

# ***STRAIGHT TALKING***

## ***on ending global warming***

**The only comprehensive, common sense plan we have, to totally fix the problem. Oil and coal loudly dispute the plan.**

- \* Change to biofuels and end dependency on petroleum fuels. This also fixes balance of payment problems.**
- \* We phase out coal and phase in nuclear energy.**
- \* Simultaneous we remove existing greenhouse gasses by slightly modified, no-chemical farming practices.**
- \* These actions are safe and will cost each of us, next to nothing. Don't believe oil-funded anti-everything critics. It actually is that simple.**

*STRAIGHT TALKING* is an overall summary and update of the concepts and proposals argued for in the book ***PRIORITY ONE Together We Can Beat Global Warming*** by Allan Yeomans. The full text of which is currently available to you at:

[www.yeomansplow.com.au](http://www.yeomansplow.com.au)

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**Please! Let's get the message out. Your help is all that people have. That's the reality. It's imperative that thinking people know the facts, and take action now.**

Professor Harry Messel. BA BSc Phd DSc. Positions held: Professor of Physics, University of Sydney. Vice Chancellor and Chancellor of Bond University Queensland.

Says, " ---- *I believe his concepts warrant immediate investigation by all relevant research organizations. If they confirm the viability of what Yeomans argues in Priority One his concepts should then be fostered by agricultural institutions and governments in all countries. ----*"

Professor Stuart B. Hill, Foundation Chair of Social Ecology. School of Social Biology. University of Western Sydney.

Says, " *Allan Yeomans has challenged us to wake up and do something now to ensure that our species has a future ----This book (Priority One) lays out a way to do this that has so far been surprisingly neglected by most scientists and environmentalists -- If we fail in this project, (to end global warming) we must bear the guilt of condemning our children and grandchildren to challenges that we can hardly imagine.*"

Rob Borbidge. 35<sup>th</sup> Premier of Queensland. Honorary Doctorate Griffith University.

Says, " *Yeomans is uniquely experienced in fertility enhancing agriculture and meteorology. His book Priority One is an innovative approach to combating global warming and climate change. Priority One is essential reading, not only for environmental protection agencies, but for all related agencies of government.*"

Professor C.E. (Wally) Wallington OAM., Positions held: Professor of Mathematics and Director of the Institute of Marine Science, University of NSW; Head of the School of Applied Science, Canberra College of Advanced Education; visiting Professor at the Institute of Atmospheric Physics, German Aerospace Establishment Oberpfaffenhofen; Chairman of the Scientific Section of OSTIV.

Says, " ---- *One is the innovative way the author presents the major air, water, and pollution and greenhouse effect factors in terms of water depths and quotas per person. The other is his scenario of an integrated political, technical and social approach to sustainable agriculture. As a meteorologist, I commend the work. ----*"

Bruce Brockhoff, John Buchannon, John Blackwell, Mike Borgelt, Brad Edwards, Arnie Hartley, Paul Mathews, John Rowe, and Tony Tabart. All long term Australian and International gliding competitors commenting on the author's metrological experience,

Says, " *At daily pre-flight briefings his explanations of weather phenomena existing, and what might be expected during the race was concise and clearly explained. His assessments were always well respected by competing pilots. Allan Yeomans has a wealth of knowledge and understanding of meteorology.*"

David Holmgren (co-founder with Bill Mollison of Permaculture) in his new book *Permaculture: Principals & Pathways Beyond Sustainability*, in acknowledging the concepts proposed in *Priority One* of mitigating global warming by soil fertility enhancement,

Says, " -- *The greenhouse issue simply gives us another good reason to get on with the job of rebuilding the natural capital of soil humus as essential for humanity's survival in the post-fossil fuel era ----*".

**It is possible, it is feasible, and it is practical  
to bring the world's atmosphere back to normal.**

**We *can* terminate global warming.**

**This is what we must do, and it will work,  
and it *really will* cost next to nothing.**

# **THE PLAN**

## **FIRST**

**We must accept the reality that information on environmental issues and global warming issues are being manipulated by skilful public relation gurus to maintain the sales of fossil carbon based fuels and products.**

## **SECOND**

**We remove the excess carbon dioxide from our atmosphere. We do this by modifying our agricultural practices to enhance the buildup of soil organic matter.**

## **THIRD**

**For large-scale industrial power generation, we switch from a system primarily based on fossil fuels, to a system primarily based on nuclear fuels. It is both the only feasible option, and the safest.**

## **FOURTH**

**For our mobile transport fuels we switch totally to ethanol and biodiesel produced from sugarcane and grains, and oil palms and oil seeds. That's for cars, trucks, busses, ships and aeroplanes.**

## **And now those statements in detail.**

**FIRST**                    **We must accept the reality that information on environmental issues and global warming issues are being manipulated by skilful Public Relation gurus to maintain the sales of fossil carbon based fuels and products.**

It is nonsense to imagine that the fossil carbon industries are anything other than acutely aware that ending global warming means human society ending its dependence on fossil carbon based products.

The thought that society might redirect itself, and switch to fuels and systems that stop global warming is the oil and agrochemical industries' worst nightmare. They are terrified of us ending our current unhealthy dependency of their products.

And, like the cigarette companies they understand that their survival relies on our dependency being maintained. And just like the cigarette companies they know clever manipulative public relations are their most effective weapon.

Hence the confusion we all now feel on global warming issues. Hence also the rocketing expansion in a plethora of inconsequential and irrelevant environmental issues.

We must stop trusting the doctored information and PR releases put out by the oil lobby and distributed through their skillfully nurtured and manipulated environmental organizations.

R.J. Reynolds Tobacco Company of Winston-Salem, North Carolina (Camel cigarettes, Winston cigarettes etc.) acknowledged in 1975 "we are in the business of selling an addictive drug". Starting then, all the major US tobacco companies got together and set about "proving" that cigarettes weren't really all that bad.

And if you are in the oil business, how do you continue to sell your products in the light of global warming; your biggest sellers being fuels and agrochemicals? You too create and foster fictions.

Fossil fuel companies suggest or claim -- global warming doesn't exist -- it is not proven -- it's safe anyway -- it can't be stopped -- or can be stopped and we are working on it --- invent a "Peak Oil" concept which implies we will run out of oil and so the problem will go away -- peak oil concepts means high fuel prices are understandable -- biofuels farms means less food and more starvation -- biofuels use too much land -- biofuels are almost as bad -- we just found plenty of oil -- etc. etc.

The development of a cheap efficient battery to power cars is a terrifying thought to any thinking oil company executive. When considering global warming the all-electric car has tremendous sales appeal. The major counter argument available to the oil companies is that the electricity to charge the battery comes from a fossil fueled power station.

However, nuclear energy generated electricity nullifies these arguments. It was inevitable that oil interests realized they required the continued existence, and availability of a vociferous and well-funded anti-nuclear movement.     1

All forms of sustainable energy systems, not just nuclear, that produce or have the potential to produce cheap carbon dioxide free electricity, are the mortal enemies of the oil lobby. Carefully scripted green movements are used to mouth the "anti-whatever" clichés, and suppress the threat.

Hydroelectric systems receive the wild, free-running, mystic and magical river treatment. Wind power generating systems get the dead birds, the noise, the ugly, treatment. Geothermal get the interfering with nature, or upsetting volcanoes treatment. Tidal power always kills off some rare fish etc. etc. The anti competition campaign is always never ending.

Then there is the blind faith in nonsense strategies. Among these, hydrogen fusion power generation (controlled hydrogen bombs) is always trumpeted, knowing it's extremely unlikely to ever be feasible. (Top nuclear physicists often quip, "nuclear fusion will always be fifty years away".)

We are also told that a solution to coal and gas power stations exhausts is to collect (how is not yet known) the millions of tonnes of carbon dioxide they discharge each year, and using giant compressors or huge refrigeration machinery, compress the gas, or liquefy it, or freeze it into a solid, and then bury it where it will stay safe for ever.

The concept is now promoted as "geological sequestration".

However the simple arithmetic doesn't add up. When carbon dioxide freezes it becomes our familiar "dry ice". (The liquid form has the same volume.) A coal-fired power station, sufficient for a city of one million people, requires TWO huge trainloads of coal every week to feed it. With geological sequestration, every week the power station would have to get rid of, what equates to SEVEN huge trainloads of dry ice. Then the dry ice, the compressed gas or liquid, or whatever, has to be buried somewhere very, very deep, and the burial paid for. It's all feel-good, Harry Potter science. It is designed to placate us for another few years.

The oil industries, along with the green movements are adamant supporters of solar cells (photovoltaic cells). There is a reason. Solar cells, even at near give-away prices produce power at costs ten to twenty times any feasible alternative system. And it's still an intermittent supply. Maybe over-night industrial electricity storage might be feasible - but never for a few weeks of rain. So they support solar cells.

Sadly, it's now necessary to think hard over what any particular green movement is demanding. Does what they demand ultimately lead to continued or increased sales of oil or fossil fuels, agrochemicals or plastics? If what they support ultimately means global warming stays with us or gets worse, don't trust their motives. Global warming, with its horrendous and cancerous climate change is by far the greatest threat, life as we know it has ever faced.

The International Union for the Conservation of Nature (IUCN), and its close ally, the Natural Resources Institute, are responsible for developing most of the major environmental policies now being enforced or promulgated by the United Nations. And that's frightening for global warming. There are over 800 conservation organizations listed as members of the IUCN. Friends Of The Earth International is a member of the IUCN. 2.

The IUCN Mission is: "To influence, encourage and assist societies throughout the world to conserve the integrity and diversity of nature and to ensure that any use of natural resources is equitable and ecologically sustainable."

It was appropriate at the time, but fifty years ago nobody had heard of global warming. The IUCN is thus, not in any way chartered to have an interest in global warming and preventing climate destabilization.

Their Mission, coincidentally, beautifully aligns with the marketing strategies of the fossil fuel industries. And those people are great at exploiting opportunities. For example:-

Here in Australia, in 2000, the Australian Conservation Foundation (the ACF) promulgated a carefully scripted report *Natural Advantage: A Blueprint for a Sustainable Australia*. Sounds good? Sure. But to produce, or maybe orchestrate the report, the ACF tied up closely with British Petroleum and Shell Oil; and two other major companies. They were Rio Tinto, with coal exports out of Australia in 2005 of 37,000,000 tonnes, and BHP Billiton Limited, described as the world's second largest exporter of coal for power generation

The WWF, (Worldwide Fund for Nature international) and additionally, the Australian Conservation Foundation are intimately associated with the IUCN. The CEO (Chief Executive Officer), of WWF Australia was, until very recently Regional President Australia and South Asia for BP (British Petroleum) and Amoco (America Oil Company). We can see why the ACF has stated in their reports, "The ACF would welcome the opportunity to play a constructive role in investigating the possibility of developing biofuels." But even this tongue-in-cheek support for biofuels is qualified by all such organizations insisting that only existing farmland be used to grow it. Hence the structured PR criticism that large biofuels production would mean hardship and starvation to the world's poor.

Projects designed to have a significant effect on preventing global warming appear to receive less than half of one percent of the amount of funding collected and distributed to what are often absolutely hypothetical biodiversity causes. Yet global warming and destabilized weather phenomena are far and away the greatest threat to all of our Earth's biodiversity.

It appears impossible to find, any where in the World, any significant environmental movement whose prime objective is to end global warming. A thoughtful person might think that peculiar reality is probably not just happenstance.

If you believe global warming has to stop, then be extremely wary of what self-anointed environmental movements are encouraged and coached to preach. Thoughtful citizens must no longer tolerate blatant and ongoing hypocrisy. See *Priority One* Chapter 9.

## **SECOND**

**We have to remove the current excess carbon dioxide from our atmosphere. Agriculture can do this for soil is the perfect carbon sink. Unfortunately for us, no other assured and available carbon sink exists.**

When the sun is shining solar energy is available, and the green chlorophyll in plant leaves absorbs carbon dioxide from the air. It then chemically combines the carbon with tiny quantities of minerals, and lots of water, both absorbed by the plant's mass of fine root structures. Living plant material is created, and free oxygen is released into the air as a "waste" product. The process is called photosynthesis. It is the very basis of all life.

When above ground plant material, especially the grasses are bitten off, harvested or mown, the plant immediately sheds some of its now excessive quantity of fine root material to permit the plant's rapid regrowth. This crop of shed dead roots, along with any loose surface litter, is soon consumed by soil fungi, bacteria, actinomycetes, earthworms etc. Stable soil humus is formed. The total of this mass of active soil life and all its products is described as "soil organic matter". This is the predominate process for the formation of fertile soil. An atom of carbon can thus exist as an ingredient of atmospheric carbon dioxide, or it can exist as an ingredient of soil humus. Or our atom is in transition. In agricultural biological processes the atom shifts from one mode to the other in a constant balanced interchange. Mining and burning fossil carbon materials overloads many millions of years of stability. And levels of atmospheric carbon dioxide constantly climb.

Carbon dioxide is 27% carbon. Soil organic matter is 58% carbon and that soil carbon can only be derived by the plants extracting carbon dioxide from the air. Soil fertility is determined by the quantity of soil organic matter it contains. In rich fertile soils there are hundreds of tonnes of soil organic matter in a hectare. Ground up rock powder is just powder. However, if it contains 5% organic matter it's rich, valuable, loamy soil. Highly mineralized soils, when farmed properly simply achieve high fertility levels more easily. Poor farming practices on the other hand, destroy soil organic matter.

A dramatic example is the change in fertility levels of the Great Plains areas of the United States. These soils have been in fertility decline for over two centuries. In the last three-quarters of a century the decline has been most rapid. The carbon released by the breakdown of the soil organic matter became atmospheric carbon dioxide. The volume of carbon dioxide that entered the atmosphere this way is approximately the same as has come out of every exhaust pipe of every car that every American has ever driven since the advent of Henry Ford's first T Model in 1908 We reverse that process. Re-establishing soil fertility levels is easy, but it means a change in our general agricultural practices. Increasing the natural fertility of soil can only occur by using agricultural practices that produce large quantities of soil organic matter and encourage active soil biological processes; not kill it.

We need to bring the world's atmospheric carbon dioxide levels back from their current extreme levels of 380 ppm (380 Parts of carbon dioxide Per Million parts of air) to near the levels that existed for at least the last half a million years - back to levels existing before our extraction and burning of coal and oil (and now natural gas). - back to under 300 ppm - back to the levels prevailing from even before the evolution of modern humans. We can do this simply by increasing the organic matter and thus the fertility levels in the world's agricultural soils along with the other soils under man's direct control, i.e. golf courses, park lands etc. In most soils, organic matter content varies from a little under 2% by weight to often over 20%. We need to raise those percentages on average another 1.6% and raise them through to a depth of 30 centimetres, or one foot, (or for farmers three hands)

Do that and our immediate global warming problem would be totally solved - it's just simple arithmetic. Then this constant deluge of "freak weather" based disasters the world is now experiencing would immediately cease.

Increasing soil organic matter content is easy. It has been part of all sustainable agricultural practices for thousands of years. Here is one dramatic and typical example of what can be done. Andre Leu is Chairman of the Board of The Organic Federation of Australia. He owns 150 acres of land near Cairns, Queensland. He grows tropical fruit. In 1992 he set about developing the property and enhancing the fertility of his farmed soils. By wise and indeed quite profitable farming, and using what are essentially standard organic farming techniques, he has increased the richness of his soil in the top 600mm or twenty-four inches by a factor of 11%. That is twice the depth envisaged and works out at an incredible fourteen times the average needed to end global warming. And those rises in organic matter content are not that unusual for organic farmers developing their soil and subsoil; even in broad acre farming.

A broad acre example; using essentially organic farming techniques, which means no agricultural chemicals - and as described in *Priority One* Chapter 8 - John Sweet on his beef property "Rugby Run", inland from Mackay, Queensland, developed a closely monitored 1000-acre area. Typical of properties in the area, below 50 mm (or two inches) the soil organic matter content drops to under 1%. However, in just four years on John Sweet's farm, the soil fertility band had deepened to 300 mm (or twelve inches). There was an almost startling rise in beef productivity. Stable organic matter content rose by a conservatively estimated average of 8%. Those organic matter content increases were slightly more than five times what is needed to stop and correct global warming.

Agricultural chemicals are notoriously lethal to microbes, fungi and earthworms; the things that manufacture soil humus. Agricultural practices therefore must swing back towards systems similar to those used in organic and biological farming - in essence farming practices operating before the development and marketing of powerful agricultural chemicals. . So how do we, the voters, guarantee that this absolutely essential switch to fertility enhancing agriculture really happens? How do we encourage the farm sector to make the change? We do two things. We dogmatically ask for, and buy, organic labeled or similarly labeled food, produce and products. Farmers are smart, and quick to follow market trends, and will produce the goods. And it's good for us in two ways, it stops global warming and secondly, organic type food is safer, tastier, and incredibly more nutritious than chemically dependent agricultural products. **Even if organic foods were more expensive volumetrically, they're most certainly less expensive nutritionally.**

Secondly we have to appreciate that the agrochemical market is huge and powerful, with logical, well-structured marketing and public relations objectives. They need total farmland areas to be reduced to encourage a high intensity, chemically dependent agricultural system. They need to keep rivers flowing to flush the poisonous waste chemicals out to sea. They need decreased farm soil fertility that necessitates massive chemical inputs. They need unhealthy crops that require continued applications of herbicides and pesticides.

The marketing essentials of the agrochemical companies are indeed "An Inconvenient Truth". But for the rest of humanity, stopping and fixing the world's horrendous weather problems is vastly more important, and rapidly becoming critical

We have to tell our politicians and governments, constantly and loudly what is needed, and what we want them to do about getting the excess greenhouse gasses out of our air.<sup>5</sup>

## **And so we demand, ASAP that they ---**

- 1 Recognize that the development of rich, fertile and productive soil can be best and most rapidly achieved through the growth cycle of efficiently watered pastures.
- 2 Modify the tax laws to disallow tax deductibility on the use of agrochemicals. It is common sense that the general taxpayer should not subsidize sales of agricultural chemicals and thereby fund global warming.
- 3 Put high and prohibitive tariffs on all non-organic food. We only import if it's organic and thus we force farmers all over, to start improving their own soil fertility.
- 4 Ensure people recognize that a fully-grown tree is useless in fighting global warming, or soil salination. And recognize that nonproductive tree planting wastes money and resources. Tropical rain forests are at best, greenhouse gas neutral. The Amazon jungle is huge but in helping to halt global warming its real value is in supplying us timber to replace an array of fuel derived construction materials. Otherwise, as it continues to dry out, its timbers will burn. It will then become an horrendous source of greenhouse gasses.
- 5 Remove all restrictions on land, clearing especially where soil fertility enhancement sequest more carbon than held in the original trees, or when the removed timber is systematically used to replace petroleum based fuels or products.
- 6 Recognize that the most economical system of storing irrigation water is in hundreds of low cost earthen farm dams, which in their turn replenish the nation's aquifers.
- 7 Remove all the insane and bureaucratic restrictions on the storage and use of the rainwater that falls on a farmer's own land. In addition, here in Australia that they fully understand that the hypocritical restrictions recently imposed on farmers were created solely to benefit the agrochemical companies' marketing strategies.
- 8 Understand that rivers in every affluent country are being poisoned by agrochemicals washing off farms. It is very rarely from sewage, as is always suggested. Here in Australia specifically it therefore makes more sense to legislate against excessive use of chemicals, than to legislate that flushing the chemical waste down our rivers and out to sea is the higher priority. And often it's not safe then. The poisoning of the ocean waters of the Gulf of Mexico is a prime example of agrochemicals not only destroying soil fertility but also destroying an ocean basin containing twice the volume of seawater as in the whole Mediterranean.
- 9 Recognize that the creation and marketing of "carbon credits" is a clever oil, gas and coal marketing strategy. A carbon trading system allows them to simply buy "coupons" that permit the continued mining of fossil fuel deposits.

The majority of these "carbon credit" coupons are the rewards or incentives paid to farmers for taking good land out of useful food production and growing instead, worthless trees. Worthless because if the trees are ever harvested, all the earned carbon credits are automatically re-debited. Best is increase the nation's soil fertility and beat the fossil carbon industries at their own game. We therefore demand that soil carbon sequestration worldwide, qualifies absolutely for carbon credits. It is important that we all recognized that increasing the humus and organic matter content of a particular soil has a feasibility limit. The initial high percentage rises in the soil organic matter content, ultimately levels out. The soil is then very fertile. However, continuing to increase organic matter content progressively becomes more difficult and less economical. The reality is that there are hundreds of times the quantity of easily accessible oil, gas and coal in the ground than there is accessible soil to economically sequest the greenhouse gasses they can generate.

Enhancing the fertility of soils is our one and only trump card to save us from impending irreversibility in global warming and weather destabilization. We must use it only to give us time to end the use of fossil fuels, not simply to stay in a losing game a few years longer. 6

**THIRD** For large-scale industrial power generation, we switch from a system primarily based on fossil fuels, to a system primarily based on nuclear fuels. It is both the only feasible option, and the safest.

Fossil fuel power generation must not be allowed to continue altering the composition of our planet's atmosphere and destabilizing world weather systems. Nuclear power stations are now exceptionally safe and comfortingly reliable. There are now 340 operating nuclear power stations worldwide. They are located in thirty-four separate countries. Fifty-six countries own and operate nuclear research reactors. Hospitals and university have them. Today almost any substantial corporation or wealthy individual can purchase and operate a nuclear research reactor.

The proliferation of nuclear weapons is not determined by how a country generates its industrial power. It is totally determined by the wealth and nature of its government, and now, the will and fortitude of the international community. Biological weapons are a greater threat by far to the world community than nuclear weapons. Global warming is worse. Sadly global warming is becoming unwittingly established and that phenomenon will kill more people and destroy more human wealth than is likely from any weapons system yet envisaged.

Anti-nuclear public relations organizations are paid to market the myth that nuclear radiation, at any level is a grave risk to human health. That is a lie. Nuclear radiation is like sunlight. High concentrations of either will kill you. The human body functions better when exposed to moderate levels of both sunlight and nuclear radiation.

It is now well documented that exposure to nuclear radiation levels, many times higher than the world average, improves both human health and longevity; even cancer risks are lowered. Guarapari (population 70,000) is a seaside health resort town on the Atlantic coast just north of Rio de Janeiro. Sun baking on the beach soaks up nuclear radiation levels at 800 mSv (millisvert - a measure of the intensity of ionizing nuclear radiation). The health effect of absorbing these radiation levels is what Guarapari is famous for. The city has the highest background radiation levels of any city on Earth. The world average radiation background is 2.7 mSv. In the US nuclear workers are limited by law to 8 mSv. Airline pilots receive around 6 mSv. Around the Chernobyl nuclear reactor, fences guard people from an exposure of 6 mSv. Guarapari Beach reads 800 mSv!

Despite the popular media's flow of misinformation, there is constantly accumulating evidence indicating that survivors of the Hiroshima and Nagasaki nuclear weapons detonation are healthier than the general population.

That nuclear waste disposal is some dreadful problem, is another PR created fiction. In your nuclear powered society your own personal total-life nuclear waste disposal problem amounts to one cup full of high-level waste. In a coal-powered society a person's lifetime waste problem is one billion litres of carbon dioxide (plus soot, fly ash, etc.). With nuclear power, in fifty years 90% of the high level radioactive material has worn itself out. Just 10% is left. In the next fifty years, 90% of that will have worn itself out. However the carbon dioxide from the fossil fuel power station is always there.

All the world's high level nuclear waste could, for example, be dumped in the Titanic. The easiest and cheapest nuclear waste disposal system is to drop it into deep ocean subduction zones. Subduction zones are like upside-down volcanoes that instead of spewing material out, they suck in any material falling into them.

The subducted material moves inexorably into, and becomes part of the Earth's molten interior. That is what subduction is. These geological sinkholes form the deepest trenches in the deepest oceans of the world. The Mindanao Deep, off the Philippines is a subduction zone in operation. See *Priority One* Chapter 10.

However, if disposal is to be confined to land based systems then we Australians should recognize the incredible common sense and the money to be made by becoming the nuclear waste storage, and possible reprocessing center for the whole world. World oil interests of course hate, and will continue their structured campaign against such an ideal solution.

**One gram of uranium supplies as much energy as two tonnes of coal.** There is enough easily mineable uranium and thorium to power the world for at least a thousand years, and that's with the entire world's people living an affluent Western life style. In addition there is three tonnes of available uranium in every cubic kilometre of seawater. Given a thousand years of R&D, that too should be easy to extract. That gives us another million years or so. Contrary to what the pro-oil lobby preaches; nuclear energy is very definitely sustainable.

We must end the massive contribution to greenhouse gas levels resulting from the generation of industrial power.

**FOURTH** For our mobile transport fuels we switch totally to ethanol and biodiesel; ethanol produced from sugarcane and grains, and biodiesel produced from oil palms and oil seeds. That's how we fuel our cars, trucks, busses, ships and aeroplanes.

As a plant grows it extracts carbon dioxide out of the air. When we burn it as biofuel exactly the same quantity of carbon dioxide goes back into the air. It is a closed loop and no additional carbon is ever added to the biosphere. Fossil fuels are different; every drop of fossil fuel we burn adds to the biosphere's total, and the result is global warming.

Total world oil consumption is 80 million barrels per day; of that approximately 60% is used to power self-contained transport vehicles. We don't want, and we don't need that oil any more. It is easy, wise, responsible and economically surprisingly sound, to immediately switch to the biofuels, ethanol and biodiesel, for all our transport fuel requirements.

**ETHANOL** is the technical name for common alcohol. It is produced by the fermentation of plant sugars and starches. Ethanol is cheap and easy to make.

Virtually all petrol engines in the world today are manufactured to run on ethanol blended fuels. All major automobile manufacturing companies currently produce, or are already geared up to produce motor vehicles that run on any blend from straight petrol through to fuel containing 85% ethanol and just 15% petrol.. The engines automatically adjust to suit the fuel currently in the tank. They are referred to as "Flex Fuel" vehicles. In these vehicles the 15% petrol content was kept for easier starting in cold weather. The newer "Total Flex" engines, now on the market, will run on any blend from 100% petrol to 100% ethanol. Most of the major manufactures are also ready to produce the Total Flex models as soon as we, the customers demand them.

During world War 11 Boeing B17 Flying Fortresses stationed in Townsville, North Queensland, were fueled with 24% ethanol produced from locally grown sugar. Range was increased and the big aircraft engines ran cooler. Today some spark ignition, light aircraft engines have been certified, and are being produced that operate exclusively on ethanol. Operating costs are vastly reduced.

Here in Australia, General Motors Holden already produce a Commodore model designed to run on a 24% ethanol blend. The cars are somehow not available in Australia. They are all shipped to Brazil and marketed as the Chevrolet Omega.

Flex Fuel and Total Flex capabilities add about \$1,000 to a new vehicle cost.

**BIODIESEL** is an extremely pure fuel manufactured by chemically combining a vegetable oil with a smaller quantity of ethanol. The byproduct is glycol, a raw material in the plastics, food and chemical industries (common name glycerin). Biodiesel is easy and cheap to make.

Biodiesel is a safer and more consistent fuel for virtually all diesel engine varieties, of all sizes and power. Biodiesel is considered a safer and more reliable fuel than the various brews of petroleum diesel sold at service stations. Jet transport aircraft and military jet aircraft run on aviation certified kerosene, (Turbine Fuel, Jet A, JP-8 etc.). They will run with equal safety and reliability on aviation certified biodiesel.

## **PRODUCING THE QUANTITIES OF BIOFUELS WE NEED**

From a well-managed sugarcane farm, we can produce 7,500 litres of ethanol per hectare, per year. Every year.

From a well-managed oil palm plantation we can produce 4,500 litres of oil per hectare, per year. Every year.

Both biodiesel and ethanol can be produced for around 40 to 50 cents per litre here in Australia. With oil at say US\$70 a barrel just the raw material for the production of petroleum-based fuels is 45 cents per litre. And it still has to be distilled into useable fuel. And it's not yet delivered. It's sitting in a storage facility in some port in the Middle East.

Now, today, tropical countries could grow and distill all the transport fuel the whole world uses, and all with a cost structure much the same as petroleum based fuels.

Brazil's Amazon Basin could supply the whole world's requirement for transport fuels by growing sugarcane and African palm oil. The arithmetic is clear-cut.

Grow biofuels on one-twenty of the worlds land and we could close down every oil well on the planet. Up the fertility of just those biofuel soils by 10% and we could normalize the atmosphere at the same time.

So, by utilizing just some of the tropical Amazon Basin, Brazil could easily supply the fuel requirements for both North and South America, probably forever. The wet tropical countries of central Africa could easily supply the rest of the world's fuel transport needs. And we haven't added South East Asia's potential.

We grow sugarcane in Australia. To grow enough biofuels to power all Australian self-contained motor transport systems we would utilize a land area less than a 225-kilometre square. That's under half the land area existing in Northern Queensland between Cooktown and the tip of Cape York.

Ethanol blended petrol was produced and sold in Queensland from 1929 through to 1957. The Queensland Motor Spirit Vendors Act of 1933 actually made a 10% blend mandatory in all petrol sold in the State. In 1957 the requirement was quietly rescinded.

OPEC (Organisation Petroleum Exporting Countries) and the oil industry can and obviously has many times, and will undoubtedly continue to juggle and fluctuate world oil prices to both inflate their income and also to sabotage the establishment of any significant world biofuel industry. To them long periods of high prices are risky. It is also natural and obvious oil industry policy to manipulate governments to frustrate any meaningful switch to biofuels.

LPG (liquefied petroleum gas) and CNG (compressed natural gas) powered vehicles are not "clean machines" as is constantly promoted. In use they produce approximately the same quantity of greenhouse gasses as is produced in petrol or diesel fueled vehicles. High and unavoidable gas losses bleed to the air when handling both LPG and CNG. Methane is a major constituent of these gasses. Methane is twenty times worse a greenhouse gas than is carbon dioxide. Motor transport systems based on LPG and CNG fuels are thus worse than systems based on petrol or diesel.

All of us must now switch to ethanol and biodiesel. . See *Priority One* Chapters 11  
So how do we, the voters, guarantee this rapid switch to biofuels really happens. How do we guarantee a massive expansion in world biofuel production happens? We have to tell our politicians, constantly and loudly; that's what we want. We make them listen.

**And we demand, ASAP that they ---**

1. Impose a tariff, tax or duty on every barrel of oil we buy so as to guarantee it can never ever be wholesaled below a minimum of say \$65 a barrel. (To illustrate: if OPEC dropped the world price of oil to \$5 a barrel, then a tax, tariff or duty of \$60 a barrel would be levied by government.) The safety and certainty of the biofuel industry is thereby guaranteed.
  2. Impose a massive tariff or duty, say 100%, on all imported petrol engined cars. At the same time make Flex Fuel and especially Total Flex cars be guaranteed exempt from any such duty.
  3. State governments, at least double current registration fees on petrol cars and halve them on Flex Fuel cars.
  4. Tax vehicles that run on LPG or CNG the same as petrol fueled vehicles.
  5. Remove all duties and tariffs on imported ethanol, biodiesel and vegetable oils used for biofuel production. This keeps the retail price of biofuels low.
  - 6 Most definitely pay a long term and very generous subsidy to local producers of sugar and grains and vegetable oils to give the farmers and producers confidence in the future, and also completely guaranteeing their financial success. The cost of such subsidies will be a tiny price to pay for such a massive benefit towards ending global warming.
- That will end the greenhouse problem caused by self-contained transport.

## **GAMBLING THE WORLD IS MADNESS**

Russian roulette is a game where you put one bullet in the revolver - put the gun to your head - spin the chamber and pull the trigger.

It's a gamble. The only unknown is, how many spins.

Each individual extreme weather phenomena that's happened in the last several decades can be explained by statistics. It is just a, "one-hundred-year freak storm event". But when a whole crop of such events just keep on happening, and happening all around the world, a wise gambler would suspect the dice are loaded, and would stop playing. Weird stratospheric cooling sucks an otherwise mild storm up to towering altitudes to become a violent, high category hurricane. Strange, new, fast flowing atmospheric rivers of warm wet tropical air are suddenly hitting our mid-latitude towns and cities. Massive flooding, mudslides and destruction, and all too often, deaths result. Then we are hit with "unusual" droughts; and starvation hits millions.

By continuing to base energy systems on fossil carbon fuels, and food supplies on potent agricultural chemicals, they are loading the odds against us. They are, we are, playing Russian roulette with our atmosphere and our future. And we are losing. Global warming effects are killing too many people now. Damage and damage bills everywhere are horrendous.

If oil and coal and gas was free, even us in the Western world, couldn't afford it.

People like Al Gore with his movie and book "An Inconvenient Truth", and writers like Tim Flannery with his "We Are The Weather Makers", spell out in detail what is happening with weather, with climates, with polar ice and with sea levels around the planet. We needed them to convince us. That's OK, but now, answers are what are needed. Switching off a few lights, turning down the air conditioner, buying a smaller car, and signing and complying with some childlike, ineffectual and toothless Kyoto Protocol, those things won't work. It will have close to zero effect on global warming, cancerous climate change and destabilizing world weather.

More and more people in countries all across the world are starting to ask, "How did we let global warming happen?" And more significantly, "Can it be stopped?" Yes it can. It happened because a group of people needed it to happen to sell their products. These people have huge budgets and huge influence on governments.

The fossil fuel industries had an excellent role model. They saw the incredible success of the cigarette company's public relations and marketing campaigns in also selling something that humanity really needed to do without.

Saving the world from the chaos of global warming is now the personal responsibility of all of us. We have to trust our own common sense, and a most important and most essential thing each one of us must do, is convince people. And have them in turn convince still more. We implement *The Plan*. All of us must understand and remember the four essential things; and how we make them happen-

**1**                   The propaganda machines cannot be trusted so:-  
**MAKE PEOPLE UNDERSTAND THAT REALITY**

**2**                   Soil fertility will return the atmosphere to normal so:-  
**BUY ORGANIC FOOD**

**3**                   Nuclear energy must power industry so:-  
**ACTIVELY SUPPORT NUCLEAR ENERGY**

**4**                   Ethanol and biodiesel must power transport so:-  
**USE BIOFUELS AND DEMAND CHEAP AVAILABILITY**

In your own country, if it is a free country, wherever you may be; when enough of us push our governments hard enough, they will act the way we want. Admittedly money most certainly influences politicians, but remember, only votes get them there in the first place. And they know it.

This is not the big, wide and distant world it once was. What we do in our home country is seen and considered by the rest of the world. We make our politicians act to end global warming, and other people in other countries will see it and see it can be done. And they too will move. So start now. Betty Reese, (American writer, officer and pilot) made famous an exceedingly apt quotation. *“If you think the efforts of one individual will be nothing, then you have never been in bed with a mosquito”*.

*It is possible, it is feasible, and it is practical  
to bring our world's atmosphere back to normal.  
We actually can terminate global warming and  
we really can re-stabilize world weather systems*

*There are four fundamentals.  
Let's get in there and make them happen.*

# TREE AND FOREST CARBON SEQUESTRATION, WORLD USE NUMBERS FOR WOOD, OIL, COAL AND BIOFUELS.

(Numbers and quantities are based on per year production or usage)

## OIL

World petroleum production is 80,000,000 barrels per day 4.7 billion cubic metres  
Oil composition, typical 85% Carbon, 12% Hydrogen. Density 0.85

REPLACED with ethanol: production from sugarcane 7500 litres per ha  
And African Palm oil (ordinary common palm oil)  
Yield 4 tons per hectare of oil. Density 0.91 4400 litres per ha  
(algae gives even better yields)

Biodiesel is a chemical blend of ethanol with a vegetable oil  
To grow all the World's liquid fuel requirements, that's petrol,  
diesel, turbine fuel etc. would require the equivalent of  
a paddock 2600 kilometres square. (6,750,000 sq km)

**We would need a 2600 km square**

## COAL

World coal production 4.4 billion cubic metres  
Coal composition typical 85% Carbon, zero Hydrogen. Density 1.25

REPLACE mainly with nuclear energy. Zero carbon dioxide,

**We would need negligible land area.**

## TIMBER

World commercial timber usage 1.7 billion cubic metres  
World burnt for fuel, cooking, etc. 2.3 billion cubic metres

Total wood use 4 billion cubic metres

Planted forest wood production is approximately 20 cubic metres per ha  
(tropical rain forests 44 cubic metres per ha per year)

To produce all the World's commercial timber requirements requires  
The equivalent of a paddock 900 km square (850,000 sq km)

**That's 0.015 hectares per human being. We use and need a 900 km square**

## CARBON DIOXIDE SEQUESTRATION WITH TREES

**OIL.** Sequester carbon into trees you need to grow,  
THREE litres of wood for every ONE litre of coal consumed.

The World would need a paddock 2650 km square of newly planted trees

**That's 1.00 hectares per human being. We would WASTE a 2650 km square**

**COAL** Sequester carbon into trees you need to grow,  
FOUR litres wood for every ONE litre of coal consumed.

The World would need a paddock 3000 km square of newly planted trees

**That's 1.5 hectares per human being. We would WASTE a 3000 km square**

To do this for coal and oil, world wood production becomes 32 billion cubic metres  
With total usage only 4 billion cubic metres.

**That means growing every year 18.8 times world commercial timber requirements.**

That's 17 times over supply every year.

**Or eight times all the World's total wood use.**

**COST** Cheap timber costs about \$150 per cubic metre, that's 15 cents per litre  
15 cents times three, then times 159, adds an extra \$71 to the price of a barrel of oil.  
15 cents times four times 1000 adds \$600 to the price of a cubic metre of coal

**A paddock big enough to grow the trees necessary to sequest our petroleum use for one thirty years period, is big enough to replace them with biofuels for ever.**

**It's illogical, it's fictional and it's dangerous to believe that trees and forests can ever be a meaningful carbon sink. Allan Yeomans**

## **OTHER NON-FOSSIL FUEL ENERGY SYSTEMS** **apart from nuclear, hydro and geothermal,**

### **TIDAL POWER**

Lift or lower 100 litres of water one metre per second is one kilowatt

For one person in a Western society allow 750 litres.

Area of the Mediterranean is 2,505,000 sq km Build a dam wall across Straits of Gibraltar from Morocco (population 29,000,000) to Spain (population 39,000,000).

Assume 24 hour operation and average fall 0.5m and useable water depth 0.5m

Useful energy contained in waves is zero to about fifty kilowatts per metre of beachfront.

Assume 10% overall efficiency of system

Would cater for 20,000,000 people. .

Double tide height or double efficiency doubles power output.

Good suitable sites are rare and usually remote.

**limited and rarely practical**

### **WAVE ENERGY**

No commercial units operating but estimates of power output range from 0.1 kw/m to 3.6 kw/m.

Now consider one continuous wave power-generating machine producing 2kw/m.

Sydney population 3,000,000 would require 1500 km of coast line, that is Victorian border to Brisbane.

Brisbane population 1,000,000 would require 500 km. That's from Brisbane to Rockhampton.

Using all of both Eastern and Western US coastlines would not even power Los Angeles.

There is one small operating test unit in the world.

**limited and rarely practical**

### **DEEP HOT ROCK ENERGY EXTRACTION**

Much publicity but seems very impractical for many reasons. No working installation anywhere.

See Priority One for comments.

**currently wishful thinking, most likely impossible**

**SOLAR VOLTAICS** . Now readily available. However for industrial power costs, will continue to be prohibitively expensive for at least many years, if ever. . **viable only for non-industrial power**

**CONCENTRATED SOLAR VOLTAICS** But at close to commercial fossil fuel and nuclear generating costs is likely soon. Has extreme cooling problems. Is currently utterly impractical to store generated energy to cover unpredictable periods of cloud cover. **still hypothetical**

**CONCENTRATED SOLAR THERMAL** At close to commercial fossil fuel and nuclear generating costs is available now. Is currently utterly impractical to store generated energy to cover unpredictable periods of cloud cover, with not even hypothetical answers available. **practical but limited**

**WIND POWER** At close to commercial fossil fuel and nuclear generating costs is available now, but sites limited to "roaring forties" latitudes and a few rare wind encouraging land topographies. Power generated has risen rapidly to approximately 2% of World use. **practical but limited**

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This space is for you. Is it what we should do? .....

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