1/2 oz per load.
Fuller 86 Powder Laundry Detergent	Fuller Brush Laundry detergent	http://sneakykitchen.com/fullerbrush/fuller_products/laundry2.htm	\$19.99 for 10 lbs	Phosphate-free formula removes tough stains. Packaged in convenient reusable pail. Includes measuring scoop.
Equator Low-Sudsing Biodegradable Laundry Detergent	Equator	http://www.abundantearth.com/store/cleaning1.html	10 lbs. 200 loads. \$38.95	*Contains no solvents or abrasives
ECOS® Free & Clear	Ultra Concentrated Laundry Liquid	http://www.kokogm.com/Green_Market/LaundryLiquid.html	\$14.11 for 128 fl oz. (64 loads)	A highly concentrated liquid laundry detergent that is free of fragrances, dyes, optical brighteners and fabric softeners.
Seventh Generation	Free & Clear Laundry Liquid	http://www.kokogm.com/Green_Market/LaundryLiquid.html	\$11.69 for 100 fl oz. (33 loads)	Hypo-allergenic and biodegradable, it contains no dyes, fragrances, optical brighteners, phosphates, or petroleum-based cleaners. It's safe for septic and greywater systems.

Bi-O-Kleen	All Temperature Laundry Liquid	http://www.kokogm.com/Green_Market/LaundryLiquid.html	\$9.92 for 64 fl oz. (62 loads)	Made with grapefruit seed and orange peel extracts for a cleaner, softer, brighter, and fresher wash the way nature intended. Helps control mildew odors, souring, and other musty odors.
Ecover®	Natural Laundry Wash	http://www.kokogm.com/Green_Market/LaundryLiquid.html	\$7.54 for 53 fl oz.	Ecover uses the most natural (95 to 100%) and least toxic ingredients available. Ideal for all machine washables.
EnviroRite	Gentle Wash(tm) for Delicate Fabrics	http://www.kokogm.com/Green_Market/LaundryLiquid.html	\$9.34 for 32 fl. Oz.	Developed by and for people with allergies, asthma, and chemical sensitivities, it is free from petroleum solvents, fragrances, dyes, and other common triggers for respiratory or skin irritations
Ecos Laundry	Ecos Laundry Powder	http://www.healthgoods.com/Shopping/Household_Products/Cleaners_and_Laundry_Products.asp	\$6.95 for 54 oz (27 loads)	Designed to quickly dissolve in any water temperature. A highly concentrated, phosphate free, laundry detergent with non-chlorine bleach, soy based brighteners and cellulose fabric softeners that is fully biodegradable.
Eco-Products	Powdered Laundry detergent	http://www.ecoproducts.com/Business_Division/ecohome/cleaners.htm#Powder%20laundry%20detergent%20	\$15.90 for 12 lbs.	Eco-Products powdered laundry detergent is suited for all fabrics and temperatures.
Eco-Products	Liquid Laundry detergent	http://www.ecoproducts.com/Business_Division/ecohome/cleaners.htm#Powder%20laundry%20detergent%20	\$12.90 for 200 fl. Oz.	Leaves your clothes smelling clean and fresh, without harmful ingredients. Highly concentrated.
American Longevity	Invision Liquid Laundry detergent	http://www.colloidal-min.com/laundry.html	\$25.00 for 32 oz.	100% phosphate free, completely biodegradable, perfume and dye free with an organic fragrance.
OUR	OUR Laundry Detergent	http://www.ourproductsonline.com/products/	\$17.50 per bottle. Need only 2 squirts (1/8 cup) per load.	Biodegradable, phosphate free, cold water active, safe for septic tanks

REFERENCES AND FURTHER INFORMATION

This document builds on a considerable amount of published work on the environmental management of hotels and the tourism industry, in particular the Environmental Hotels of Auckland Resource Kit 1996.

For more detailed and comprehensive documents those interested may like to start by contacting the following organizations:

SPTO

South Pacific Tourism Organisation (ExTCSP Tourism Council of the South Pacific)

Level 3, FNPF Place, 343-359 Victoria Parade, PO Box 13119, Suva, Fiji Islands

Tel +679 330 4177 Fax +679 330 1995

Email spice@connect.com.fj

Web <http://www.infocentre.com/spt>

SPTO is a regional organization specializing in tourism development for 10 years. It supports National Tourism Offices in 13 member countries and has a 200 private sector membership. This publication is one of its green initiatives. SPTO promotes an Excellence in Tourism Award. This guide is based on their booklet "Environmental Management for Small Hotels and Resorts" 1998 ISBN 982 06 0043 X

Environmental Hotels of Auckland Initiative

EHOA Coordinator, Auckland Regional Council,
Private Bag 68912, Newton, Auckland, New Zealand

Tel +64 (9) 366-2000 x 8336 Fax +64 (9) 366-2155

The EHOA Resource Kit 1996, summarizes a large number of hotel case studies demonstrating the financial and environmental benefits of sound environmental management. The initiative which was launched in 1995 is a partnership between the Auckland Regional Council, Auckland City Council, Ministry for the Environment and Auckland hotels.

IHEI

International Hotels Environment Initiative

5 Cleveland Place, St James's, London SW1Y 6JJ, UK

Tel +44 (0) 1 71 321 6407 Fax +44 (0) 321 6480

Web <http://www.ihei.org.uk>

The International Hotels Environment Initiative publishes a number of guides and education materials specifically aimed at the hotel industry including the industry standard 'Environmental Management for Hotels: the Industry guide to best practice' now in its updated 2nd Edition

UNEP IE

The United Nations Environment Programme Industry and Environment

39-43, Quai Andre Citroen, 75739 Paris Cedex 15 - France

Tel +33 (1) 44 37 14 50 Fax +33 (1) 44 37 14 74

Email unepie@unep.fr

Web <http://www.unepie.org/home.html>

UNEP IE has a large number of publications relating to environmental management in the tourism industry.

International Hotel & Restaurant Association

251 rue du Faubourg Saint Martin, 75010 Paris - France

Tel +33 (1) 44 89 94 00 Fax +33 (1) 40 36 73 30

Email Infos@ih-ra.com

Web <http://www.ih-ra.com>

Publisher with UNEP of 'Environmental Good Practice in Hotels: Case Studies from the International Hotel & Restaurant Association Environmental Award' (ISBN 92-807-1623-9)

Green Globe

PO Box 396, Linton, Cambridge CB1 6UL, UK

Tel +44 1223 890255 Fax +44 1223 890258

Email GREENGLOBE@compuserve.com

Web <http://www.ggasiapacific.com.au>

Green Globe is a worldwide environmental management and awareness programme for the Travel and Tourism Industry. It partners the presentation of ECONETT which is a very useful source of information on the web at <http://www.wttc.org>

Greenpeace Pacific

Private Mall Bag, Suva, Fiji

Tel +679 312861 Fax +679 312 784

Email greenpeace@connect.com.fj

Greenpeace has a resource centre in Suva and has an environmental action pack for hotels and some other useful publications including 'Creating environmentally sound resorts - a guide for reducing environmental impacts from small scale tourist facilities on Pacific islands' and 'Sewage Pollution In the Pacific, and how to prevent it'

Commonwealth Department of Tourism

GPO Box 1545, Canberra, ACT 260

The Commonwealth Department of Tourism has published 'Best Practice Ecotourism - A Guide to Energy and Waste Minimisation' (ISBN 0 642 20526 4) which provides a detailed discussion of the issues and is full of practical ideas and case studies.

“The Composting Toilet System Book:

A practical guide to choosing, planning, and maintaining composting toilet systems, an alternative to sewer and septic systems”. ISBN number is 0-9666783-0-3

David Del Porto and Carol Steinfeld.

Published by The Centre for Ecological Pollution Prevention (CEPP) PO Box 1330 Concord, Massachusetts 01742-1330 USA

Distributed by Chelsea Green Publishing Company, White River Junction, Vermont.

Email EcoP2@hotmail.com

Web <http://www.cepp.cc>

“Guidelines for Low Impact Tourism:

Along the Coast of Quintana Roo, Mexico”, 2001 English Edition

Concepcion Molina, Pamela Rubinoff, Jorge Carranza

Coastal Resources Centre, University of Rhode Island, Narragansett Bay Campus, Narragansett, RI 02882, USA

Tel (401) 874 6224 Fax (401) 789 4670

Email rubi@gso.uri.edu

Web <http://crc.uri.edu>