

GAIA Newsletter – July 2008

carl.ohlen@lacable.se

THE GAIA newsletter will regularly update the information about our 60 years crisis on this website. That is how a minority of the human population living today in the rich western world = our generation – you and me have managed to seriously harm our common environment and endanger the common future for coming generations and for thousands of species on our living planet – Gaia. We have now an enormous challenge – that is to drastically change our present way of living above our means. This can not be done with more of the same – as our present leaders are preaching in their globalization and consume more mantra. The same persons, the same model and the same thinking that has created this enormous problem cannot solve it. We need a complete turn around. And this is the most difficult thing to do – to change our selves.

Increased CO₂ increase!

Mauna Loa in Hawaii showed a change from June 2007 to June 2008 with 2.04 ppm. This is a higher increase from the May to May value as well as the 2006 to 2007 value that were 1.95 and 1.97. A small but significant increase of the increase. Time is running out!

Another lost chance

Another top meeting and another lost chance. The G8 + G5 meeting in Japan did not result in any action to reduce CO₂ emission and mitigate on global warming. Instead the rich countries blame China and India who blame the rich countries what one US journal call “Dangerous Deadlock”. See page 3 – 7.

Up or down confusion ?

“Global warming stopped in 1998,” has become a recent mantra of those who wish to deny the reality of human-caused global warming. global warming? Read the conclusions based on facts from the Goddard Institute for Space Studies. See page 9

Your personal CO₂ budget

What CO₂ emission are you responsible for. What can you do and not do. Eat meat? Travel? See page 10-12.

Where is the dead line?

How much carbon dioxide can earth withstand? The answer is no limitation at all. But if we want to continue to live on a planet with life forms as today we need to drastically lower the CO₂ content of the atmosphere. In June this was 388. If you look at the yearly trend it was 386 ppm. Before industrialization it was 280. 1958 it was 315. We need to reduce it from 386 to 350! Page 8.

Summer in Sweden

Go on a short walk around Myrskären and discover the beauty of NOW. “Wherever you want to go – aren’t you already there” See Summer Special.

Endangered Coral Reeves!

A new report states that one third of all reef-building coral species are at “elevated risk of extinction”. This is due to the increased level of CO₂ emission causing a warmer and more acid ocean together with other human activities. The Caribbean has the largest proportion of corals in high extinction risk categories while the western Pacific has the highest proportion of species. See page 2

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One-Third of Reef-Building Corals Face Elevated Extinction

In a new study, a team led by marine biologist Kent Carpenter of Old Dominion University in Norfolk, Virginia, censused 704 reef-building coral species and rated them according to International Union for Conservation of Nature (IUCN) standards of extinction risk. This was presented in Science Published Online July 10, 2008 and states *“One-Third of Reef-Building Corals Face Elevated Extinction Risk from Climate Change and Local Impacts”*:

“The conservation status of 845 zooxanthellate reef-building coral species have been assessed using IUCN Red List Criteria. Of the 704 species that could be assigned conservation status, 32.8% are in categories with elevated risk of extinction. Declines in abundance are associated with bleaching and diseases driven by elevated sea surface temperatures, with extinction risk further exacerbated by local-scale anthropogenic disturbances. The proportion of corals threatened with extinction has increased dramatically in recent decades and exceeds most terrestrial groups. The Caribbean has the largest proportion of corals in high extinction risk categories while the Coral Triangle (western Pacific) has the highest proportion of species in all categories of elevated extinction risk. Our results emphasize the widespread plight of coral reefs and the urgent need to enact conservation measures.”

This comprehensive survey presents facts that one-third of reef-building coral species are in danger of extinction, a sevenfold increase in just the past decade. If current trends continue, the authors predict a mass die-off among the engineers of some of the world's most important and diverse ecosystems. The effects will be enormous since these coral reefs are not just for snorkeling tourists but the nursery for other species. Because coral reefs are home to more than a quarter of all marine species, their loss could be devastating for biodiversity in the world's oceans.

The highest concentration of jeopardized species lives in the Caribbean Sea and in the “Coral Triangle” of the western Pacific, an archipelago spanning parts of Indonesia, Malaysia, the Philippines, and nearby areas. Carpenter says steps must be taken now to reduce greenhouse gas emissions and stop over-fishing and pollution of the oceans. *“If we do not do those things, then, at the current level of how things are going, we will probably lose our coral reefs by the middle of this century,”* said Kent Carpenter. *“So, 2050 is the date that many people are predicting that coral reefs will cease to exist.”* The carbon dioxide spewed into the atmosphere by factories, cars and power plants is not just raising temperatures. It is also causing what scientists call “ocean acidification” as around 25 percent of the excess CO₂ is absorbed by the seas. The pH value of the oceans has been around 8.2 for hundreds of thousands of years, but since the start of the industrial age in 1800, it has dropped by 0.1. *“The threshold for (corals) could be approached by the middle of this century ... when they'll reach a point where they may no longer be able to reproduce themselves as fast as they're being destroyed,”* said Chris Langdon, at the University of Miami.

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Editorial – Dangerous deadlock

So what happened really at the G8 and G5 meetings in Japan. The answer to this question depends who you ask. Let us start with the facts: G8 - The Group of Eight industrialized nations -- the U.S., Japan, Germany, Italy, Britain, France, Canada and Russia -- makes up about 13 percent of the world's population and 62 percent of its economy. The G-5 Mexico, Brazil, China, India and South Africa accounts for 42 percent of the world's population and 11 percent of the global economy.

This is the official conclusion of the G8 conference from the press conference:

JAPANESE PRIME MINISTER YASUO FUKUDA: "Allow me to deliver my remarks. The Summit this time became extremely important, even more so than recent ones, because this Summit took place at a time when global challenges such as ongoing global warming, soaring oil and food prices, and tension in financial markets are having an impact on the everyday life of people very close to home.

The first on climate change. We, the G8, arrived at a common view which is to seek to adopt as a global target the goal of at least a 50% reduction of global emissions of greenhouse gases (GHG) by 2050. This, needless to say, is based on a premise that the G8 including the US agree on this goal. There have been disparate positions on this matter amongst the G8 but I believe we have been able to arrive at a common view overcoming these differences, and have been able to make a contribution which is to add momentum to the United Nations (UN) negotiations. Apart from this, we also agreed to implement ambitious mid-term quantitative national targets, to launch an international initiative for innovative technology development, and to also launch climate investment funds to support developing countries."

The G-8 conditioned a promise to reduce greenhouse gas pollution at least 50 percent by 2050 on China, India and other emerging economies taking part in a "global response." So what did they really agree upon? Nothing! But they say they have a common view of at least 50% reduction of global emissions by 2050. Compared to what year, 1990 (UN and EU are using 1990), 2005, 2008, 2010. And what are the commitments from each country. What has to be done and when. Nothing! So what did the G5 "emerging markets say?"

"Responsibility shouldn't fall on developing countries for what is an unavoidable responsibility of developed nations," said Mexican President Felipe Calderon. "Sustained and accelerated economic growth is, critical for all developing countries and we cannot for the present even consider quantitative restrictions on our emissions," said Indian Prime Minister Manmohan Singh. So consequently there was no joint "road map" for G8 and G5 countries. The main leaders of our world.

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Editorial – Dangerous deadlock

The quote “Dangerous deadlock” is borrowed from the editorial from Salt Lake Tribune Editorial, July 8, 2008: “Dangerous deadlock: All nations should unite against global warming.” So thank you God that there still are some newspapers out there that dares to disagree with the establishment.

The planet, its inhabitants and their way of life can't survive this irresponsible game of "chicken." And why are we not surprised that our very own George W. Bush is behind the deadlock at the G-8 summit? Bush and Vice President Dick Cheney have in turn denied the existence of global warming, covered up or slashed scientific reports and the testimony of climatologists about what its effects are likely to be, and tried a variety of tactics to delay taking any action that might hurt their Big Oil buddies they call "the economy." The latest example: A former Environmental Protection Agency official has said Cheney's office succeeded in deleting several pages of testimony on the health consequences of climate change. Cheney feared the testimony of the head of the Centers for Disease Control might make it harder for the administration to avoid regulating CO₂..... If the world community does not unite against climate change, every nation on Earth will feel the pain of rising seas, severe weather patterns, drought, hunger, fire and floods. We simply can't wait to see who blinks first. (Salt Lake Tribune)

US expert James Hansen, NASA called the g8 result "worse than worthless" Leaders of the world's richest nations, meeting in Japan, "are taking actions that guarantee that we deliver to our children climate catastrophes that are out of our control," he said.

WWF presented ahead of the G8 meeting a Position Paper saying among other things:

“The G8 countries have ample reason to act as pioneers for developing the zero-carbon world: They make up more than 60% of world’s wealth in GDP, account for roughly 39% of the world’s current emissions, and are responsible for more than 62% of the historic emissions that have accumulated in the atmosphere, while representing a mere 13.5% of the world’s population. While projected emissions growth is unquestionably significant in some emerging economies, the capability and historic responsibility of the G8 countries to act now remain unaffected. Simultaneously, green industries have already created thousands of new jobs, a number that is rapidly increasing. A green revolution – if done right – will benefit economies worldwide.

A vision for global action: In the run up to the 2009 UN climate conference in Copenhagen, WWF calls on industrialized country governments to commit to fair and ambitious “Kyoto Plus” negotiations under the UN for the post-2012 period and specifically agree to:

- *An overall domestic mid-term emission reduction target for the group of industrialized countries of at least 30% below 1990 levels by 2020, in line with the IPCC2 recommendations. “*

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The WWF has also prepared score card for G8 and G5 countries:

“The G8 (Canada, France, Germany, Italy, Japan, Russia, United Kingdom and United States of America) and other major industrialized countries have a large responsibility for taking the lead on action to tackle climate change. They must show leadership by committing to deep emission cuts as a group in the order of at least 25 % to 40 % below the 1990 level by 2020 and by putting policies and measures in place to achieve these targets and harnessing the massive economic benefits of a clean energy future. (In addition WWF states that these countries implement enough measures to reduce their emissions by 80 % by 2050.)

They also have a responsibility to drive global cooperation with the +5 (Brazil, China, India, Mexico and South Africa) and other developing countries to foster sustainable development through technology transfer and financing. Sending a political signal in support of international cooperation and ambitious targets to cut global emissions, this year’s G8+5 can also help make the UN climate talks in Poznan this December a success. The three worst in the class is according to WWF:

The United States score the worst of all G8 countries, being the largest emitter with the highest per capita emissions and an increasing trend in total emissions. At the same time the US have not ratified the Kyoto Protocol. While substantial activities emerge at the state level, little substantive federal measures are in place to curb emissions in the short term.

Second on the list is Canada with a similar situation: » very high per capita emissions, a steadily increasing trend in total emissions (recently revised upwards), far away from its Kyoto target and inadequate mid to long-term greenhouse gas targets. A plan to curb emissions is developed but is yet to be implemented. The Kyoto target will stay out of reach.

Russia ranks a bit better due to declining absolute » emissions in the early 1990s and a large share of less CO₂-intensive natural gas. But since 1999 emissions increase steadily and there is hardly any policy in place to curb emissions. Recent modest government plans exist but still need to be implemented.”

So what WWF really is saying is that the G8 countries (And especially USA and Canada) need to reduce their CO₂ emission with 25 - 40% by 2020 and 80% by 2050. And what they also is saying is that nothing has yet happened to start this process in North America. Instead the emissions are increasing!

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The WWF comment on July 9 to the G8 summit: **“Major Economies Meeting turns into Major Embarrassment Meeting for G8”**

“The deadlock paralyzing today's Major Economies Meeting (MEM) at the G8 summit in Japan is a result of missing G8 leadership on emission reductions. According to WWF, strong actions by emerging economies – which MEM host George W. Bush demands – can only be made on the basis of stronger commitments by industrialized nations. But G8 climate talks yesterday failed to signal bold action by rich nations.

“The Major Economies Meeting has been a Major Embarrassment Meeting for G8 leaders who were coming to the table with too little while demanding too much from the developing countries”, said Kim Carstensen, Director WWF Global Climate Initiative. “The G8 are trying to fool the world in selling yesterday's climate deal as progress. The ball remains in the G8 court and countries like India and China are rightly insisting on rich nations to set ambitious targets.”

WWF welcomes the forward-leading interventions made by G5 countries in Sapporo yesterday, where Brazil, China, India, Mexico and South Africa offered more domestic climate action. In turn they called on industrialized nations to cut greenhouse gas emissions by 80 to 95% by 2050, insisting that mid-term targets in the range of 25 to 40% by 2020 are necessary to trigger the energy revolution needed for reaching the long-term goal. *“While some rich nations get lost in tactics and seem to forget that the survival of people and nature crucially depends on their leadership, the developing world understands the magnitude of the threat and shows a strong will to act”, said Kim Carstensen. “The G8 are responsible for 62% of the carbon dioxide accumulated in the Earth's atmosphere, which makes them the main culprit of climate change and the biggest part of the problem”, added Carstensen. “WWF finds it pathetic that they still duck their historic responsibility and refuse to turn from the main driver of the problem into the main driver of the solution.”*

WWF criticizes the lack of a commitment to mid term targets and judges the goal to reduce global emissions by at least 50% by 2050 to be insufficient. *“Confirming the results of last year's summit in Heiligendamm is hardly a remarkable outcome”, said Kim Carstensen, Director WWF Global Climate Initiative. “So little progress after a whole year of Minister meetings and negotiations is not only a wasted opportunity, it falls dangerously short of what is needed to protect people and nature from climate change.”* WWF said the summit confirmed a recent trend that industrialized countries show less rather than more of the leadership so urgently needed. Toyako saw countries like Canada, Japan and the US emphasizing their inability to move, while emerging economies have recently made concrete policy proposals, offering more domestic action in turn for decisive leadership by industrialized nations.”

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“Ignoring the climate change alarm” was the comment from Joseph Romm in the UK newspaper The Guardian – One of the very few media commenting this most critical problem – ever!

“The recent G8 meeting seals President Bush's legacy as the president who blindly blocked all serious efforts aimed at domestic and international action on greenhouse gas emissions. For more than seven years, Bush has used every tool at his disposal to stop states like California from reducing their emissions, to stop Congress from adopting greenhouse gas controls and to stop the international community from developing a serious follow-on to the Kyoto protocol. No surprise that climate scientists have become increasingly desperate for action. In November, for instance, the head of the UN Intergovernmental Panel on Climate Change, Rajendra Pachauri, said: *“If there's no action before 2012, that's too late. What we do in the next two to three years will determine our future. This is the defining moment.”*

And remember that Pachauri was handpicked by the Bush administration to replace the "alarmist" Bob Watson. Now compare his alarm call to the nonchalant language of the Declaration on Environment and Climate Change from the G8: *“We recognise the importance of setting mid-term, aspirational goals for energy efficiency.”* Translation: hit the snooze button. Some people seem excited by the fact that Bush signed a G8 deal to halve greenhouse gas emissions by 2050. But here are three reasons this won't keep any insomniacs awake. First, the G8's statement on the matter was:

“We seek to share with all Parties to the UNFCCC the vision of, and together with them to consider and adopt in the UNFCCC negotiations, the goal of achieving at least 50% reduction of global emissions by 2050, recognising that this global challenge can only be met by a global response, in particular, by the contributions from all major economies, consistent with the principle of common but differentiated responsibilities and respective capabilities.” The language couldn't be any more watered down than if it had been in New Orleans during Hurricane Katrina.

Second, what is the baseline for this 50% reduction? Today's level of emissions? The text doesn't say. In fact, we probably need a 50% cut from 1990 levels.

Third, who really cares if the G8 pledges to share their vision and to consider and adopt a global "goal" of a 50% cut in emissions by 2050? What we need to know is not what the G8 thinks the world must do but rather what the G8 itself is prepared to do by 2050 - and by 2020. At a minimum, the G8 needs to establish firm targets and timetables that return to 1990 levels by 2020 and 80% below 1990 levels by 2050. If the state of California can make such commitments, the G8 can.”

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The dead line!

Today there is an understanding that burning fossil fuel will increase the content of CO₂ in the atmosphere. In June this was 388. If you look at the yearly trend it was 386 ppm – an increase with 2 ppm in one year – another 20 ppm in ten years, another..... Before industrialization it was 280. 1958 it was 315. There is also an understanding that increase CO₂ creates the green house effect and global warming.

There should also be a general understanding that plants “breathe” inhaling CO₂ and exhaling oxygen so animals have something to inhale (oxygen) so we can exhale CO₂. The endless cycle of life. That is why the global CO₂ content varies every 12 month since a majority of plants are on the Northern hemisphere and will be green during summer with the highest CO₂ level in May and the lowest in September.

About half of our CO₂ emissions are absorbed in plants at land and in sea. The problem is that this “natural sink” is losing its capability with global warming. They absorb less – not only because of deforestation but because of the warming. This is called “positive feedback”. The warming is also causing melting of ice and tundra resulting in less reflection of sunlight and more emission of methane – another green house gas. This means that the situation is more critical than even we knew just 12 month ago. National Geographic reports June 20 quoting David Barber, of the University of Manitoba aboard a research icebreaker in the area: *“We're actually projecting this year that the North Pole may be free of ice for the first time [in history].”*

The G8 agreed “to consider and adopt ... at least a 50 percent reduction” of global greenhouse-gas emissions by 2050 via UN-sponsored talks. But the G-8 provisions lack specific interim commitments that the European Union has sought – and is 50% reduction (from what level) enough? The EU already has set an interim target of reducing carbon-dioxide emissions to 20 percent below 1990 levels by 2020. More broadly, the Bali Road Map points to a need for between 25 and 40 percent cuts in CO₂ emissions by then. James Hansen, with the National Aeronautics and Space Administration’s Goddard Institute for Space Studies in New York, is arguing that to avoid the most destabilizing effects of global warming, atmospheric concentrations of CO₂ must be cut far lower than the levels UN negotiators are discussing. To stand an even chance of holding warming to no more than 2 °C (3.6 degrees F) by century’s end, UN negotiators are talking about stabilizing atmospheric CO₂ levels at 450 parts per million. To avoid dangerous climate tipping points, Dr. Hansen now argues, the world should be aiming at 350 ppm or less. Today’s level is 386.

The problem is that half of what we are emitting today as CO₂ will stay in the atmosphere for years to come. So even if we stopped completely emitting carbon dioxide it would take years to reduce the level to 350! This is unfortunately what few has yet understood. We are already running out of time. So what are we waiting for?

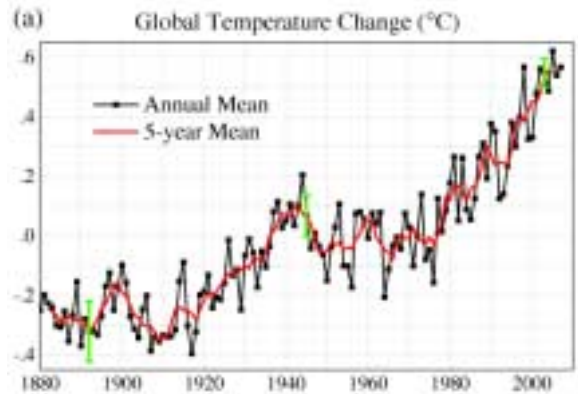
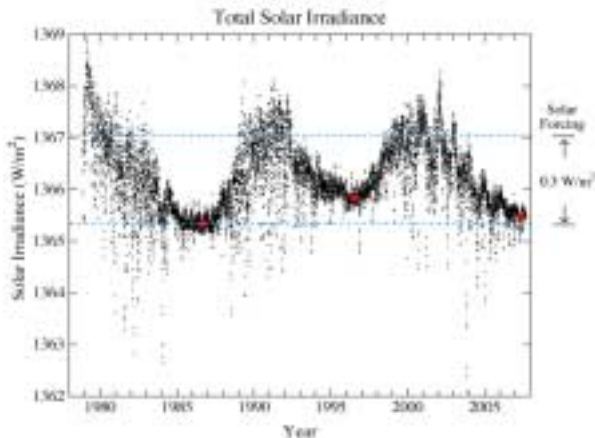
We have already passed the dead line!

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Analyzing some early warming signs

The sun is naturally the source for all life and the temperature on earth. If the sun shines more the temperature goes up and with less sun it goes down. We experience this very well in Sweden from the long days of summer to the long nights of winter. There is a long term variation of the solar intensity over Millions of years. There is also a solar cycle of about 10 years illustrated below and based on an analysis of satellite measurements shows that 2007 is at the minimum of the current 10 year solar cycle.



For a couple of years we have therefore experienced some relative cooling, but...The year 2007 tied for second warmest in the period of instrumental data, behind the record warmth of 2005, in the Goddard Institute for Space Studies (GISS) analysis. 2007 tied 1998, which had leapt a remarkable 0.2°C above the prior record with the help of the "El Niño of the century". The unusual warmth in 2007 occurs at a time when solar irradiance is at a minimum and the equatorial Pacific Ocean is in the cool phase of its natural El Niño-La Niña cycle. So what will happen now? Well if we will not have any unusual events such as a large volcano erupting it is going to get warmer.

Solar irradiance will still be near its minimum in 2008 but will now soon start to increase again. There will be a delay due to the earth thermal inertia but combined with a new El Niño in 2009 or 2010 we will most probably experience a new all time high within 2-3 years. Future will tell. Because GAIA is a complex system balancing on a thin edge. If we bring this balance over the tipping point we just do not what will happen.

The IPCC has pointed out the scenarios and probable effects of increased temperature but this is still estimates. But what seem clear is that it is the people "without guilt" who will suffer the most of us humans. We the wealthy ones can always buy us protection. We can afford higher gas and food prices. But the poor people in Asia, Latin America and Africa cannot. And even more so it is the other life forms who will be the real victims – species are now going extinct at an unprecedented rate – and increasing. The "silent Spring" of Rachael Carson may become a hot "Silent Summer".

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So what can I do – and not do

Most of our activities are both healthy and pollution free. Walk, dance, sing, hug, talk, make love, swim, enjoy the nature, dream. As long as we do not consume something. But when you consume you still have a choice. When you eat and drink chose “wisely”. If you eat locally produced vegetables and drink water you are safe but will soon be bored. Basically you can still eat anything but with balance and avoiding the real polluters as much as possible. Meet, hamburgers & coke is neither healthy for you nor the environment. And when you need to buy something else, why not go to a second hand store. Or go there to sell something. But once again you can consume if you do it wisely and in balance. You do not have to give up a new laptop or DVD player. But do you really need a new and bigger flat screen TV? If you do need to buy something do this locally and do not drive to this distant shopping mall. And yes you may switch to low energy lamps – when the old fail. But the main thing is – reduce your consumption!

Now we come to the heavy stuff. Heating/Air conditioning and travel. Because efficient heating and air conditioning may involve new technical solutions and better insulation but also that you as a person can live with a larger temperature range. You do not always need heating or air conditioning. The fact is that you most probably can reduce the energy consumption of your house a lot. If you live in an apartment you may also reduce some. But now the real problem. Travel to work, to school or on vacation. This is according to statistics what is increasing the most all over the world. More and bigger cars, soon there will be one billion on earth. And we travel on vacation by airplane.

A report presented for UNWTO last year showed the global tourist industry represents 5 percent of all carbon dioxide emissions. And at present rate the emissions will triple until 2035. Globally we make 5 billion tourist trips a year of which 750 million is international and increasingly with air. Today we make in total (Business and pleasure) 4.5 billion flights worldwide causing 2% of the total emissions. 2025 we estimate 9 billion flights. Generally you can say that driving alone in your gas fueled car is the most polluting. (Except for your own airplane or boat). Flying in a passenger airplane is the second most polluting. All this depends on the size of your car/airplane and how many passengers. Driving a small car on gas result in about 0.2 kilo/km. Flying in a full airplane results in less than 0.1 kilo/km. A large passenger ferry will at 30 knots pollute about 0.4 kilo (!) per person and km. A cruise ship with fewer passengers even more.

The average American pollutes today 20 tons CO₂ per person and year, Sweden 6 ton, world average 4 ton and India 1 ton. So how much can we do with 1 ton. We can drive 5000 km in one year. This is 14 km or 8 miles per day or we could fly Stockholm – Seattle –Stockholm once per year. But not eat any meat or buy anything else. If Sweden would reduce with 50%, my budget would be 3 ton per year. My own personal problem is that I want to visit my son in USA and our relatives in Brazil. That will according to the SAS CO₂ calculator cost me $(470 + 800) \times 2 = 2540$ kilo CO₂. Just 500 kilo left for meat, heat etc. This illustrates that we all have to make some tough choices.

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So what can I do – and not do

This is an example of what the SAS calculator will give you for flying Stockholm – Seattle, a distance of 7565 km if the plane is 88% full. But CO₂ is not the only gas.

Resultat												
Flygplatser	Flygplan	CF	Enkel resor	GCD	pkm	CO ₂	NO _x	CO	HC	H ₂ O	SO ₂	
				km		kg	kg	kg	kg	kg	kg	
ARN-SEA	SK A330-300	88%	1	7565	7565	470	2,43	0,12	0,00	195	0,15	
ARN-GOT	SK 737-600 112	75%	1	393	393	71	0,19	0,57	0,05	28	0,02	
ARN-GRU	SK A340-300	88%	1	10913	10913	800	4,57	0,62	0,03	314	0,25	
			3		18871	1340	7,18	1,31	0,06	527	0,43	

Nitrogen gases, sulphur dioxide and water will also add to the green house effect. An airplane furthermore emits these gases on high altitude that is much worse. If you compare with a car for example the trip between Stockholm and Gothenburg this is 393 km with air but longer with car. So comparing the different options (But not considering the high altitude for airplanes) we will get the following CO₂ for two persons traveling:

Train 3 kilo (75% full)

Car 75 kilo (Medium size with 2 persons)

Bus 29 kilo (75% full),

Air 140 kilo (75% full)

In Sweden fossil fuel is not used for electricity. That is why the electrical train is the best option by far. But in Europe and USA with fossil fuel generation, the train will be on a much higher level of pollution similar to a bus. I have an Ethanol (E85) car which still means 15% gas. So if two persons will go to the same distance with my car the emission will be 15% of 75 = 11 kilo. A popular vacation in Sweden is to go with any of the many passenger ferries and cruise ships to Finland or any of the Baltic states. According to the Viking Line calculation an average ship will emit 350 kilo/km. With an average of 1000 passengers this will give 0.35 per person and km. A return trip to Helsinki would give a distance of 1000 km and 350 kilo in emission compared to 200 kilo with airplane. And the faster the ship will go the higher the pollution.

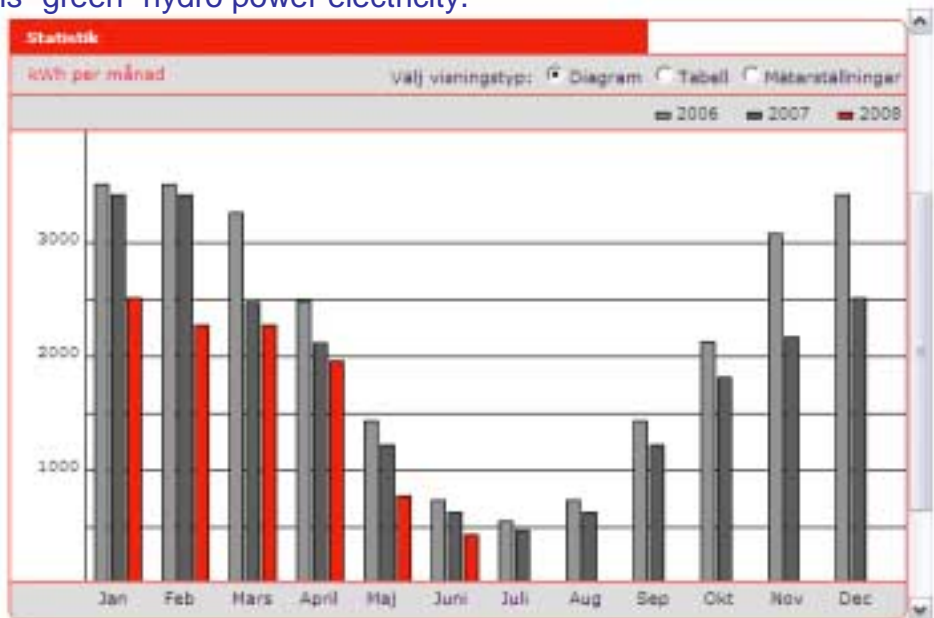
And for cars, airplanes & ships we also need to add the CO₂ it takes to make them. If you still want to travel you can on SAS buy CO₂ compensation. This means SAS will invest your money in renewable energy projects. But the CO₂ emission will still be the same from you and if flying is continuing to increase this will get even more pollution. You cannot have the cake and eat it. In the book "Building Sustainable Energy Systems - Swedish Experiences" the authors point out the importance of "dematerialisation" that is to decrease the total material turnover resulting from human activities. "The factor 10 club" suggested 1994 that industrial countries need to reduce their material turnover by a factor 10. So the best is always to walk or to take the bike and the canoe whenever you can. "Small is beautiful" by Schumacher is still valid. The problem is that this will decrease the economic growth, the stock market would collapse,.....

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carl.ohlen@lacable.se

The Swedish Experiences

Sweden has been in the fore-front in environmental initiatives since the first UN conference in Stockholm 1972. This means that Sweden has a significantly lower ecological footprint than for example USA, Canada, UK and Australia. A lot of what can be done in energy efficiency and better housing insulation, public transportation etc. has already been done in Sweden. I am personally trying my best to be more efficient and less polluting as I earlier described. After improved insulation of my house and installation of a heat pump you can see the effect on the electricity consumption below. And this is “green” hydro power electricity.



But this is still not enough for us to do. We have to change from a consuming to a sustainable life style. So if Sweden has a tough challenge being one of the worlds richest, wealthiest and most environmental friendly societies imagine the problem facing USA, Russia, China, India.....

This can for example be reviewed in English in the book “Building Sustainable Energy Systems – Swedish Experience” from 2001 by the Swedish National Energy Administration. They list a number of things that can be done even with today’s technology but conclude that the most difficult thing is to change peoples habits. This I know by own experience. It is very, very difficult to change by your self. We are today used to travel and to eat almost anything at anytime. But “everything has a season”.

When I grew up we followed this simple rule. The high cost comes when we try to modify nature for our own private needs. But we don’t have to! Last evening we took a bottle of wine and a box of fresh strawberries to watch the sunset by the lake. Today we have been picking wild blueberries and raspberries in the nearby forest to eat and to make “Drottning Sylt”, (The queens jam) for the winter season. Simple, green and fun. So we can combine the habits of the past with our new technology – and we have to.

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carl.ohlen@lacable.se

From “The factor 10 manifesto”, 17 January 2000

“We cannot afford the western kind of environmental protection at this time. We will first establish a market economy and then, when we are as rich as you are, we will take care of the environment”, S. S. Shatalin, chief economic advisor to president Gorbachev said in a conversation with Bio Schmidt-Bleek at the International Institute for Applied Systems Analysis (IIASA) at Laxenburg, Austria in 1989. It became suddenly clear that whatever western countries had hitherto undertaken to protect the environment was not a valid model for reaching ecological sustainability.....

... Violent and life-threatening reactions of the ecosphere to the stresses imposed by human activities are still growing in all parts of the world. Humanity continues to live in an increasingly dangerous and unsustainable environment. Essential environmental services are declining at an alarming pace. More people are exposed to polluted air and have less clean water available than ever before and fertile soil is eroding fast. Fresh water supplies are dwindling, biodiversity is still rapidly declining

On the average, more than 90 % of the resources harvested and displaced in nature are wasted on the way to producing food, machines, vehicles, and infrastructures. All western systems operate with a lot of wastes. Frequently, the fulfillment of human demands is not at all a question of increasing supplies but rather a question of utilizing available supplies more intelligently. On the average, close to 100 tons of non-renewables are consumed every year per person to support the current life-style in industrialized countries, in addition to more than 500 tons of sweet water. This is 30 to 50 times more than is available in the poorest countries. To build a catalytic converter for a car requires close to 3 tons of non-renewable natural materials, and a PC between 8 and 14 tons. Not enough raw materials, nor water, nor environmental space are available on this earth to support this kind of consumption for all human beings. More than three planets would be needed if western life-styles and technology were to be adopted by all people on this earth. And long before the economies run out of resources, humankind will have begun to suffer disastrous ecological consequences from this kind of parasitic behavior. Environmental services cannot be replaced by technology in most cases, at any costs.

As we noticed already, reaching sustainability demands an absolute reduction in resource use of at least 50 %. Moreover, equity demands that the rich make sufficient environmental space available for the poor when moving jointly toward ecological sustainability. As less than 20 % of humankind consume in excess of 80 % of the natural resources at this time, the richer countries need to dematerialize their technical basis of wealth – or increase the resource productivity - by at least a factor 10 on the average (Schmidt-Bleek, 1993). Factor 10 is not a mathematical answer to the complex environmental crisis, nor is it an economic model. It is a valid objective. It is a flexible goal that will be refined as experience with changing life styles grow.”*

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carl.ohlen@lacable.se

So what can I do?

This seem to be a very boring world if we cannot travel or shop all sorts of things and food from all over the world. And man has since early civilization in Mesopotamia traveled, created colonies and established trade. Yes some of us has but what has happened in recent times is that this globalization & consumption mania is generating more and more pollution from an increasing part of the world. But the few of us in the rich world are still absolutely the worst in garbage. My grand parents never left our local community. My mother only visited Norway except for her native country Sweden. I have been in 73 countries, mainly in my work but still. We have to come back to a sustainable balance and remember the best in life is still free. But if you are addicted to our present life style – try these alternatives for a simulated vacation:

Simulated air travel vacation:

Pack your largest suitcase with 30 kilo. Then carry it around in your house for two hours if possible up the stairs before you run over it with your car. Sit down in the smallest chair you can find and ask your biggest friend to sit down beside you. Then both of you should eat cold food out of a small box and drink wine from a plastic cup. Ask your friend to spill some wine over you and then to throw up in a paper bag.

Simulated beach vacation:

Buy a UV lamp or visit a solarium to spend eight hours in the strong light wearing your swimming suit. When your skin is red and burning put on a lot of lotion and start drinking rum and coca cola until you no longer recognize your spouse. After a big fight you fall asleep in the bathroom. (Option – you go over to your nearest single neighbor at midnight and tell him/her how much you love him/her.) You can still send your friends e-mails with pictures from Hawaii telling them how great it is.

Simulated golf vacation:

Borrow an electric wheel chair and on a rainy day go to the nearest park or cemetery. If you don't have a golf club bring a big broom and some small balls. Drive around in the park and when you see a small lake or pond try to hit the ball in the water with the broom. Drink the warm beer you have with you and if someone is wondering why you are driving around in a wheel chair you tell them you have 102 in handicap.

Simulated Casino vacation:

Cash in your income from the last six month. Turn off the light in your living room and your bath room except for small blinking lamps and occasional ringing bells. Sit down on a chair in front of the toilet and ask your wife to put on a very short skirt and serve you drinks while you are flashing your money down the drain. (As an option you can donate them to starving children in Africa to feel better)

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