# **Community Composting Schemes**

# Introduction

Community composting is where a community gets together to make compost. It is a very rewarding activity and it makes use of valuable resources that are so often regarded as 'waste' or 'rubbish'. It diverts garden debris and kitchen waste out of the waste stream - and so out of the landfills - and creates a useful, natural product for the garden which cuts down on the necessity for peat and so helps to conserve our natural bogland areas.

You, your garden and the environment will benefit from a natural soil conditioner that means all round improvement in your gardens and plants. Everything you need to make your garden healthy already lies in your home and garden waiting to be exploited.

Most garden debris and wastes can be recycled back into the soil - a far better alternative to consigning them to ever increasing landfills or bonfires. This recycled organic material can be used to provide plant food and improve the structure and health of the soil - an excellent (and free) substitute for peat and peat based composts.

One of the best ways to carry out the recycling process is to make a compost heap - a subject surrounded by mystique with everybody having their own rules for success. In fact, making a compost heap is easy. Another good reason for making your own organic conditioner is the peace of mind of knowing that you are not contributing to further exploitation of finite resources such as our wild bogs.

There are plenty of alternatives to peat compost available if you are prepared to look and pay for them. It does not mean that the alternatives must always be a second best to peat; most may be as good, or even better. But the best and easiest alternative by far is the creation of your own compost. About one half of your rubbish is likely to be kitchen and garden waste. Most of this organic material can be recycled and put to good use in your garden.

People are increasingly thinking about their local environment and how much waste they produce. Community composting is a way of putting words into action. At the Rio Earth Summit in 1992 world governments committed themselves to using the world's limited resources fairly and wisely. This was called Local Agenda 21. They realised that for this to become a reality they had to get things working at a local level. Local Agenda 21 is about local people setting the agenda for action to improve their immediate environment.

# Community composting is the way to help fight the war on waste, create an excellent source of free garden compost and protect precious peatlands.

# Why set up a community scheme?

Adopting a "co-operative" composting scheme gives everyone a chance to do a bit for the environment. All kinds of community groups can get involved:

• Residential Groups, Gardening clubs, Parish Groups, Wildlife Groups, Urban Groups, Scouts and Guides, Sports Clubs, Women's Institutes, Schools, Youth Clubs

There are several practical reasons for creating a communal heap.

A small back garden may not produce enough organic matter, nor the right balance of soft-to-woody material needed to create a successful heap. At least a cubic metre (1m wide x 1m deep x 1m high) is required to generate sufficient heat to break down all the material. Much of the compostable waste that finds its way to the tip is made up of garden debris that is difficult to cope with.

# Community composting benefits everyone because it:

- · Produces a focus for voluntary action
- · Provides a free source of one of the best soil enrichers
- · Creates a place for people to take waste if they do not have space to compost at home
- · Pools local composting knowledge/skills
- · Reduces pollution from back garden fires
- $\cdot$  Cuts down on illegal dumping in the locality
- · Shares tools and equipment
- · Generates a source of compost and mulch for local environmental improvement schemes
- $\cdot$  Raises awareness of the benefits of composting
- · May save participants money by reducing the amount of rubbish presented to or for collection.

# Setting up your Community Composting Scheme - Key Points

Forming a core of interested and enthusiastic volunteers is the obvious first step in forming a Community Composting Group. Advertising in the local press and shops is a good way to attract people. The number of people necessary to operate the scheme will depend on the scale and size of the community which will be served by it. It may be wise to limit the size of the operations until it is underway. Start small with room to expand. This should prevent the workload being too high and so prevent people from being discouraged and overwhelmed.

Many recycling projects start off with great enthusiasm but fail after a while. It may be worth keeping the following points in mind:

Have a clear idea of your objective. Is it:

- $\cdot$  To improve the environment?
- To develop a group or community?
- To make money?

# After this you will need to:

Establish a Community Composting Group Arrange a meeting premises and hold regular meetings Invite members of your local community to join the scheme Select possible sites Research funding sources Look into issue of planning permission Draw up a work plan Arrange for volunteer workforce Publicise your intentions to the community you are working in Monitor feedback For further information on the details of setting up a scheme and how to compost - check out **The IPCC Guide to Community Composting (order details at the end of this factsheet)** 

# Irish Community Composting Schemes & Contacts

Irish Peatland Conservation Council, 119 Capel Street, Dublin 1, Ireland. Tel. 01-8722397.

**The IPCC Guide to Community Composting (1998)** A 25 page book designed to help local groups and interested individuals establish community composting schemes to reduce the amount of material going to landfills and produce a sustainable alternative to peat for use in the garden.

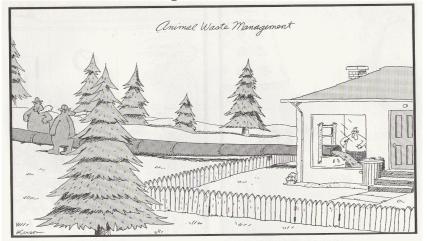
The IPCC Guide to Community Composting is for any enterprising person or group of individuals who would like to take practical action for the environment at a local level. It is a guide to the recycling of organic garden and household waste produced in all communities, and its conversion into useful compost to enrich soils in public and private areas.

The guide provides practical advice on what to compost, what is needed to set up a scheme, Funding Sources and how to organise the local community into a composting work force.

Five case studies highlight successful and beneficial schemes.

Paperback, Price £5.00

# **Ecological Economics**



"If we just enlarge the pie, everyone will get more". This has been the imagery of Capitalist growthmanship since the end of World War II- and I once did my share in propagating it. But the growth of the pie did not change the way the slices were distributed except to enlarge the absolute gap between the lion's share and the ant's. And whether the pie grows, or stops growing, or shrinks, there are always people who suffer from the behaviour of the cooks, the effluents from the oven, the junkiness of the pie, and the fact that they needed something more nutritious than pie anyway." Bertram Gross, Friendly Fascism

# What is ecological economics?

It's about thinking about human productive and consumptive activity as if there were *actually biological processes going on, as if there were laws of physics (ya canna change 'em).* It's about limits, 'side-effects' and consequences- the stuff you never hear about in the mainstream. Ultimately, it's about trying to devise ways we can get by fairly without turning the planet into an uninhabitable slagheap.

"Its distinguishing characteristic is that it sees the economy as a subsystem of a larger ecosystem that is finite, non-growing, and materially closed, while open to a flow-through (through-put) of solar energy that is also finite and non-growing. The biophysical constraints of the larger system upon the economic subsystem, and the co-evolving mutual adaptations by both systems to those constraints, is the subject matter of ecological economics." Daly, 1999 page xii

"... Daly claims that there are three alternate strategies for integrating economics and ecology. All three start with the notion of the economy as a subsystem of the entire planetary ecology.

**Economic Imperialism**; the economy is expanded to encompass the entire ecology, so that all energy and matter flows are regulated through price mechanisms. The ecosystem takes in solar energy and releases waste heat, while the economy generates material and releases heat into the ecosystem.

**Ecological Reductionism;** the economic subsystem is reduced to a minimum, the surrounding ecology is viewed as central. The ecosystem takes in solar energy and releases waste heat, while the economy takes in material and energy from the ecosystem.

**Steady-State Subsystem;** Viewing the two previous approaches as thesis and antithesis, this approach is the synthesis: it insists on "maintaining a boundary between the ecology and the economic subsystem and on 1)drawing it in the right place, and 2) putting constraints on the physical flows crossing that boundary in both directions." The ecosystem takes in solar energy and releases waste heat, while the economy takes in material and energy from the ecosystem and generates material and releases heat into the ecosystem.

"...a distinction between growth and development. **Development**, for Daly, means qualitative improvements, particularly in resource efficiency, so that economic activities do not exceed the regenerative and absorptive capacities of the ecosystem. **Growth** means quantitative increase in the amount of energy and materials taken from the earth and processed through the economy, returning to the earth usually in the form of waste. The economy must be viewed not so much from the perspective of money (GNP) as from a biophysical perspective: from source to sink, closely examining the resource-depleting and the waste-generating consequences of our choices." From review by Holly Stallworth

#### http://csf.colorado.edu/seminars/daly/holly-rev.html

#### How is it different from 'classical economics'?

Classical economics, in its implementation if not always in its 'theory', assumes that the planet provides resources and especially services (sites for disposal, clean air etc.) without cost. It assumes that more economic activity- even if it is clearing up oil spills, dealing with the consequences of industrialism etc.- is the measure of success. It equates 'growth' with 'progress'. It assumes that we are all calculating machines trying to maximise our own individual pleasure with no thought for other people/species/the future.

# What are the blind spots of classical economics?

How long do you have?! Read 'For the Common Good' for the whole lot. Noticeably, though the 'homo economicus' assumption- that humans' primary desire is for the endless accumulation of material wealth. Economic theory ignores/minimises the desire for community, solidarity, beauty, a liveable environment, leaving a legacy to our children.

#### So why is classical economics so successful...

...given that there clearly *are* laws of biology and physics which it is ignoring? The problem is partially a biological one in itself. It's not easy to think beyond your life span, your direct experience. For most of human history, it hasn't even been necessary. Clearly, though, as the authors quoted in this pamphlet show, such discipline is entirely possible. A deeper difficulty is that, back when the empty world model still appeared to hold, the theory entrenched itself too successfully to be uprooted. A useful parallel is the QWERTY keyboard. Old-fashioned typewriters will jam if the keys are pressed too quickly, so the letters were placed inefficiently, to force typists to slow down. Of course, this isn't relevant anymore- the world has changed, word processors can't jam. Alternative keyboards have been designed, but hardly anybody buys them. Despite its clunkiness, QWERTY is too successfully entrenched; a switch to a new system would simply cost too much, the training and manufacturing processes are in place, too many people would lose out. It's interesting, incidentally, that hardcore neoliberals get extremely worried about the 'QWERTY problem', since it's one of the clearest demonstrations that the free market doesn't inevitably produce the most rational result.

#### How useful is 'ecological economics' to us as activists?

- × It puts all the little bits of economic/ecological insanity we encounter in our daily lives and our reading of others' struggles into a bigger frame than 'Marxism' or 'anarchism'.
- It shows that many of the problems are not the result of any 'natural laws', but rather conscious decisions made
- *x* It indicates that the problems are bigger than we thought (not necessarily helpful!)
- *x* It begins to answer the "well, how would you do things differently?" question.

#### What are the 'holes' in steady-state (ecological) economics?

It demands, natch, a stable population. It demands we are far-sighted, and willing to sacrifice present 'pleasure' and 'advantage' for the sake of other species and humans yet unborn.

#### SMOKING!!!

So, the industrialized nations are hooked on burning fossil fuels. Rather like smokers are hooked on the evil weed. So what are some of the ways people 'quit' smoking?

*"I'll switch to a low-tar/filter brand."* This is like switching to natural gas instead of coal burning. (This, incidentally, is how Britain has met its Kyoto obligations)

*"I"ll cut down gradually"*. This is the Kyoto solution- a 5.2% reduction on 1990 levels which simply isn't enough.

"I'm allowed to smoke 10 a day, and I've already had 9 and it's only lunch time. Tell you what, I'll have 15 today and 5 tomorrow" This is what we've been doing all along

Finally: *you stop buying cigarettes yourself and smoke other people's.* This is "co-implementation", meaning we pay people in other countries to plant trees since these will allegedly offset the carbon our cars and factories belch out.

#### The words economy and ecology have the same root, oikos, "the home."

When Sir Stamford Raffles went to Singapore, he went by way of Indonesia and saw how self-reliant people were with the palms that provided them with everything they needed. He said 'These people are ungovernable'. There was nothing the government could give them that they wanted or needed. So what had to be done was clear. Cut the fucking palms down, so they became dependent, and hence governable. You can't govern independent people. They have no need of anything you can bring them.

# Bill Mollison (founder of 'permaculture') in Jeremy Seabrook's book 'Pioneers of Change'

Many nations have made progress in controlling their population growth, in limiting domestic income inequality, in reducing unemployment. They have also improved resource productivity by internalising environmental and social costs into prices. But nations' efforts in this regard are undercut by the ideology of globalization- a last-gasp attempt to re-establish the conditions of the empty-world economy by growing into the economic and ecological space of other countries, and into the remaining global commons. Daly, 1999, page 21

**Disclaimer:** This is not just your FIRST! booklet, but the first for me too. I don't know much about ecological economics. I haven't read or thought thoroughly enough. The second edition, whenever/if ever that is, will be broader-based. **PLEASE WRITE TO ME AND TELL ME WHAT YOU THOUGHT USEFUL/USELESS/ LACKING.** 

**Big But:** "When a normal economy doesn't grow, you have recession and misery!" Well, the fact that a jet plane- which is designed for flying forward- can't hover, doesn't mean that helicopters are impossible!! (With apologies to Matt, who hates this analogy)

#### How on earth would we get there?

It's classic chicken and egg; we won't have social and ecological justice until we have ecological economics, and we won't have ecological economics until.... It's hard to see how 'reforms' could short-circuit this. But replacing GNP with another less imperfect yardstick would be a good start. Ecological taxes that highlighted the real costs might help shift attitudes, but could fall most heavily on the poor. And we have to combat rampant consumerism without becoming hairshirt-ists.

Sad to suspect, we will not be shaken from our sleep- by enormous and undeniable ecological catastrophe(s) that even the West's money can't insulate from- until it is 'too late'.

#### They paved paradise and put up a parking lot!!

Modern economic theory originated and developed in the context of Calvinism. Both were bids for personal freedom against the interference of earthly authority. They based their bids on the conviction that beyond a very narrow sphere, motives of self-interest are overwhelmingly dominant. Economic theory differed from Calvinism only in celebrating as rational what Calvinists confessed as sinful. page 6 (Daly and Cobb)

Relations of production are difficult to identify; they are so much a part of our everyday environment that we take them for granted, not perceiving them as chosen by anyone, let alone the state. However, when an effort is made to challenge them, the situation becomes clearer. "In 1932-33, at a time of very high unemployment and depression, the Austrian town of Wurgl created its own interest-free currency which was distributed in return for public works. The notes were date stamped, and decreased in value by one cent each month, which encouraged rapid circulation. Taxes were paid, unemployment greatly reduced and local shopkeepers flourished. There was great interest, but the Austrian National Bank took legal action against it

and closed it down." A currency that did not accumulate represented a challenge to the state's role in determining relations of production...

page 174 of Alex Begg Empowering the Earth, citing Guy Dauncey, 'After the Crash'

When the Norse first arrived [in Greenland] they had shown tremendous flexibility and ingenuity, modifying the Icelandic economic model to their own needs. Later on, however, they appeared unable to make the necessary changes required to cope with the deteriorating climate and economic stresses. McGovern (1981) blames this increasing inflexibility on the growth of hierarchy and elitism within the Norse community. When there is little stress on a society there is no need to gather data, or to manage. As a society comes under climactic or economic stress there is a need for more data. However, there s a limit to how much data one person can process. People begin to specialize and the hierarchy becomes more stratified. The more stress, the more elaborate becomes the hierarchical structure to process the environmental and economic data. This increases the distance between social classes. Decisions will be made which benefit the elite and not necessarily the individual farmer. In order to justify this an increasing mystification of the elite was needed and this was probably achieved by increasing the power of the church. As the distance between farmer and elite grows, there is a danger that management effort goes towards maintaining the hierarchy, increasing conformity and ritual. If the elite managers perform well, searching out additional resources and alternative technologies, such as that of the Inuit, this separation can work to the benefit of the society as a whole, but the elite in Greenland clung to their rituals. McGovern suggests that a society which believes that lighting more candles to St. Nicholas will have a greater effect on the spring seal hunt than more and better boats is in deep trouble. The last records from Norse Greenland are of a Christian marriage and a burning for witchcraft.

page 131-2 of **Frances Drake, Global Warming; the science of climate change** (Compare this with our models of economics, and their usefulness for protecting the power and privilege of rich but utter disconnection from the real world!)



Liebig, the famous German agro-chemist writing in the mid-nineteenth century, believed capitalism has a long-run natural resource problem, and capitalist agriculture buggers up soil fertility -- Liebig's Law states that whatever necessity is least abundantly available\_ (relative to per capita requirements) sets an environment's carrying capacity, or an\_ economy's growth limit-point. And energy has always served that role in capitalism.

Economists counter-argue that resources are not finite.... when whale-oil ran out, Rockefeller provid[ed] mineral kerosene instead. Whale-oil had been essential for domestic lighting, lubricant and other purposes and was thought irreplaceable. Rockefeller's achievement in creating a 'standard oil' is supposed to show how substitutability is infinite, and that technology will always save us.

In fact, there is an earlier example of energy-substitution which seems to make that point even more clearly, which however is rarely mentioned. By 1750 English iron production had collapsed to a few thousand tonnes pa, furnaces everywhere closed, and the future workshop of the world came to depend on imports of iron from Sweden and Russia -- why? Because those places still had plenty of forest, therefore charcoal. But Britain had just enclosed its commons, the agrarian revolution was in full swing, and the forests had been cleared. Only when Abraham Darby and others learned how to make iron using pit-coal instead of charcoal, was the bottleneck removed. That was about 1750. Then iron supplies were plentiful and the Royal Navy had enough cannons and balls to see off Napoleon, which Boney never expected, so there you are. And because coal mines fill with water, James Watt or Newcomen invented the steam engine to pump them out, and thus was the Industrial revolution born. Darby's ironworks was in Shropshire, which overnight gave up using wood and stone to build with and turned to cast and wrought iron. They suddenly had so much iron they didn't know what to do with the stuff. They paved the streets with it, made boats of it, which didn't sink, they made iron rails for pit wagons to run on instead of wooden ones, thus birthing railways, they made missionary cooking pots and floated them down the River Severn to Bristol whence they went to Africa in exchange for slaves, who went to America and sent back cotton to Liverpool and Manchester... They even made the pulpits in the churches from iron (stern ironmanster patriarchs still stare down from stained glass windows at the humble worshippers) and they even buried themselves in iron coffins.

Such breakthroughs are supposed to give the lie to Malthusian doom and gloom. But the simple fact is that industrial capitalism was and still is entropically based upon the use of non-renewable hydrocarbon As an island in space, the world could not rely on imports from elsewhere; nevertheless, it was already heavily dependent upon imports from elsewhen. That we were importing from the past becomes clear when we logically extend Borgrstrom's ghost acreage [extra resources from fishing and trade] concept to include a third component. Technological progress had made mankind heavily dependent upon imports of energy from prehistoric sources. Man's use of fossil fuels has been another instance of reliance on phantom carrying capacity.

The energy we obtain from coal, petroleum, and natural gas can be expressed as "fossil acreage"- the number of additional acres of farmland that would have been needed to grow organic fuels with equivalent energy content. Mankind originally did rely on organic fuels, chiefly wood. Wood was a renewable resource, though even in the world's once vast forests it grew in limited quantity. Access to vast but non-renewable deposits of coal and petroleum came to be mistaken by peoples and nations as an opportunity for permanently transcending limits set by the finite supplies of organic fuel. No-one has ever found a substitute. Oil replaced coal, and US hegemony replaced British, but nothing can replace the industrial world's dependence on fossil fuels. When the oil runs out, and the world's population includes three billion teenagers (that will be the demography of 2020 AD), social crises of a severe nature seem unavoidable. From Mark Jones' "Notes on Oil"

When fossil fuels had been depleted enough to make supplies of them precarious, insufficient, and increasingly expensive, proposals for making up the shortfall included various versions of "energy farming"- growing crops from which fuels could be derived. The acreage required for future energy plantations is an obvious measure of the phantom carrying capacity upon which fossil-fuelled civilisation had been depending.

Catton page 41



The feature of the industrial revolution whose implications are insufficiently appreciated is the shift to fossil fuel energy and mineral materials. This is a shift from harvesting the surface of the earth to mining the subsurface; or, in Georgescu-Roegen's (1971) terms, it is a shift from dependence on energy currently coming from the sun to stored energy on the earth. This shift is extremely significant because these two ultimate sources of life sustenance differ in their patterns of scarcity.

Radiant energy from the sun is practically infinite in total amount (stock) but it is strictly limited in its flow rate- that is, the amount that arrives on earth during any period. Energy stored in fossil fuels and minerals is strictly limited in its total amount (stock), but relatively unlimited in its flow rate- that is, we can use it up at a rate largely of our own choosing. page 11 (Daly and Cobb)

# Classical economics worked well enough with 'frontiers' and spaces and places to get rid of waste (including 'waste' people). But it isn't 1492 anymore. In fact, it's later than you think...

Historically, in the 'empty-world' economy, man-made capital was limiting and natural capital superabundant. We have now, due to demographic and economic growth, entered the 'full-world' economy, in which the roles are reversed. More and more, the remaining natural capital now plays the role of limiting factor. The fish catch is not limited by fishing boats, but by remaining populations of fish in the sea. (Daly, 1999,page 52)

The potential for growth of money is theoretically unlimited, which obscures the possibility that there may be biophysical limits to economic growth. To use Herman Daly's metaphor, monetary analysis does not recognize the Plimsoll line, which indicates the maximum load capacity of a ship. Overloading (excessive

growth) may eventually sink the ship. Pareto efficiency- the current criterion of macro-economic healthensures only that the load is distributed in such a way that the ship sinks optimally! (Wackernagel and Rees, page 47)

# <u>Useful Terms</u>

*Chremastics*- "the branch of political economy relating to the manipulation of property and wealth so as to maximize short-term monetary exchange value to the owner. *Oikonomia*, by contrast, is the management of the household to increase its use value to all members of the household over the long run...." (Daly and Cobb, p. 138)

*Carrying Capacity-* the population of a given species that be supported indefinitely in a defined habitat without permanently damaging the ecosystem upon which it is dependent. However, because of our culturally variable technology, different consumption patterns, and trade, a simple territorially-bounded head-count cannot apply to human beings. Human CC must be interpreted as *the maximum rate of resource consumption and waste discharge that can be sustained indefinitely without progressively impairing the functional integrity and productivity of relevant ecosystems wherever the latter may be.* 

*Coasean-* idea that if you turn over 'common' assets to private individuals they will be better taken care of. e.g. If someone owned a whale, they'd stop it being harpooned...

*Ecology*- study of relations of living organisms to their environment; study of ecosystems; study of the environmental conditions of existence.



*Ecological Footprint-* An accounting tool for ecological resources. Categories of human consumption are translated into areas of productive land required to provide resources and assimilate waste products. It shows how much productive land and water we occupy to produce all the resources we consume and to take in all the waste we make. Westerners footprints are enormous, if compared to those of Majority Worlders.

*Externality*- anything the economists don't want to include in their calculations; the 'spillover effects' of activity. (Daly and Cobb page 53). Social/ecological cost-dodging.

*Natural Capital*- the ecological economists' term for the earth and its living systems; minerals, forests, watersheds, oceans, climate, soils, forests, etc. ...

**Paradigm**- the framework(s) of concepts /assumptions that people work within. For the West the neoliberal paradigm is individualism, more= better, growth etc. Paradigms have great staying power, to do with financial, career, emotional and mental investments in them. Evidence against a paradigm is ignored and/or ridiculed, then partially adopted. Eventually the paradigm collapses and a simpler framework, which explains things better, is adopted (Occam's Razor). See Kuhn, 1970. BUT, in this case the evidence will be the collapse of the eco-systems that support our activity, because capitalists can't/won't admit that they are killing the planet. So, we're probably fucked.

Pigouvian- A tax that tries to internalise costs. After Alfred Pigou

*Usufruct*- the right to use an object belonging to someone else on condition of not damaging it. One of the many rights swept away by military and legal force from the 17th century onwards. George Monbiot's barnstorming speech on this at the '96 Bristol Schumacher Lectures went down like a lead balloon with those rich hippie scum.

# **Reading List**

Adams, P. (1991) <u>Odious Debts</u> Very good account of the 'debt crisis' and its social and ecological consequences.

Athanasiou, T. (1995) Slow Reckoning: The Ecology of a Divided Planet

Catton, W. (1980) Overshoot The doomiest and gloomiest of all the doomsayers.

**Croall**, S. and **Rankin**, W. (1981) <u>Ecology for Beginners</u> Brilliant stuff- lots of important concepts explained painlessly. Hunt it down if you can.

**Daly**, **H.** and **Cobb**, **J.** (1989) For the Common Good Big fat beginners guide to ecological economics. The daddy of them all.

**Daly**, **H.** (1999) <u>Ecological Economics and the Ecology of Economics</u> Bunch of cool essays that rip into 'neo-classical' economics, refute criticisms and offer vision.

**Drake**, **F.** (2000) <u>Global Warming: The Science of Climate Change</u>. Pretty good- the science in the first few chapters will make your ears bleed though...

George, S. (1998) The Lugano Report. Bitter satire from an excellent writer.

**Heilbroner**, **R.** (1967) <u>The Worldly Philosophers</u> good account of the 'great' economic thinkers (Dead White Males) and their context. Nothing about the environment.

Korten, D. (1995) <u>When Corporations Rule the World</u> Readable and informative, but completely disregards of the effect of military research, organisation and spending on industrialism over the last two hundred years.

Kuhn, T. (1962/1970) The Structure of Scientific Revolutions Heavy, but essential.

**O'Connor**, **M.** ed (1996) <u>Is Capitalism Sustainable?</u> Really interesting collection of essays. The answer, by the way, is 'no'.

Wackernagel, M. and Rees, W. (1996)<u>Our Ecological Footprint: Reducing Human Impact on the Earth</u> Brilliant, and short overview- very accessible

# <u>Web sites</u>

**www.dieoff.org** hardcore 'we are fucked' site, that revels in its Malthus idolatry. http://csf.colorado.edu/ecol-econ/ discussion site for ecological economics. The forum is a good place to

pick up on basic ideas and plugs for interesting books/articles.

www.ecologicaleconomics.org/about International Society for Ecological Economics

www.neweconomics.org New Economics Foundation

www.puaf.umd.edu/faculty./facultystaff/daly.htm Herman Daly home page www.geocities.com/RainForest/3621/DALY.HTM Ch. 5 of Steady State Economics Complexity, Problem Solving and Sustainable Societies, by Joseph A. Tainter

www.dieoff.org/page134.htm

Combustion in the RainForest: Ecology, Energy and Economy for a Sustainable Environment www.geocities.com/Rainforest/3621/index.html

# Freecycling

An interesting revitalisation of the Gift Economy described by Marcel Mauss and Richard Titmuss, the Free Cycle Network is growing daily. Some of the material used at the Climate Camp was acquired through freecycle.

The Freecycle Network<sup>™</sup> is made up of many individual groups across the globe. It's a grassroots and entirely non-profit movement of people who are giving (& getting) stuff for free in their own towns. Each local group is moderated by a local volunteer (them's good people). Membership is free. To sign up, find your community by clicking on the region on the left. You may then go directly to your local group by clicking on "Go To" or you may immediately joining by clicking on "Join." It will generate an automatic e-mail which, when sent, will sign you up for the local group and send you a response with instructions on how it works. Can't find a group near you? You might want to consider starting one (click on "Start a Group" for instructions). Have fun!

The Freecycle Network was started in May 2003 to promote waste reduction in Tucson's downtown and help save desert landscape from being taken over by landfills. The Network provides individuals and non-profits an electronic forum to "recycle" unwanted items. One person's trash can truly be another's treasure!

# How does it work?

When you want to find a new home for something -- whether it's a chair, a fax machine, piano, or an old door -- you simply send an e-mail offering it to members of the local Freecycle group.

Or, maybe you're looking to acquire something yourself. Simply respond to a member's offer, and you just might get it. After that, it's up to the giver to decide who receives the gift and to set up a pick-up time for passing on the treasure.

Our main rule: Everything posted must be free, legal, and appropriate for all ages.

Non-profit organizations also benefit from The Freecycle Network. Post the item or items you want to give away and specify that you wish the gift to go to a non-profit cause. It's entirely your choice! It's a free cycle of giving.

# Who can use The Freecycle Network?

Think globally, recycle locally. The Freecycle Network is open to all communities and to all individuals who want to participate. Freecycle groups are moderated by local volunteers from across the globe who facilitate each local group – grass-roots at its best!

Reduce Repair Reuse, Recycle

Do your bit to be frugal; Frugal living means taking notice of the 4 Rs.

# Freecycle hints for giving stuff away - please read this bit:

In the guidelines it suggests leaving it overnight after you've offered something and then picking someone - rather than just giving stuff to the first person who gets their request in. It seems sadly that some people are bragging about "having got the last 30 items" because they check their email very frequently. Obviously this is massively unfair on people who work or can't check their email as often, so please leave it 24 hours and then pick someone.

You can join in with freecycling - freecycling is when you give stuff away rather than take it to the tip or put it in the bin. It's great for items like old bikes, TVs; things which still work and you know someone would get use out of - if only you knew who!

You can join your local freecycle group on-line - post messages about the stuff you've got to give away and see how fast stuff goes!

Rules are simple. Everything given away must be free. You can't post wanted ads until you've given away something and then not more than 1 a month! It's better to give than to receive!

#### If you're hard up for cash then try e-bay for selling stuff rather than giving things away.

# Meat, dairy, and carbon emissions

This article is adapted from 'Hard to Swallow' by Jonathon Porritt, 'The Guardian', January 4, 2006.

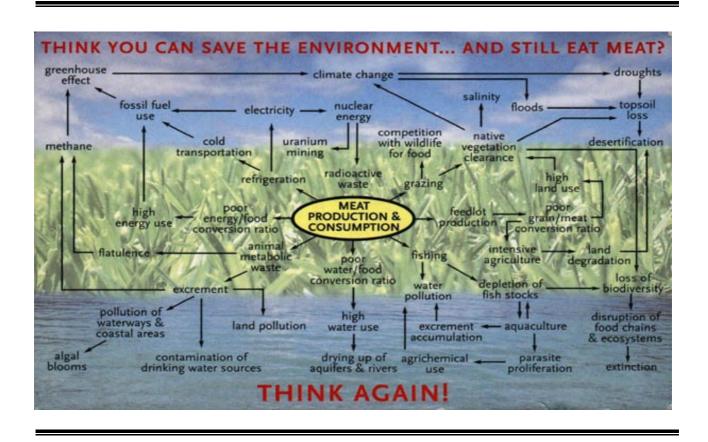
Each of us could make a bigger contribution to reducing emissions of greenhouse gases by becoming a vegan than by converting to an eco-friendly car.

Researchers at the University of Chicago have calculated the relative carbon intensity of a standard vegan diet in comparison to a US-style carnivorous diet, all the way through from production to processing to distribution to cooking and consumption. An average burger man (that is, not the outsize variety) emits the equivalent of 1.5 tonnes more CO2 every year than the standard vegan. By comparison, were you to trade in your conventional gas-guzzler for a state of the art Prius hybrid, your CO2 savings would amount to little more than one tonne per year.

The basic rule of thumb is that it takes 2kg of feed to produce every kilogram of chicken, 4kg for pork, and at least 7kg for beef. The more meat we eat, the more grain, soya and other feedstuffs we need. So when we hear that the total global meat demand is expected to grow from 209m tonnes in 1997 to around 327m tonnes in 2020, what we have to hold in our mind is all the extra hectares of land required, all the extra

water consumed, the extra energy burned, and the extra chemicals applied to grow the requisite amount of feed to produce 327m tonnes of meat. Oil is used to manufacture the fertilizers required by industrial agriculture, to power agricultural machinery and to transport foodstuffs. When we consume the products of industrial agriculture we are consuming oil and emitting carbon dioxide, just as we do when we drive a car.

A vegan diet consumes less agricultural land and less fossil fuels. Quite apart from concerns about the welfare or animals, concern about climate change should push us to reduce the amount of meat and dairy that we consume.



**Do Vegetarians Have Smaller Feet...?** 

# ... or is it their compassionate, sustainable and more equitable diet that reduces their ecological footprint?

If you're reading this article then you're already aware of the need to reduce the impact of our existence as a species. Given the shockingly high number of environmentalists who are not yet committed to vegetarianism, it seems likely, however, that you are not fully aware of the many positive effects vegetarianism can have on both local and global environments and in particular it's potentially significant role in helping to slow global warming, and modify climate change.

# Land and Energy use

Livestock cover one third of the World's land mass, and the number of animals reared for food is growing hugely, mainly in the developing world. This growth is fuelled not by grazing animals, pursuing a natural existence, but by animals fed on crops. A chicken (the most efficient land animal to fatten) needs to be fed 2.1 - 3 kilos of cereals or pulses to produce a kilo of poultry meat; a pig 4 - 5.5 kilos, and a beef cow 10 kilos.

As with all production, crops grown for animal feed require the input of energy derived on the whole from fossil fuels and once again, growing food through the life-cycle of an animal is very inefficient in comparison with the direct production of plant-based foodstuffs for human consumption. It has been estimated that it takes two calories of fuel to produce one calorie of soya, and three calories to produce one calorie of corn or wheat, but 54 calories to produce one calorie of beef.

An adult human eating a typical omnivorous diet need 0.32 hectares of UK land to sustain their food consumption. A vegetarian needs just 0.14 hectares and a vegan 0.7 hectares. On this basis, the UK could sustain a population of 250 million people eschewing all animal products. More constructively, if the UK population were to cease eating meat, current agricultural practices could be abandoned in favour of less intensive methods with more organic production and significantly less input from artificial fertilisers and animal manure. Land would become available to grow more trees, and start producing significant quantities of bio-crops (in the EU you can produce 3000 litres of ethanol annually from a single hectare of wheat).

Bio-fuels, of course, have the potential of being carbon-neutral over their life cycle, assuming that one chooses the crops carefully (some crops actually sequester carbon in the soil), limits the use of nitrogen based fertilisers, and grows for local distribution and use close to the point of production.

#### **Climate Change**

The UN Food and Agriculture Organisation estimates that Agriculture contributes about 30% of total global anthropogenic emissions of Greenhouse Gases (GHGs).

15% of total anthropogenic Carbon Dioxide emissions are directly related to agriculture, mainly relating to land use change, especially deforestation (linked to both beef and feedstock production).

Methane is estimated to be responsible for around 20% of global warming, and 15% of that methane comes directly from ruminants and manure (35% of the UK's emissions). Since methane has a 12 year lifespan, compared with 120 years for CO2, many experts are coming around to the idea that methane is one area that significant investment should be put into to investigate ways of reducing the outputs of individual animals through feed selection, and manure management schemes. However if emissions grow in direct proportion to the UN's projected increase in livestock numbers, global methane emissions could be 60% higher by 2030.

14% of Nitrous Oxide emissions come directly from cattle and feedlots, and a further 14% from agricultural soils, manure and fertilisers. The UN estimates the total production of manure is projected to rise by about 60% by 2030.

With current farming practice contributing so greatly to the gases most responsible for global warming, surely one of the simplest steps any individual can make towards positive change is to stop consuming meat?

#### Other environmental factors

Rearing animals for meat has many other detrimental effects on the natural environment. Ammonia from animal waste and agricultural fertilisers damages aquatic and plant life by contributing to acid rain. Intensive grazing causes soil erosion and nutrient depletion, which harms plant life and in some cases renders the soil infertile, creating vast, barren deserts where previously there was fertile land. Water – the very life blood of the planet – is another precious resource squandered daily by the global meat trade. Nine hundred litres of water are required to produce 1 kilo of wheat, which sounds like a lot until you consider the incredible 100,000 litres needed to produce a single kilo of meat.

#### What you can do

So, the arguments are persuasive, but many enlightened, environmentally aware people continue eating meat. It is part of our inherited culture and perhaps many find it difficult to change the habits of a lifetime. However, with free support and advice available from many organisations, including The Vegetarian Society, there really is no excuse for remaining an apologetic meat-eater, or even a fish-and-chipocrite.

Article kindly written by the Vegetarian Society www.vegsoc.org