The sixty years crisis

A short history of a huge problem

Part 8 My home countries
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When you have gone through this history
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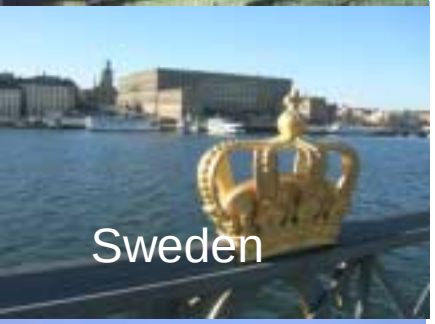
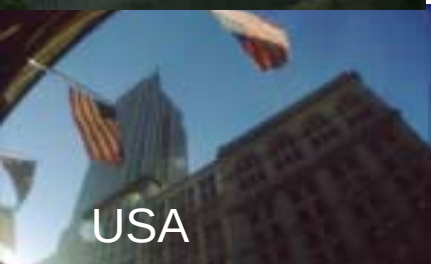
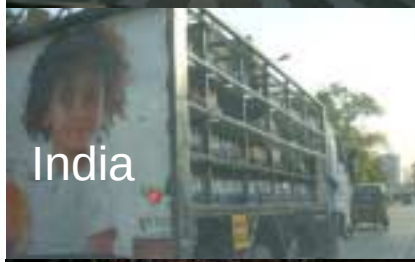
My home countries...

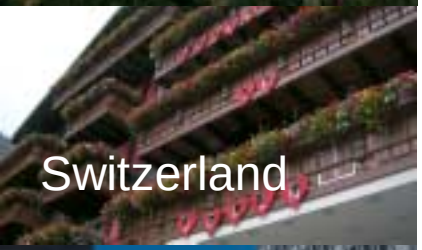
My son is Canadian. He grew up in Alberta and now works and lives in Texas. (Designing Computer Games). My daughters learned how to swim in Brazil and how to read and write in a Los Angeles public school. My older daughter went to High School in Houston, Texas and got her University degree in Umeå, Sweden (Dietician). My youngest daughter got her University degree in Melbourne, Australia. (Psychology). My wife is Brazilian with native “Indian” origin and we both have worked internationally for more than 30 years. I have lived longer periods in USA, Brazil, Switzerland and naturally Sweden and I have traveled through and worked in more than 70 countries.

From this experience I have picked the countries I feel as “Home” or where I have been particularly involved in their development through my job. The reason is that they also represent the differences we have in our world both today and for the challenges ahead of us.



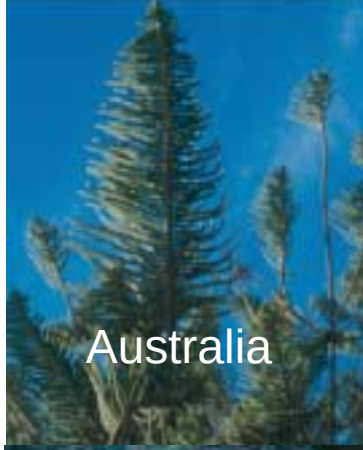


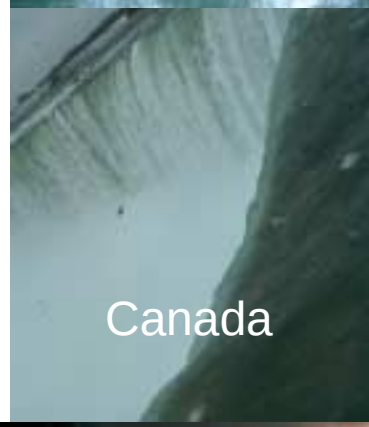


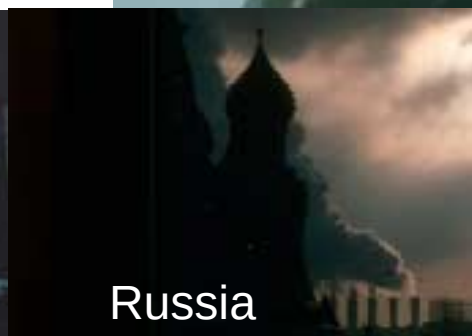


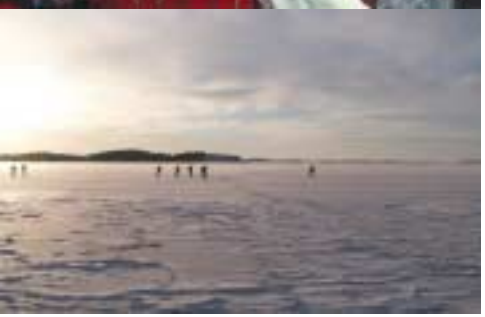
...are all part of GAIA

USA and Canada covers the North American continent north of Mexico. In just a few generations has this wilderness populated by native people living with Nature been colonized by the white man and is now the model for the modern Anglo-American way of living. So is Australia and today also Sweden and Switzerland. All five countries are very rich and part of what we call the developed world with high CO_2 emission. The other five of my home countries are economically poor but now rapidly adopting to the Anglo-American model with growing CO_2 emission. All ten countries are part of GAIA and therefore part of the problem and part of the solution. But still there are large differences both as problem and as solution. This is what we will discuss in the following pages.









Sweden

Sweden has a population of 9 millions expected to by 2050 reach 10 millions. Most people live in Stockholm, Gothenburg and Malmö regions. The size is 449 thousand sq. km that is almost twice of UK. Sweden is number 6 of 177 countries on United nations Human Development Index list.

Sweden is part of the Scandinavian peninsula and located at the same latitude as Alaska and Northern Canada. The Golf stream has however created a milder climate. I was born in the northern part with large forests, lakes, rivers and small farms. Through the church records I have been able to trace my ancestors for 10 generations living in the same area. During the 19th century Sweden was a poor country and many Swedes emigrated to America to build a new world.

Sweden is rich of natural resources and did early develop a fairly large mining and forest industry. Sweden had the advantage to stay outside the two world wars and could therefore further develop the industry. After the isolation during the second world war Sweden had it's own steel, paper, car, ship, train and airplane industry. This heavy industry for export and it's cold climate made Sweden dependent on energy. Based on large resources of hydro power Sweden was electrified.

And with a large scale nuclear power expansion Sweden became less dependent of imported fossil fuel. This in combination with energy conservation and high building standard gave the Sweden a more sustainable model compared to many other industrial countries. The Swedish model with a mixed economy blending large private corporations with state controlled infrastructure created a well fare state with a relatively low environmental impact.

But during the last twenty years Sweden has followed the de-regulation and privatization dogma with more consumption as the main goal. This has now accelerated with a new center-right government. What could have become a model for a sustainable society is today part of EU common market and globalization.

20 persons/sq. km
83% Urban
23 % over 60 years
HDI rank 6 of 177
5.6 ton CO2/person
Change 1990/2005 - 5%
GDP 40 kUSD/person
No of Billionaires 8

USA

USA has a population of 298 millions expected to by 2050 reach 395 millions. The main urbanized regions are around New York, Chicago and Los Angeles. The size is 9,4 million square km that is 39 times of UK.

USA is a complete continent with a climate changing from humid heat in Florida, dry heat in California and the Pacific rainforests of Washington to the snowy winters of Minnesota, the rainy winters of the Atlantic coast. or the Tornados of the mid west. Alaska and Hawaii is adding to this spectra of varying climate.
I visited USA for the first time 1969 and I lived there between 1986 and 1989. In my work I have visited almost all of the 50 states.

USA was created by immigrants from all over the world and built on a complete continent with varying nature. And although the different states are different it is amazing to discover the similarities. It is the same motels, stores, banks, restaurants and way of living en every state. And it is a model that is based on forming the nature to man. Freeways for millions of cars. Houses and shopping centers with air conditioning. Irrigation of lawns and golf courses. Poor housing insulation and heated swimming pools in the winter.

31 persons/sq. km
81 % Urban
17 % over 60 years
HDI rank 12 of 177
19.6 ton CO2/person
Change 1990/2005 + 20%
GDP 42 kUSD/person
No of Billionaires 432

Most American houses are basically without insulation. The gasoline for cars are much cheaper than in Europe. So is meat from Texas, fruit from California and electronics from China. Everything packed and transported. This is why the energy consumption is so high even though the climate is temperate.

When I lived in California I worked with alternative energy – 20 years ago.
But despite the investment in wind power and cogeneration the contribution was minimal. And despite more stricter environmental laws the traffic increased. The main result was that industries moved to other states. And although California consume less than most US states per capita it did not become the model for a changing life style. It is still a model for more cars and more consumption.

3 persons/sq. km
81 % Urban
18 % over 60 years
HDI rank 4 of 177
17 ton CO2/person
Change 1990/2005 +28%
GDP 34 kUSD/person
No of Billionaires 23

Canada

Canada has a population of 32 millions expected to by 2050 reach 43 millions. The size is 10 million sq. km that is 41 times the size of UK and more than three times the size of India. Mos people live near the boarder with USA with Montreal, Toronto, Calgary and Vancouver as the main metropolitan areas. The sprawling urban areas is covering larger areas with low density housing requiring longer transportation and more use of energy.

Before the arrival of the white people an estimated number of 2-3 million native people lived trough out Canada and the Arctic region. The first white inhabitants were French and Quebec was founded 1608. The population of New France traded with the native people; Algonquian, Hurons and Iroquois. 1763 France lost Canada to England. This started a British immigration both from England and USA reaching about 400 000 inhabitants around 1800 increasing with Klondike and gold fever. One hundred years later this was 5.7 million from coast to coast now interlinked with the Canadian Pacific Railroad. Another continent with as it seemed limitless resources was now part of the Anglo-American empire.

I visited Canada the first time 1969 and has since then been working coast to coast in this enormous land that is still to a great part a wilderness and with a social system that is more European than American. Ontario is English, Quebec is French. British Columbia is like Scandinavia. But Alberta is still the wild west with enormous fields and cattle ranches. This is also the land of the dinosaurs and oil. The tar sand of Northern Alberta is seen as the last resource when oil is running out.

The Canadian Indians was also terminated like in the rest of America. But some of the original population is regaining some influence. The Inuits has a limited self governing in Nunavut. So there is a difference between Canada and USA. But the model and way of living is American, just with an even colder climate. So is the consumption of fossil fuel and CO2 emission.

Australia

Australia has a population of 20 millions expected to by 2050 reach 28 millions. The size is 7.6 million sq. km that is 32 times the size of UK and more than twice the size of India. Most of the population is in south east with the larger cities of Sydney, Melbourne and Brisbane.

Australia was discovered much later than America by the Europeans. 1770 captain Cook arrived to the location of Sydney and declared this for Britain as New South Wales. 1788 about 1000 mainly prisoners were shipped to Australia. Brisbane was founded 1824. When the Europeans arrived it is estimated that about 700 000 native aboriginal people lived in Australia divided in about 500 groups. As in America the native population were killed by the white supremacy. All natives in Tasmania were terminated by 1900. Aboriginal children were taken from their parents to be brought up as “whites” in “the stolen generation”. This has finally the Australian government apologized for. The unique Australian Nature with original species was also severely damaged. The introduction of rabbits and foxes as well as sheep and cows took its toll.

1851 when gold was discovered all of Australia had 400 000 white inhabitants. And gold was not the only resource. Once again the white man had access to a complete continent with as it seemed limitless resources.

2 persons/sq. km
93 % Urban
17 % over 60 years
HDI rank 3 of 177
18.4 ton CO2/person
Change 1990/2005 +45%
GDP 36 kUSD/person
No of Billionaires 6

I visited Australia and New Zeeland the fist time some 15 years ago. Both countries was then like Europe – ten years earlier. A small and local community with some trade with UK. And with an outstanding nature from the costal mountains around Melbourne and Sydney, the beaches around Brisbane, the Great Barrier Rev and the Rain forest in the north. But also a huge desert. Now Australia is part of the global economy. Today Australia together with USA and Canada has the highest emission of carbon dioxide per capita – and increasing drastically.

Switzerland

Switzerland has a population of 7 millions expected to be the same 2050. The size is 41 thousand sq. km that is only 9% of the size of Sweden. Geneva and Zurich are the large cities but the Swiss population is spread over many smaller villages.

Switzerland is located in the middle of Europe with one French, one Italian and one German part. Like Sweden also Switzerland has managed to stay out of the European world wars. It has many similarities with Sweden but while Sweden was build as a social well fare state with a strong female influence Switzerland is a conservative state where the women for very long was not allowed to vote.

Both Sweden and Switzerland are in the top on distributed wealth and life quality but using two different formulas. Switzerland is still a unique decentralized society with independent regions. Although being very rich with a high standard of living it still keep farming as essential and you will find cows within the city limit. Switzerland does not need large industries. The main industry is banking. Switzerland has for long been the bank for the worlds white and black money.

When I lived and worked in Switzerland I did not have a car because I did not need one. I went to work in an electrical tram. For weekend or vacation we bought a rail pass and went to a beautiful Alp village, to France, Italy or Germany that also worked on the river boats or the old steamers on the lakes. Or we went hiking on high altitude. In the village of Zermat only electric cars are allowed. Still this beautiful and small country that really not need cars has a lot of them – expensive and thirsty luxury cars . This means that this decentralized country with local farming that is so rich and has such a well functioning electric rail road system could have become a sustainable model for the world. But instead the oil consumption is higher than in Sweden and increasing.

176 persons/sq. km
68 % Urban
22 % over 60 years
HDI rank 7 of 177
6 ton CO2/person
Change 1990/2005 +9%
GDP 49 kUSD/person
No of Billionaires 20

Russia

Russia has a population of 143 millions expected to be reduced to 112 million 2050. The same trend you can see in the other ex-Soviet regions where for example Ukraina is forecasted to reduce its population to almost half. Russia is significantly smaller than old Soviet Union. Still the size is 17 million sq. km and almost twice the size of USA. Moscow and St Petersburg is the two major cities and the majority of the population is located in the western European region.

Russia has always been a closed country because of it's size. Hidden behind a huge land with forest and tundra reaching from one side to the other of Euro-Asia. Three warriors has tried to conquer Moscow – The Swedish King Carl the 12th, Napoleon and Hitler. They all failed. to beat the Russian tsar. The first to succeed was Lenin in what has been known as the Russian revolution to establish a communistic state based on the teachings of Karl Marx. But what the history books are describing as a despotic and cruel regime under Stalin that after an "unholy" cooperation with USA and UK managed to include Eastern Europe in his empire after the second world war.

Despite the terror during Stalin and the enormous losses during the second world war the Soviet Union managed after the second world war to build up an industrial, technological and military strength that could compete with USA. The first Sputnik, animal and man in space was Russian. The Soviet Union also competed in pollution and was together with USA the major carbon dioxide emitter. But with the collapse of the Berlin Wall and the Soviet Union it all changed. A complete system disintegrated. Poverty, aids, alcoholism took it's toll and the average life length decreased by ten years to the lowest in Europe.

I have been visiting Russia and the other ex Eastern Block countries several times during this period of "transforming" with the Mafia, the prostitution, the luxury cars and hotels as the first signs of "progress". The freedom had it's price for many. The income gap is now larger in Russia than any European country and on the same level as in USA. And in just 15 years as many as 53 Russian billionaires have been created.

8 persons/sq. km
73 % Urban
17 % over 60 years
HDI rank 67 of 177
11 ton CO2/person
Change 1990/2005 -30%
GDP 5 kUSD/person
No of Billionaires 53

Brazil

Brazil has a population of 186 millions expected to increase to 253 million 2050. The size is 8.5 Million sq. km that is almost the same size as USA. Brazil is a tropical country covering a larger part of South America around the Equator. Still the population is highly urbanized in the Sao Paulo and Rio de Janeiro region.

Brazil became a Portuguese colony while the other part of South America became Spanish by a decision of the Pope in Rome. Naturally he had not asked the native population. Brazil was truly a garden of Eden with plenty of fruit, fish and game for the original inhabitants. As in North America the majority was killed or died from the diseases the European brought. The slave trade brought millions of Africans to work on the sugar plantations. In the beginning of the 20th century many Japanese workers immigrated. This means that Brazil is a mosaic of humans of all colors. The race segregation has not been so apparent as in USA but is in reality a separation between the rich and middleclass of white and the poor black and mixed majority. Brazil has one of the largest income gaps in the world and a consequently high crime rate.

The Amazon rain forest and the Pantanal wetland is still unique in numbers of species. This Garden of Eden is essential for the survival of life on Earth as we know it today. Brazil is rich of resources including hydro power. The construction of dams will however influence in ecology as well as the remaining native people. The sugarcane is today also used for ethanol production and fuel for cars. This means that although Brazil has oil resources at sea the consumption of fossil fuel is relatively low. But the deforestation of the original rain forest to grow crop including sugarcane, eucalyptus for pulp and paper and an increasing meat production is adding to the carbon dioxide increase.

Brazil is my second home country and I have spent several years of my life here in a country with wonderful people and nature. But also a country with large problems due to uncontrolled urbanization, more cars, narcotics, corruption and poverty. Brazil has one of the largest differences between rich and poor in the world.

22 persons/sq. km
84 % Urban
9 % over 60 years
HDI rank 67 of 177
1,8 ton CO2/person
Change 1990/2005 +72%
GDP 4 kUSD/person
No of Billionaires 16

China

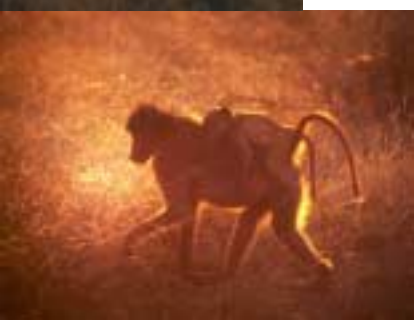
China has a population of 1316 millions expected to stabilize around 1392 million 2015 to 2050. China is still a rural society but with fast growing cities around Guangzhou, Shanghai and Beijing. The size is 9,6 million sq. km and a size a little more than USA.

Before the European expansion starting around 1500, China was by far the most advanced and largest civilization growing in parallel in time to the Roman Empire. The Portuguese were the first 1514 and establish a trading port in Macau 1557. The British tried for several years to get access to China. To finance import of silk, tea and porcelain the British started to illegally sell opium during the end of the 18th century. This escalated and caused sever social problems in China . 1839 the Chinese governor destroyed the storage of Opium in Guangzhou. The British then attacked China and after two years of war the British in the treaty got Hong Kong and the access to five more ports. This made it possible for Britain to continue with drug trafficking. After a second Opium war now also including France n the Chinese culture and country was breaking down.

China had to pay huge amounts and give away more land. Another part of the world was now conquered by the white man. The Boxar uprising 1900 against the Europeans by the Chinese to free their own land failed and once again foreign troops massacred the Chinese. Also Japan “joined the party” and after the first world war they were given the old German colonies in China and 1931 Japan invaded part of the country.

137 persons/sq. km
41 % Urban
11 % over 60 years
HDI rank 81 of 177
3.8 ton CO2/person
Change 1990/2005 + 129%
GDP 2 kUSD/person
No of Billionaires 20
(+ 21 in Hong Kong)

Mao founded 1921 the communistic party and after the war against Japan followed by a civil war the new “red” China was founded 1949 as a peasant communist experiment.
I visited China the first time 1989 and has been back frequently. The transformation is a paradox in history. A rural communistic society becoming an urban capitalistic super factory in just a few years. The Chinese culture is strong independent where it is.
When I visited Singapore the first time 1979 I was impressed by the development. So I was 1989 in Hong Kong and 1999 in Shanghai. Impressed but scared. It is an American model but with a Chinese now exploding in size - a giant shopping mall.
The earth can not sustain a consumerist China in a consumerist world.



South Africa

South Africa has a population of 47 millions expected to be stabilized on this level up to 2050 due to the AIDS epidemic. The size is 1.2 million sq. km or about five time the size of UK. Johannesburg and Cape town are the main urban centers.

Our human race originates from Africa so we are all of African origin. South Africa has a very rich archeological treasure of our race going back four million years. From the one million year old acheuléen culture there are several caves. Tools are found from about 200 000 years ago and remains of the modern man dates back to 95 000 years ago. About year 1500 before the arrival of the Europeans South Africa had developed a farming culture as well as a gold, cupper and iron mining. The Dutch fleet traveling to Asia begun using the Cape area for supplies and soon small colony was established. First the immigrants lived on trade and in peace with the original black population but soon this followed the same trend as in other parts of the world. Smallpox and guns killed most of the natives and the rest were kept as slaves.

1875 Britain conquered the colony from the Dutch. The Dutch Boer population emigrated towards the North conquering new land from the natives. 1879 the British army defeated the Zulus after a cruel war and late defeated the Boer opposition. The discovery of diamonds and gold created more European immigrants. South African Union was created as a part of the British Empire 1910. Apartheid meaning the segregation of white and colored was introduced 1910 when the original black population was degraded and assigned to small “home countries”.

The white man had conquered the richest part of Africa and enslaved the original population in the land of our origin. I visited South Africa the first time 1983 during the Apartheid and I have been back after the liberation. But South Africa is still a segregated country between rich and poor with the same AIDS and criminality problems as other African states. And it is a large emitter of carbon dioxide.

39 persons/sq. km
58 % Urban
7 % over 60 years
HDI rank 121 of 177
7 ton CO2/person
Change 1990/2005 +30%
No of Billionaires 1
GDP 5 kUSD/person

India

India has a population of 1103 millions expected to by 2050 reach 1593 millions. The size i 3.3 million sq. km or about eight times the size of UK. India is still a rural region but with Dehli, Mumbai, Kolkata and Chennai.

The Indian culture is very old originating from the Indus valley 2000 years BC with writing and cities. The Muslims entered India around 700 and were concentrated in the North while the Hindu religion was dominant in the South. The Europeans had through Arabic trade learned about India. Portugal was first to establish a trading colony in Goa. The British East Indian Company gained more and more influence during the 18th century. After four wars Britain conquered Mysore the last Muslim resistance. After another war against the Hindu and Sikh resistance Brittain 1840 controlled all of India. The new English rulers established a system to convert an Indian upper casts to the white man's beliefs. This means that India also after the liberation 1948 in many aspects is "British" in administration, politics, economy and education but still limited to the higher casts with a few exceptions within politics.

I have been traveling and working in different parts India during 20 years and although there has been development this is very limited. Very poor people are still dying on the streets. On one of these trips I had the chance to meet with the minister of finance Singh who is the mastermind behind the economic changes in India.. And II have also experienced the growth in traffic. But I am ashamed staying in one of the luxury hotels looking out on the starving misery on the other side of the street.

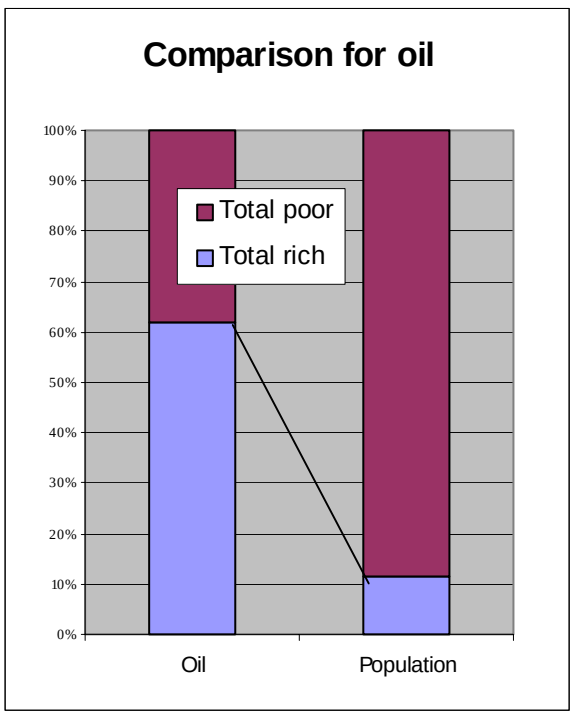
Today India has a few extremely rich individuals but a small middle class while the majority is very poor. The Tata family is one of the extremely rich in India who also has become one of the largest steel producers in the world . The "one –lakh" car is now introduced by Ratan Tata and with a price tag of 2000 USD it is intended to be affordable for the growing middle class. Also in India the car is the goal. Imagine 1500 million cars.....

336 persons/sq. km
29 % Urban
8 % over 60 years
HDI rank 128 of 177
1 ton CO2/person
Change 1990/2005 +94%
No of Billionaires 54 owns 154 Billions = 220 million with
GDP 0.7 kUSD/person

The rich and the poor

Another reason I choose these countries is that they represents five “rich” countries and five “poor”. Or if you want five countries with high per capita oil consumption and five with low. In the “old times” before the economic “revolution” of the 1980s the world was divided in first, second and third world countries, Now they are called developed, transition and emerging markets.

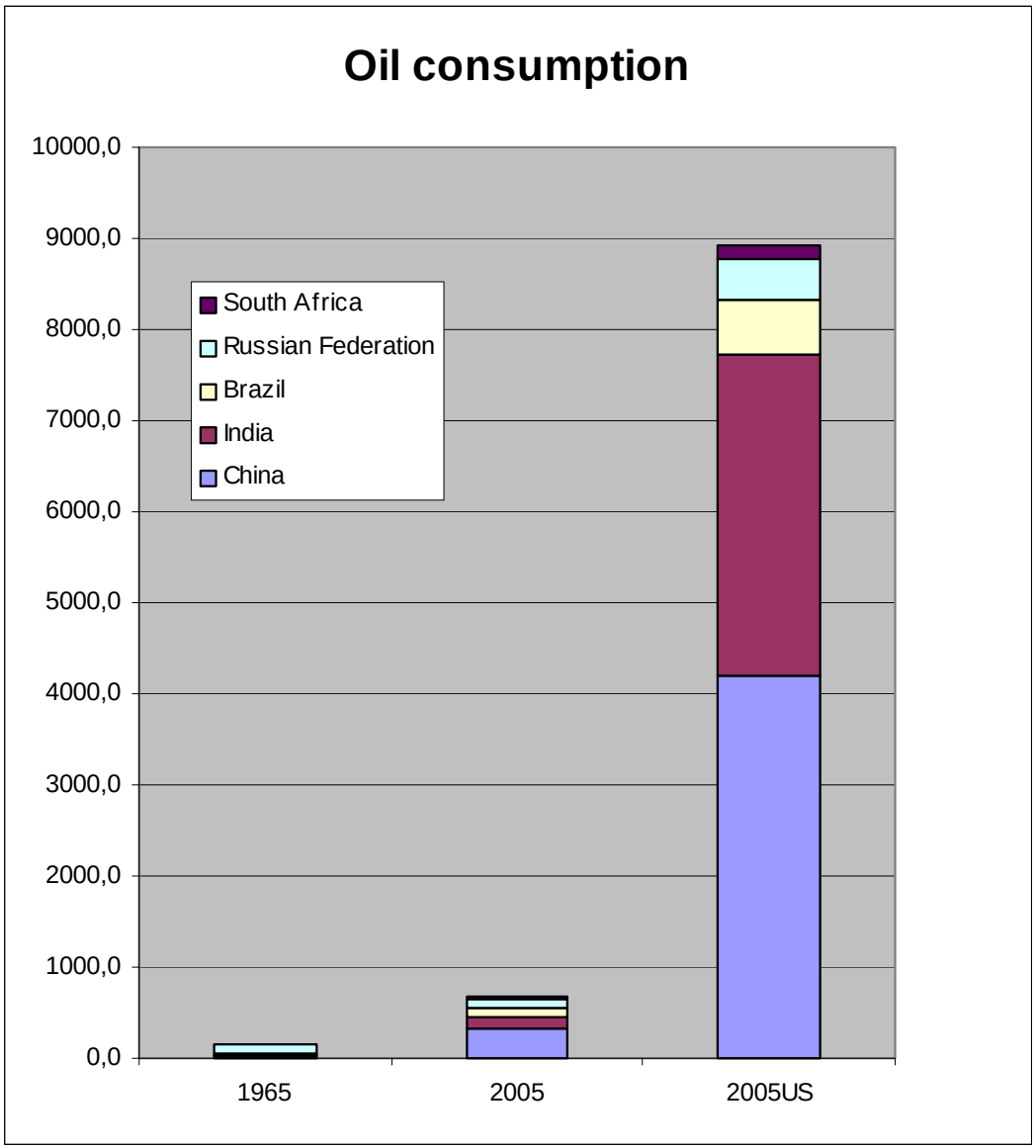
The oil consumption has increased a lot in all rich countries, except Sweden. And it has sky rocketed in the emerging markets – but it is still much lower than in the rich world. The average oil consumption in the five rich and developed markets is more than 3 tons of oil per capita and year while in the poor emerging and transition economies is about 0.2 tons per capita and year.



Million tonnes oil	1965	2005	Change	Population	Change/ person	2005/ person
USA	549	951	402	298	1,4	3,2
Canada	54	100	47	32	1,5	3,1
Australia	17	39	22	20	1,1	1,9
Sweden	19	15	-4	9	-0,4	1,7
Switzerland	8	12	4	7	0,6	1,7
Total rich	647	1118	471	366	1,3	3,1

Million tonnes oil	1965	2005	Change	Population	Change/ person	2005/ person
China	11	328	317	1316	0,2	0,2
India	13	120	107	1103	0,1	0,1
Brazil	15	90	75	186	0,4	0,5
Russian Federation	110	123	13	143	0,1	0,9
South Africa	6	23	17	47	0,4	0,5
Total poor	154	684	530	2795	0,2	0,2

Imagine all as rich as in USA



Although the oil consumption has increased in my poor home countries from 1965 to 2005 it is still just a fraction of the American consumption.

This is how it would look if my five poor countries would have the same per capita consumption as in USA.

A similar comparison can be made for other fossil fuel, gas and coal, but also for steel and aluminum, chemicals and ....pollution.

More cars, more shopping centers, more airplanes, more air conditioning, more hamburgers and fries will create more consumption and pollution in an already over stressed world.
So let us look at the development in each of these countries.

My home countries' statistical overview

Somebody has said that there are lies, fiction and then statistics. Which means that with statistics you can "prove" many things depending on how you select your data. It also means that even though this is official data by United Nations we need to "evaluate" the result and how reasonable it is.

However let us "fool" around with my home countries to find some extremes or trends. All developed countries have higher degree of urbanization, make more money and use more energy than the developing countries. The life length is also several years longer if you live in a developed country. You may also see that the Swedes talk a lot in cell phones or sit by their computers surfing the Internet. And the Swedish women are relatively well represented in Parliament compared to all other countries. But money and energy does not automatically give a more peaceful society. USA has a high crime rate and almost 1% of the population in prison. Since most are men almost 2% of all grown up American men are in prison. The number of homicides are high in USA but even higher in Russia, Brazil and South Africa. And so is AIDS. So we need to investigate some more.....Let us start with HDI!

	Pop 2005 M	Change %	Pop 2050 M	Urban	Life length years	> 60 years %	HDI	Energy Mtoe	Fossil Energy	GDP kUSD	PPP KUSD	Cell phones per 1000	Internet per 1000	Homicides per 100 000	In prison per 100 000	% women in parlament
Australia	20	1.1	28	93	80	17	0.957	5,98	5,80	36	32	818	646	1,3	126	25
Canada	32	1.0	43	81	80	18	0.950	9,91	6,72	34	33	469	626	1,9	127	21
Sweden	9	0.4	10	83	80	23	0.951	5,65	2,00	40	33	1034	756	2,4	82	47
Swizerland	7	0	7	68	78	19	0.947	3,97	2,16	49	36	849	474	2,9	83	25
USA	289	1.0	3951	81	77	17	0.948	8,13	7,27	42	42	617	630	5,6	738	16
Russia	143	-0.5	111	73	65	17	0.797	4,70	4,19	5,3	10	517	111	20	611	10
Brazil	186	1.4	253	84	70	9	0.792	1,07	0,65	4,2	8,4	357	120	>10	191	9
China	1315	0.6	1392	41	71	11	0.768	1,19	1,11	1,7	6,8	258	73	2,1	118	20
South Africa	47	0.8	49	58	49	7	0.653	2,52	2,45	5,1	11,1	428	78	48	30	8
India	1103	1.6	1592	29	63	8	0.611	0,36	0,34	0,7	3,5	64	82	3,7	335	33
World	6465	1.2	9076	49	65	10	0.741									

UNDP 2006/2007

Our human development

UNDP presents regularly the Human Development Index (HDI). This is a way to follow what we believe is the fundamental components in “human development” and “Living standard” and take into account not only “money” but life length, education etc.
The statistics confirm that we live in a very uneven world of the “have a lot” and the “have not” varying from a “purchasing power” of 1000 USD per year to 33 000 a year and a life length of 50 years to 80 years – on average.

TABLE 1

Monitoring human development: enlarging people's choices . . .

Human development index

HDI rank[a]	Human development index (HDI) value 2005	Life expectancy at birth (years) 2005	Adult literacy rate (% aged 15 and above) 1995-2005[b]	Combined gross enrolment ratio for primary, secondary and tertiary education (%) 2005	GDP per capita (PPP US$) 2005	Life expectancy index	Education index	GDP index
HIGH HUMAN DEVELOPMENT								
1 Iceland	0.968	81.5	..[d]	95.4[e]	36,510	0.941	0.978	0.985
177 Sierra Leone	0.336	41.8	34.8	44.6[h]	806	0.280	0.381	0.348
Developing countries	0.691	66.1	76.7	64.1	5,282	0.685	0.725	0.662
Least developed countries	0.488	54.5	53.9	48.0	1,499	0.492	0.519	0.452
Arab States	0.699	67.5	70.3	65.5	6,716	0.708	0.687	0.702
East Asia and the Pacific	0.771	71.7	90.7	69.4	6,604	0.779	0.836	0.699
Latin America and the Caribbean	0.803	72.8	90.3	81.2	8,417	0.797	0.873	0.740
South Asia	0.611	63.8	59.5	60.3	3,416	0.646	0.598	0.589
Sub-Saharan Africa	0.493	49.6	60.3	50.6	1,998	0.410	0.571	0.500
Central and Eastern Europe and the CIS	0.808	68.6	99.0	83.5	9,527	0.726	0.938	0.761
OECD	0.916	78.3	..	88.6	29,197	0.888	0.912	0.947
High-income OECD	0.947	79.4	..	93.5	33,831	0.906	0.961	0.972
High human development	0.897	76.2	..	88.4	23,986	0.854	0.922	0.915
Medium human development	0.698	67.5	78.0	65.3	4,876	0.709	0.738	0.649
Low human development	0.436	48.5	54.4	45.8	1,112	0.391	0.516	0.402
High income	0.936	79.2	..	92.3	33,082	0.903	0.937	0.968
Middle income	0.776	70.9	89.9	73.3	7,416	0.764	0.843	0.719
Low income	0.570	60.0	60.2	56.3	2,531	0.583	0.589	0.539
World	0.743	68.1	78.6	67.8	9,543	0.718	0.750	0.761

UNDP 2006/2007

My human development

My “home countries” Australia, Canada, Sweden and Switzerland are all part of “top ten” and USA just behind as 12 out of 177. So it looks that I am doing OK if I live there! Russia has after the collapse a lot of problems including a dying male population and is soon being passed by Brazil. China is really increasing and will soon be on the the “Fortune 50” list. But India and South Africa is far behind. So one question should be how far down on the human development list of the 177 countries are we prepared to live? And how far down on the list do we want “the others” to live.

TABLE 1

Monitoring human development: enlarging people's choices . . .

Human development index

HDI rank[a]	Human development index (HDI) value 2005	Life expectancy at birth (years) 2005	Adult literacy rate (% aged 15 and above) 1995-2005[b]	enrolment ratio for primary, secondary and tertiary education (%) 2005	GDP per capita (PPP US$) 2005	Life expectancy index	Education index	GDP index	GDP per capita (PPP US$) rank minus HDI rank[c]
HIGH HUMAN DEVELOPMENT									
1 Iceland	0.968	81.5	..[d]	95.4[e]	36,510	0.941	0.978	0.985	4
2 Norway	0.968	79.8	..[d]	99.2	41,420[f]	0.913	0.991	1.000	1
3 Australia	0.962	80.9	..[d]	113.0[g]	31,794	0.931	0.993	0.962	13
4 Canada	0.961	80.3	..[d]	99.2[e,h]	33,375	0.921	0.991	0.970	6
5 Ireland	0.959	78.4	..[d]	99.9	38,505	0.890	0.993	0.994	-1
6 Sweden	0.956	80.5	..[d]	95.3	32,525	0.925	0.978	0.965	7
7 Switzerland	0.955	81.3	..[d]	85.7	35,633	0.938	0.946	0.981	-1
8 Japan	0.953	82.3	..[d]	85.9	31,267	0.954	0.946	0.959	9
9 Netherlands	0.953	79.2	..[d]	98.4	32,684	0.904	0.988	0.966	3
10 France	0.952	80.2	..[d]	96.5	30,386	0.919	0.982	0.954	8
11 Finland	0.952	78.9	..[d]	101.0[g]	32,153	0.898	0.993	0.964	3
12 United States	0.951	77.9	..[d]	93.3	41,890[f]	0.881	0.971	1.000	-10
67 Russian Federation	0.802	65.0	99.4[d]	88.9[e]	10,845	0.667	0.956	0.782	-9
70 Brazil	0.800	71.7	88.6	87.5[h]	8,402	0.779	0.883	0.740	-3
81 China	0.777	72.5	90.9	69.1[e]	6,757[e]	0.792	0.837	0.703	5
121 South Africa	0.674	50.8	82.4	77.0[h]	11,110[e]	0.430	0.806	0.786	-65
128 India	0.619	63.7	61.0	63.8[e]	3,452[e]	0.645	0.620	0.591	-11

UNDP 2006/2007

My human development trend

It is not the position on the ranking list that is important. It is the actual value And all my home countries has radically improved their human development index except Russia and South Africa. Both countries are suffering from high criminality, increasing AIDS and large income differences. Russia is also still suffering from the collapse f the Soviet Union and the existing infrastructure.

An interesting question is however would should all countries aim at. 1 (One) is the ultimate goal of we all lived in a prefect world. Would this be possible? Do we want this? Or is our present "global" model depending on that we have rich and poor so we can produce in low cost countries. And is the UN way to measure human development the "right one"? If not do we have a better way to define "quality of life"?

TABLE 2

Monitoring human development: enlarging people's choices...

Human development index trends

HDI rank		1975	1980	1985	1990	1995	2000	2005
4	Canada	0.873	0.888	0.911	0.931	0.936	0.946	0.961
6	Sweden	0.872	0.882	0.893	0.904	0.935	0.952	0.956
7	Switzerland	0.883	0.895	0.902	0.915	0.926	0.946	0.955
12	United States	0.870	0.890	0.904	0.919	0.931	0.942	0.951
67	Russian Federation	..	..	..	0.815	0.771	0.782	0.802
70	Brazil	0.649	0.685	0.700	0.723	0.753	0.789	0.800
81	China	0.530	0.559	0.595	0.634	0.691	0.732	0.777
121	South Africa	0.650	0.670	0.699	0.731	0.745	0.707	0.674
128	India	0.419	0.450	0.487	0.521	0.561	0.578	0.619

UNDP 2006/2007

My home countries' population

Australia, Canada and USA continues to grow with about 1%. Which is more than China! Russia is decreasing. Sweden and Switzerland is getting an older population and is down to +0.4%.
So if your population growth decreases and your life length still goes up this means that fewer working citizens has to support more non working citizens.
And the population can not grow for ever, or.....

TABLE 5

. . . to lead a long and healthy life .

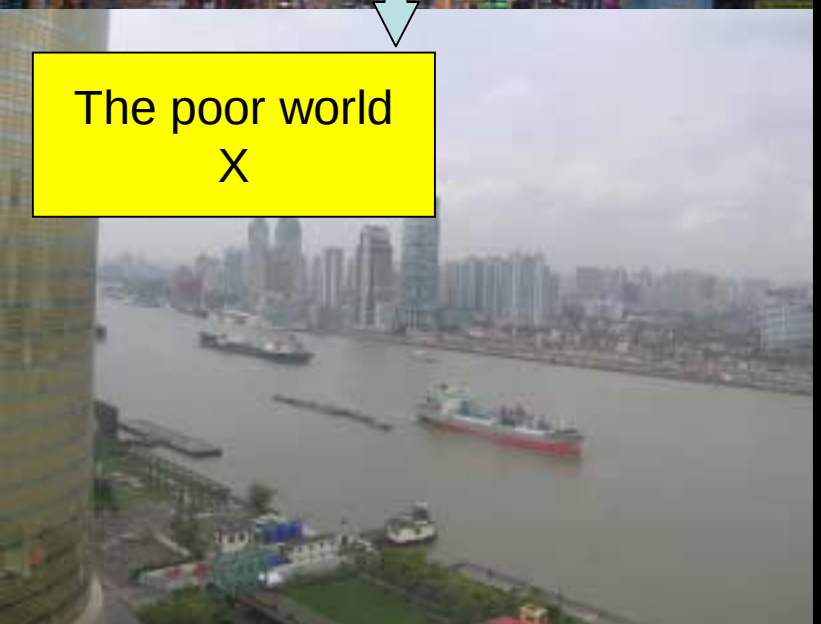
Demographic trends

HDI rank	Total population (millions) 1975	2005	2015[b]	Annual population growth rate (%) 1975–2005	2005–2015[b]	Urban population[a] (% of total) 1975	2005	2015[b]	Population under age 15 (% of total) 2005	2015[b]	Population aged 65 and older (% of total) 2005	2015[b]	Total fertility rate (births per woman) 1970–1975[c]	2000–2005[c]
HIGH HUMAN DEVELOPMENT														
3 Australia	13.6	20.3	22.4	1.3	1.0	85.9	88.2	89.9	19.5	17.9	13.1	16.1	2.5	1.8
4 Canada	23.1	32.3	35.2	1.1	0.9	75.6	80.1	81.4	17.6	15.6	13.1	16.1	2.0	1.5
6 Sweden	8.2	9.0	9.4	0.3	0.4	82.7	84.2	85.1	17.4	16.7	17.2	20.2	1.9	1.7
7 Switzerland	6.3	7.4	7.7	0.5	0.4	55.7	75.2	78.7	16.7	14.5	15.4	18.7	1.8	1.4
12 United States	220.2	299.8	329.0	1.0	0.9	73.7	80.8	83.7	20.8	19.8	12.3	14.1	2.0	2.0
67 Russian Federation	134.2	144.0	136.5	0.2	-0.5	66.9	73.0	72.6	15.1	15.9	13.8	13.1	2.0	1.3
70 Brazil	108.1	186.8	210.0	1.8	1.2	61.7	84.2	88.2	27.8	25.4	6.1	7.7	4.7	2.3
81 China	927.8[d]	1,313.0[d]	1,388.6[d]	1.2[d]	0.6[d]	17.4	40.4	49.2	21.6	18.5	7.7	9.6	4.9	1.7
121 South Africa	25.7	47.9	50.3	2.1	0.5	48.1	59.3	64.1	32.1	30.2	4.2	5.5	5.5	2.8
128 India	613.8	1,134.4	1,302.5	2.0	1.4	21.3	28.7	32.0	33.0	28.7	5.0	5.8	5.3	3.1
Developing countries	2,972.0 T	5,215.0 T	5,956.6 T	1.9	1.3	26.5	42.7	47.9	30.9	28.0	5.5	6.4	5.4	2.9
Least developed countries	357.6 T	765.7 T	965.2 T	2.5	2.3	14.8	26.7	31.6	41.5	39.3	3.3	3.5	6.6	4.9
Arab States	144.4 T	313.9 T	380.4 T	2.6	1.9	41.8	55.1	58.8	35.2	32.1	3.9	4.4	6.7	3.6
East Asia and the Pacific	1,312.3 T	1,960.6 T	2,111.2 T	1.3	0.7	20.5	42.8	51.1	23.8	20.6	7.1	8.8	5.0	1.9
Latin America and the Caribbean	323.9 T	556.6 T	626.5 T	1.8	1.2	61.1	77.3	80.6	29.8	26.3	6.3	7.7	5.0	2.5
South Asia	835.4 T	1,587.4 T	1,842.2 T	2.1	1.5	21.2	30.2	33.8	33.6	29.5	4.7	5.4	5.5	3.2
Sub-Saharan Africa	314.1 T	722.7 T	913.2 T	2.8	2.3	21.2	34.9	39.6	43.6	41.7	3.1	3.2	6.8	5.5
Central and Eastern Europe and the CIS	366.6 T	405.2 T	398.6 T	0.3	-0.2	57.7	63.2	63.9	18.1	17.4	12.8	12.9	2.5	1.5
OECD	928.0 T	1,172.6 T	1,237.3 T	0.8	0.5	66.9	75.6	78.2	19.4	17.8	13.8	16.1	2.6	1.7
High-income OECD	766.8 T	931.5 T	976.6 T	0.6	0.5	69.3	77.0	79.4	17.6	16.5	15.3	18.0	2.2	1.7
High human development	1,280.6 T	1,658.7 T	1,751.1 T	0.9	0.5	66.4	76.8	79.4	20.2	18.8	12.7	14.5	2.7	1.8
Medium human development	2,514.9 T	4,239.6 T	4,759.8 T	1.7	1.2	23.8	39.3	44.9	29.3	26.0	5.8	6.8	5.3	2.6
Low human development	218.5 T	508.7 T	653.0 T	2.8	2.5	18.6	33.2	38.6	44.9	43.0	2.9	3.0	6.9	6.0
High income	793.3 T	991.5 T	1,047.2 T	0.7	0.5	69.4	77.6	80.0	18.1	17.0	14.8	17.3	2.3	1.7
Middle income	2,054.2 T	3,094.7 T	3,339.7 T	1.4	0.8	34.7	53.9	60.3	25.1	22.5	7.3	8.6	4.6	2.1
Low income	1,218.0 T	2,425.5 T	2,894.7 T	2.3	1.8	20.5	30.0	34.2	36.6	33.3	4.2	4.7	5.9	3.8
World	4,076.1 T[e]	6,514.8 T[e]	7,295.1 T[e]	1.6	1.1	37.2	48.6	52.8	28.3	26.0	7.3	8.3	4.5	2.6

UNDP 2006/2007

The rich and the poor

The rich world
10 X



The poor world
X

The globalization has been growing since the discovery of America and the triangle trade between Europe, Africa and America. And the rich countries has always been in the drivers seat in their mission to become even richer.

During the 19th century the rich world imported wood, silver, cotton, sugar and slaves while exporting liquor, glass jewelries and a new religion. In the 21th century the rich world imports wood, metals, oil and cheap labour products while exporting liquor, luxury brands and a new religion.

As 200 years ago we export the labour intensive production to the poor countries. But the difference is that this now also require more fossil fuel in these countries to produce our consumer goods for our shopping centers and for their own 10% upper middle class so they can buy our luxury goods and increase their own consumption. But the whole model is based on that you have rich and poor – always.

Our human economy

GDP = Gross Domestic Product has always been used to measure our economic performance. The rich OECD countries in the world with about 18% of the world population represent a GDP of 35 trillion or 80% of world total. PPP or "Purchasing Power" illustrates much you can buy for your money in your own country. This give the poor countries a little more. But we are still a very divided world in rich and poor.

TABLE 14

. . . to have access to the resources needed for a decent standard of living . . .

Economic performance

HDI rank	GDP		GDP per capita				
					Annual growth rate (%)		Highest value during 1975–2005
	US$ billions 2005	PPP US$ billions 2005	US$ 2005	2005 PPP US$[a] 2005	1975–2005	1990–2005	2005 PPP US$[a]
HIGH HUMAN DEVELOPMENT							
Developing countries	9,812.5 T	26,732.3 T	1,939	5,282	2.5		3.1
Least developed countries	306.2 T	1,081.8 T	424	1,499	0.9		1.8
Arab States	1,043.4 T	1,915.2 T	3,659	6,716	0.7		2.3
East Asia and the Pacific	4,122.5 T	12,846.6 T	2,119	6,604	6.1		5.8
Latin America and the Caribbean	2,469.5 T	4,639.2 T	4,480	8,417	0.7		1.2
South Asia	1,206.1 T	5,152.2 T	800	3,416	2.6		3.4
Sub-Saharan Africa	589.9 T	1,395.6 T	845	1,998	-0.5		0.5
Central and Eastern Europe and the CIS	1,873.0 T	3,827.2 T	4,662	9,527	1.4		1.4
OECD	34,851.2 T	34,076.8 T	29,860	29,197	2.0		1.8
High-income OECD	32,404.5 T	30,711.7 T	35,696	33,831	2.1		1.8
High human development	37,978.4 T	39,633.4 T	22,984	23,986	1.9		1.8
Medium human development	5,881.2 T	20,312.6 T	1,412	4,876	3.2		4.0
Low human development	236.4 T	544.2 T	483	1,112	-0.7		0.6
High income	34,338.1 T	32,680.7 T	34,759	33,082	2.1		1.8
Middle income	8,552.0 T	22,586.3 T	2,808	7,416	2.1		3.0
Low income	1,416.2 T	5,879.1 T	610	2,531	2.2		2.9
World	44,155.7 T	60,597.3 T	6,954	9,543	1.4		1.5

How much money can you live on?

USA is since long the most successful and has now passed 12 trillion USD as GDP. This gives 41890 USD per person as GDP. Still Switzerland is higher with 49351. Sweden, Australia, and Canada are between 35 – 40 kUSD. Then we have Russia, Brazil and South Africa on a similar level of around 5kUSD. And in the end China with 1.7 kUSD and India with 0.7 KUSD.

If we use PPP that is a more sophisticated version of the Big Mac index (How much you pay for a Big Mac in different countries) the low income countries get a better rating since they can purchases more "value for the money" at home compared to if they would spend their money abroad. Since PPP is based on USD and US standard the GDP and PP will have the same value in USA but in high cost countries like Switzerland PPP will be lower than GDP.

TABLE 14

. . . to have access to the resources needed for a decent standard of living . . .

Economic performance

HDI rank	GDP		GDP per capita						Average annual change in consumer price index (%)	
	US$ billions 2005	PPP US$ billions 2005	US$ 2005	2005 PPP US$[a] 2005	Annual growth rate (%) 1975–2005	Annual growth rate (%) 1990–2005	Highest value during 1975–2005 2005 PPP US$[a]	Year of highest value	1990–2005	2004–05
HIGH HUMAN DEVELOPMENT										
3 Australia	732.5	646.3	36,032	31,794	2.0	2.5	31,794	2005	2.5	2.7
4 Canada	1,113.8	1,078.0	34,484	33,375	1.6	2.2	33,375	2005	1.9	2.2
6 Sweden	357.7	293.5	39,637	32,525	1.6	2.1	32,525	2005	1.6	0.5
7 Switzerland	367.0	265.0	49,351	35,633	1.0	0.6	35,633	2005	1.2	1.2
12 United States	12,416.5	12,416.5	41,890	41,890	2.0	2.1	41,890	2005	2.6	3.4
67 Russian Federation	763.7	1,552.0	5,336	10,845	-0.7[b]	-0.1	11,947[b]	1989	53.5	12.7
70 Brazil	796.1	1,566.3	4,271	8,402	0.7	1.1	8,402	2005	86.0	6.9
81 China	2,234.3	8,814.9[g]	1,713	6,757[g]	8.4	8.8	6,757	2005	5.1	1.8
121 South Africa	239.5	520.9[d]	5,109	11,110[d]	-0.3	0.6	11,617	1981	7.4	3.4
128 India	805.7	3,779.0[d]	736	3,452[d]	3.4	4.2	3,452	2005	7.2	4.2

UNDP 2006/2007

The polarized world

An American with the highest purchasing power has 12 times the PPP as in India. When it comes to GDP an American has 57 times as in India. This means that one American income could support 57 persons living in India.

During the last maybe 10 – 20 years we have seen a strong shift in attitudes towards “money”. There is no longer any restrictions in how much money a person can “make”. The figures are astronomical. The division between poor and rich countries therefore has an additional dimension within each country. The 20% richest Americans have 46% of the income while the 20% poorest only has 4,6%. And the rich never loose. 2007 when many Americans have to leave their homes since they cannot pay their loans and banks are in trouble the bonus paid will still be 38 billion Dollar in Wall Street. Sweden is the country with the most even income distribution. Brazil is one of the countries with the widest income gap. The rich 10% make 51 times the poor 10%.

So what you can see in both the developing world and USA is parallel worlds with a standard of living on totally different levels. And this also is reflected in resources and pollution.

TABLE 15

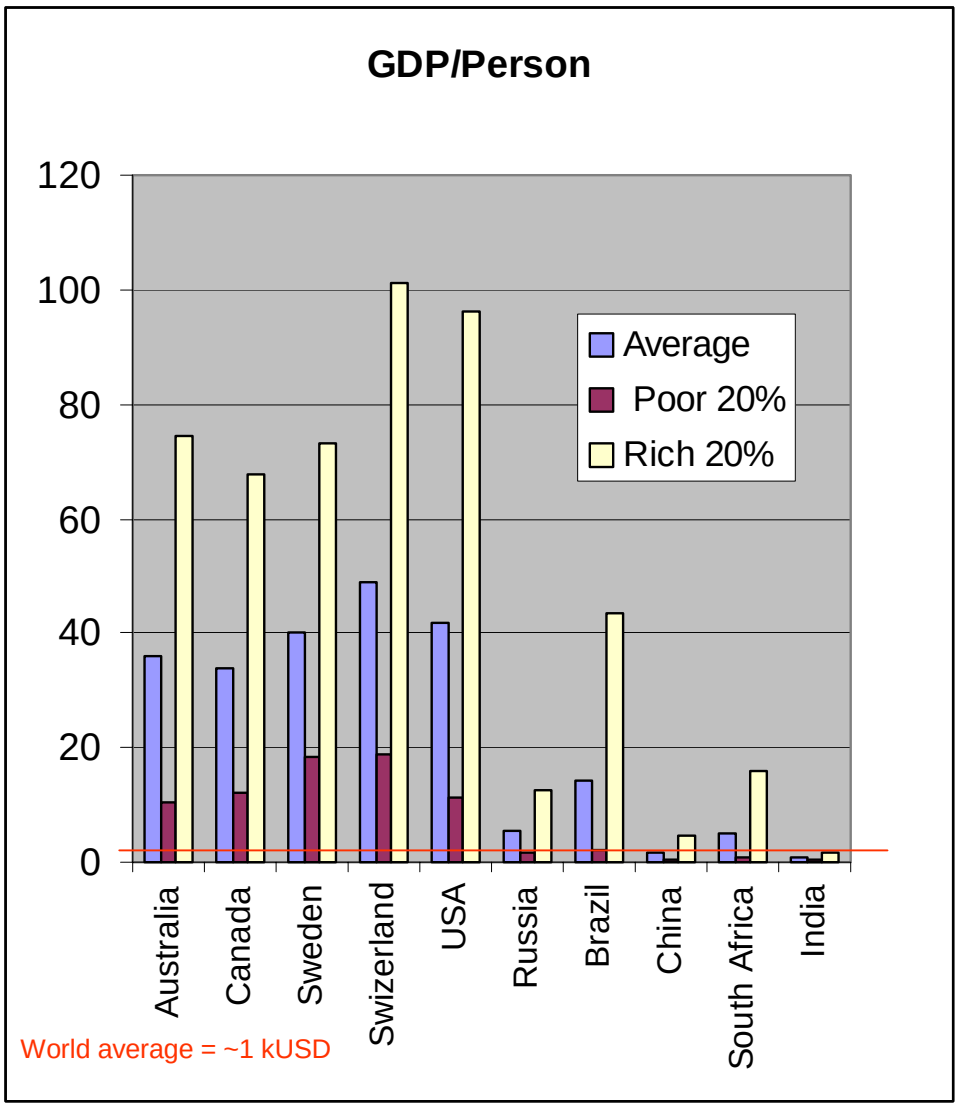
. . . to have access to the resources needed for a decent standard of living . . .

Inequality in income or expenditure

HDI rank	Survey year	MDG Share of income or expenditure (%) Poorest 10%	Poorest 20%	Richest 20%	Richest 10%	Inequality measures Richest 10% to poorest 10%[a]	Richest 20% to poorest 20%[a]	Gini index[b]
HIGH HUMAN DEVELOPMENT								
3 Australia	1994[c]	2.0	5.9	41.3	25.4	12.5	7.0	35.2
4 Canada	2000[c]	2.6	7.2	39.9	24.8	9.4	5.5	32.6
6 Sweden	2000[c]	3.6	9.1	36.6	22.2	6.2	4.0	25.0
7 Switzerland	2000[c]	2.9	7.6	41.3	25.9	9.0	5.5	33.7
12 United States	2000[c]	1.9	5.4	45.8	29.9	15.9	8.4	40.8
67 Russian Federation	2002[d]	2.4	6.1	46.6	30.6	12.7	7.6	39.9
70 Brazil	2004[c]	0.9	2.8	61.1	44.8	51.3	21.8	57.0
81 China	2004[c]	1.6	4.3	51.9	34.9	21.6	12.2	46.9
121 South Africa	2000[d]	1.4	3.5	62.2	44.7	33.1	17.9	57.8
128 India	2004-05[d]	3.6	8.1	45.3	31.1	8.6	5.6	36.8

UNDP 2006/2007

The even more polarized world



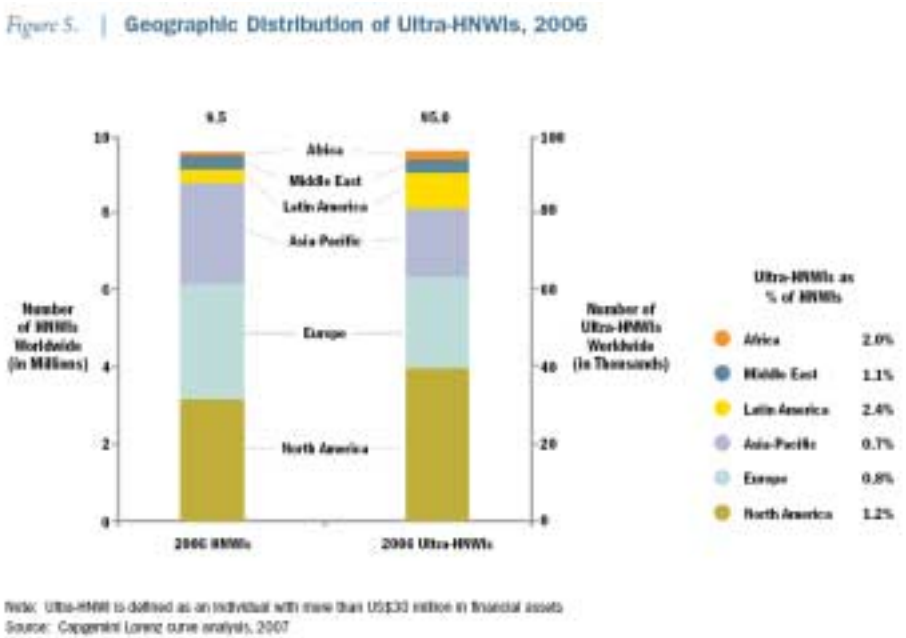
So if you use the UNDP figures for the 20% rich and the 20% poor in my "home countries" you will se a rather dramatic difference. The richest 20% Americans make 321 times more money than the 20% poor Indian citizens or 160 times poor Brazilians. Good for them!

So is this a problem? Yes because the more you consume the more waste and pollution!

GDP/Person kUSD	Average	Poor 20%	Rich 20%	Ratio
Australia	36	10,6	74,3	7
Canada	34	12,2	67,8	5,5
Sweden	40	18,2	73,2	4,0
Swizerland	49	18,6	101,2	5,4
USA	42	11,3	96,2	8,5
Russia	5,3	1,6	12,3	7,6
Brazil	4,2	0,6	12,8	21,8
China	1,7	0,4	4,4	12,1
South Africa	5,1	0,9	15,9	17,8
India	0,7	0,3	1,6	5,6

A rapidly expanding minority

John D Rockefeller was the first Billionaire 1918. Based on oil. The world of today has 946 billionaires of which half in North America. The combined net worth of the list is US$ 3.5 trillion, a US$ 900 billion increase in one year. A HNWI is a High Net Worth Individual with more than 1 Million. In total they own 37,2 Trillion USD an increase with 11.6% in one year. The number of HNWI grew to 9.5 Million who represents 37.2 Trillion USD. These individuals now controls a quarter of the worlds total wealth equivalent to almost the complete GDP of the world! (Increase of 11%) USA alone has 2 163 000 HNWI Millionaires which is about the same number as is in American prisons. And now this get extremely rich model also works in Russia, Turkey, China and India



World wide top 10

Rank Worlds Richest	Nation/Region	Number of billionaires	Category
1	United States	432	Category:American billionaires
2	Germany	55	Category:German billionaires
3	India	54	Category:Indian billionaires
4	Russia	53	Category:Russian billionaires
5	United Kingdom	29	Category:British billionaires
6	Turkey	25	
7	Japan	24	Category:Japanese billionaires
8	Canada	23	Category:Canadian billionaires
9	Hong Kong	21	
10	China	20	

The 11th world wealth report by Merril Lynch and Forbes Magazine

The fortune 100

Top 100	No.	BUSD
USA	38	568
Russia	14	168
India	8	123
Germany	9	107
France	5	81
Saudi	4	43
UK	1	11
Sweden	4	71
Swiss	1	9
Spain	3	40
Hong Kong	3	55
Italy	3	33
Canada	2	30
Egypt	1	10
Kuweit	1	12
UAE	1	8
Mexico	1	49
Greece	1	11
All Top 100	100	1429

These are the countries of origin with the top 100 richest persons in the world. All together they own 1.4 Trillion USD. This sum is enough to double the income for the poorest 20% living in Brazil, China and India (about half a billion persons) for 8 years.

About 2.4 billion humans are estimated to live in “low-income” countries. This is 37% of the world population. The combined wealth of the 9.5 million “Dollar Millionaires” in the world is estimated to be 37.2 Trillion USD. If they donated ¾ of their fortune they could double the income for these 2.4 billion “low income” individuals for twenty years. This simple calculation is to demonstrate the enormous differences between rich and poor that is even accelerating. Salaries, bonuses and options are skyrocketing for the already rich. And this is now happening not only in USA but in the “emerging markets like India and the transforming markets like Russia. Fueling a luxury consumption we could never even dream about.

The fortunate become even richer

The World's Billionaires

03.05.08, 6:00 PM ET

Page 1

RANK	NAME	CITIZENSHIP	AGE	NET WORTH ($BIL)	RESIDENCE
1	Warren Buffett	United States	77	62.0	United States
2	Carlos Slim Helu & family	Mexico	68	60.0	Mexico
3	William Gates III	United States	52	58.0	United States
4	Lakshmi Mittal	India	57	45.0	United Kingdom
5	Mukesh Ambani	India	50	43.0	India
6	Anil Ambani	India	48	42.0	India
7	Ingvar Kamprad & family	Sweden	81	31.0	Switzerland
8	KP Singh	India	76	30.0	India
9	Oleg Deripaska	Russia	40	28.0	Russia
10	Karl Albrecht	Germany	88	27.0	Germany
11	Li Ka-shing	Hong Kong	79	26.5	Hong Kong
12	Sheldon Adelson	United States	74	26.0	United States
13	Bernard Arnault	France	59	25.5	France
14	Lawrence Ellison	United States	63	25.0	United States
15	Roman Abramovich	Russia	41	23.5	Russia

Yes the enormously rich are getting even richer. 2007 there were 946 USD Billionaires in the world. 2008 there are 1125 USD Billionaires. In total they own 4.4 Trillion USD.

And what we now see is that India and Russia are catching up. Our model is really working well...at least for a few. But the majority in India and Russia is far from well.

What is wrong by being rich?

Worlds High Net Worth Individuals

HNWIs (more than $1 million, in 2006)		
Region	Number	Percentage of regional population
Global	9,500,000	0.15%
North America	3,200,000	0.62%
Europe	2,900,000	0.41%
Asia-Pacific	2,600,000	0.06%
Latin America	400,000	0.07%
Middle East	300,000	N/A
Africa	100,000	0.01%

Worlds Ultra High Net Worth Individuals

UHNWIs (more than $30 million, in 2006)		
Region	Number	Percentage of regional population
Global	95,000	0.001%
North America	38,400	0.007%
Europe	23,200	0.003%
Asia-Pacific	18,200	0.0004%
Latin America	9,600	0.002%
Middle East	3,300	N/A
Africa	2,000	0.00002%

To become successful and earn money is naturally the goal for most people today. And when an invention or entrepreneurship with a great business idea pays off this is naturally good and often generates jobs for some and products or services for others.
This has always been part of our civilization.

But with the privatization and globalization mania starting in the 1980s we lost both perspective and control. Money became the driver by itself. A new bread of people occurred to make fast money. Mergers, acquisitions, speculation made a few people gambling about our future. No one was any longer thinking longer than next days stock market index. No one took the responsibility for the whole and the long term effects. We lived in a big Las Vegas Casino where a few played he monopoly game about our common future and determining the life of millions of people they did not know or even though of as existing.

Our freedom to be rich

In the old times when we did not have democracy there were different types of governance. The natural free man who lived in small villages mostly had a council of elderly men. Island and for periods also the other Scandinavian countries had something call “ting, that was a larger council. But when civilization grew and with this the wealth some of these men also grew in power and wealth. We got nobility and kings who could inherit this wealth so they in turn could grew in power and wealth. Then we in the western world “invented” Parliamentary democracy with roots from the Roman republic and even the Greece partial democracy. It was still wealthy men who decided but they were more so that not one single lunatic could destroy it all.

Then came the system with public elections. Everyone could vote. Well not exactly everyone. Not women, not black, not young. It was even so that men that were more wealthy had more votes then other with less money. Then for a short period of time during my generation almost all in the western world had the freedom to vote. But after a while that did not matter so much as before. Because the real power was now tied to how wealthy you were. And a few of us got extremely rich. And many of us in the western world got fairly rich. Even a few in the developing countries got rich. So who got the power. The economic, the military but also political power is within the OECD or even G7 group of the richest countries. Who will ask Bolivia, Tanzania or even India when we will take an important decision. No our free democracy is now as before interlinked with how much money we have. And since women, black and young people do not have so much money it is still the “stupid white men” who has the power.

Our human solidarity

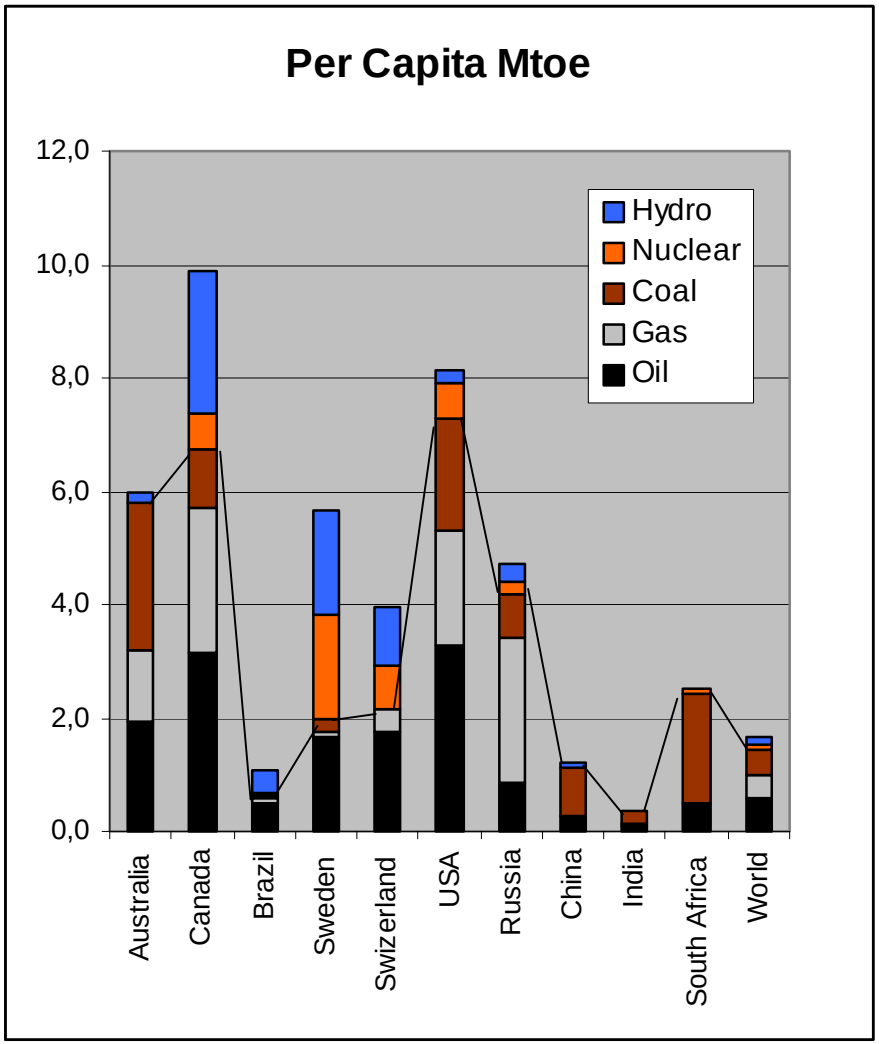
The rich OECD countries in the world with a GDP of 35 trillion or 80% of world total therefore can afford to share some money with majority of the world still in powerty. And some do. The goal has been to give 1% of the gross national income as aid to the poor. No rich country has so far afforded this. Sweden and Norway are close with 0.94%. The extreme CO_2 polluters United States and Australia can only afford 0.22% and 0.25%. Their foreign aid goes to oil import and war for oil.

TABLE 17 . . . to have access to the resources needed for a decent standard of living . . .

OECD-DAC country expenditures on aid

		MDG Net official development assistance (ODA) disbursed				MDG		MDG		MDG	
	Total [a] (US$ millions)	As % of GNI		ODA per capita of donor country (2005 US$)		ODA to least developed countries [b] (% of total)		ODA to basic social services [c] (% of total allocable by sector)		Untied bilateral ODA (% of total)	
HDI rank	2005	1990 [d]	2005	1990	2005	1990	2005	1996/97 [e]	2004/05 [e]	1990	2005
HIGH HUMAN DEVELOPMENT											
2 Norway	2,786	1.17	0.94	453	600	44	37	12.9	14.3	61	100
3 Australia	1,680	0.34	0.25	76	83	18	25	12.0	10.7	33	72
4 Canada	3,756	0.44	0.34	115	116	30	28	5.7	30.4	47	66
5 Ireland	719	0.16	0.42	27	180	37	51	0.5	32.0	..	100
6 Sweden	3,362	0.91	0.94	256	371	39	33	10.3	15.2	87	98
7 Switzerland	1,767	0.32	0.44	148	237	43	23	8.6	7.2	78	97
8 Japan	13,147	0.31	0.28	91	103	19	18	2.5	4.6	89	90
9 Netherlands	5,115	0.92	0.82	247	313	33	32	13.1	22.0	56	96
10 France	10,026	0.60	0.47	166	165	32	24	..	6.3	64	95
11 Finland	902	0.65	0.46	174	171	38	27	6.5	13.4	31	95
12 United States	27,622	0.21	0.22	63	93	19	21	20.0	18.4	..	..
13 Spain	3,018	0.20	0.27	35	70	20	27	10.4	18.3	..	87
14 Denmark	2,109	0.94	0.81	315	388	39	39	9.6	17.6	..	87
15 Austria	1,573	0.11	0.52	29	191	63	16	4.5	13.9	32	89
16 United Kingdom	10,767	0.27	0.47	72	179	32	25	22.9	30.2	..	100
17 Belgium	1,963	0.46	0.53	123	188	41	31	11.3	16.5	..	96
18 Luxembourg	256	0.21	0.82	101	570	39	41	34.4	29.5	..	99
19 New Zealand	274	0.23	0.27	44	67	19	25	..	29.9	100	92
20 Italy	5,091	0.31	0.29	77	87	41	28	7.3	9.4	22	92
22 Germany	10,082	0.42	0.36	125	122	28	19	9.7	12.1	62	93
24 Greece	384	..	0.17	..	35	..	21	16.9	18.8	..	74
29 Portugal	377	0.24	0.21	25	36	70	56	8.5	2.7	..	61
DAC	106,777 T	0.33	0.33	93	122	28	24	7.3	15.3	68 [f]	92 [f]

Energy consumption



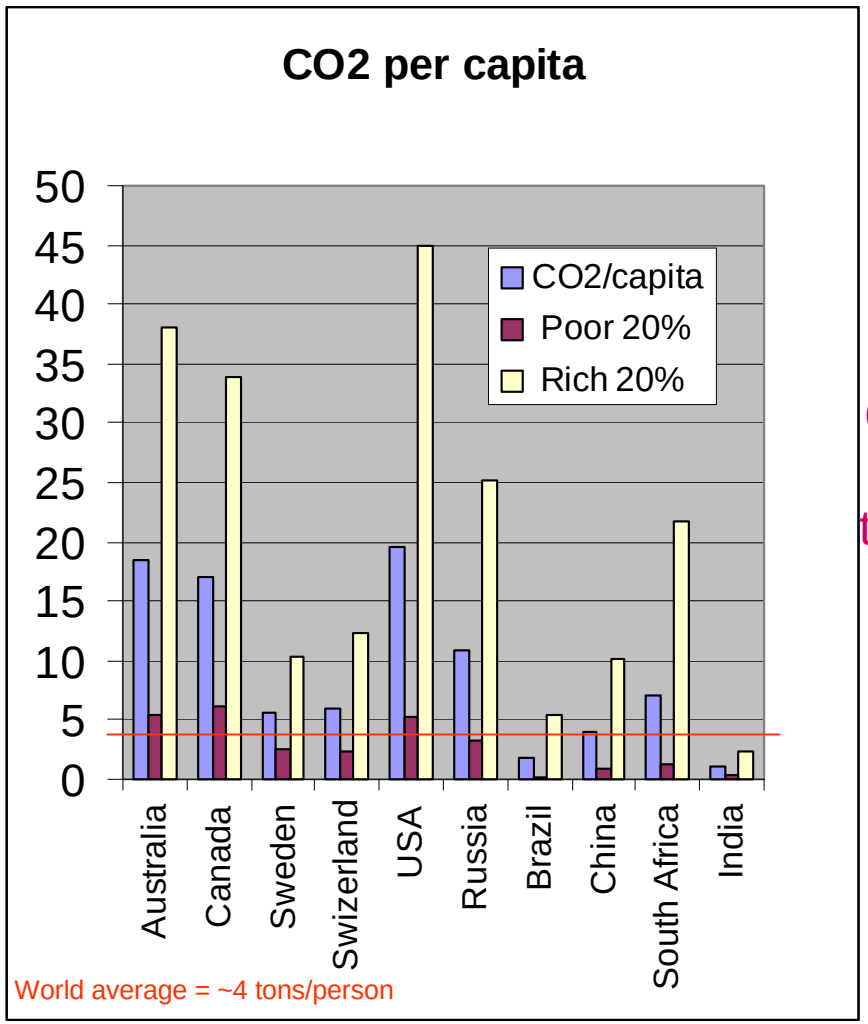
What we can see is that the economical success has it's price in higher energy consumption. So Brazil, India and China has significant lower energy consumption than USA, Canada and Australia.

There is also differences in the use of fossil fuels compared to nuclear and hydro. Sweden and Switzerland has consequently a high HDI ranking and a high GDP/capita but a relatively little use of fossil fuel on the same level as world average.

So all Americans, Canadians and Australians consume about 7000 tons fossil fuel per year and person. That is about 20 kilos (40 pounds) of black oil every day for each man, women and child living in these countries. But since it is the wealthy white men who consume the most this gives an even more unbalanced picture. Especially since these rich white males also rules the world.

BP Statistical review

Your pollution reflects your income



Money is used to measure economical wealth. Money is the result and cause of most of our actions. Money is equal to purchasing power . And money measure the use of resources and emissions. So if you use the UNDP figures for the 20% rich and the 20% poor in my “home countries” you will se a rather dramatic difference also for CO_2 emissions. But maybe it is not so strange. The more money you make, the bigger house you have, the more you travel, the more things you buy the more you pollute.

So once again the difference depends on how much you consume and your life style.
The difference is between countries but also between different income and spending groups in each country.

So the rich 20% Americans once again get in trouble since they pollute more than 20 times an average Brazilian and 50 times someone in India.

The US electrical raw model

Table 5. Electric Power Net Generation by Primary Energy Source and Industry Sector, 1990, 1995, and 2001 Through 2006
(Megawatthours)

Energy Source	1990	1995	2001	2002	2003	2004	2005	2006	Percentage Share	
									1990	2006
United States										
Total Electric Industry	3,037,988,277	3,353,487,362	3,736,643,653	3,858,452,252	3,883,185,204	3,970,555,262	4,055,422,750[R]	4,064,702,227	100.0	100.0
Coal	1,594,011,479	1,709,426,468	1,903,955,943	1,933,130,354	1,973,736,750	1,978,620,219	2,013,178,838[R]	1,990,926,091	52.5	49.0
Petroleum	126,621,142	74,554,065	124,880,222	94,567,394	119,405,641	120,770,924[R]	122,521,953	64,363,874	4.2	1.6
Natural Gas	372,765,154	496,057,945	639,129,120	691,005,746	649,907,542	708,853,525[R]	757,974,331	813,044,015	12.3	20.0
Other Gases	10,382,830	13,869,951	9,039,473	11,462,685	15,600,020	16,766,090	16,316,773[R]	16,060,217	0.3	0.4
Nuclear	576,861,678	673,402,123	768,826,308	780,064,087	763,732,695	788,528,387	781,986,365	787,218,636	19.0	19.4
Hydroelectric	292,865,846	310,832,748	216,961,044	264,328,832	275,806,327	268,417,308	270,321,255[R]	289,246,416	9.6	7.1
Other Renewables	64,372,226	73,965,385	70,768,646	79,109,172	79,486,789	82,603,592	87,212,740[R]	96,423,384	2.1	2.4
Pumped Storage	-3,507,741	-2,725,131	-8,823,445	-8,742,928	-8,535,065	-8,488,210	-6,557,788	-6,557,842	-0.1	-0.2
Other	3,615,663	4,103,808	11,906,342	13,526,911	14,044,507	14,483,430	12,468,282	13,977,436	0.1	0.3

See footnotes at end of tables.

USA has the highest number of cars and airplanes in the world consuming fossil fuel (oil). Heating and air conditioning utilize fossil fuel. (gas). Also the electricity consumption in USA is based on fossil fuel. The electricity consumption increased with 34% from 1990 to 2005 while the population increase was 20%. This means that although USA is the most developed as our western consumer model the electricity consumption continuous to rise. What is also alarming is that both fossil and nuclear share increased while hydroelectric and other renewable share decreased.

www.eia.doe.gov

The US consumption raw model

Table 8. Retail Sales, Revenue, and Average Retail Prices by Sector, 1990, 1995, and 2001 Through 2006

Sector	1990	1995	2001	2002	2003	2004	2005	2006	Percentage Share	
									1990	2006
United States										
Retail Sales (thousand megawatthours)										
Residential	924,019	1,042,501	1,201,607	1,265,180	1,275,824	1,291,982	1,359,227	1,351,520	34.1	36.8
Commercial	751,027	862,685	1,083,069	1,104,497	1,198,728	1,230,425	1,275,079	1,299,744	27.7	35.4
Industrial	945,522	1,012,693	996,609	990,238	1,012,373	1,017,850	1,019,156	1,011,298	34.9	27.6
Other	91,988	95,407	113,174	105,552	NA	NA	NA	NA	3.4	NA
Transportation	NA	NA	NA	NA	6,810	7,224	7,506	7,358	NA	0.2
All Sectors	2,712,555	3,013,287	3,394,458	3,465,466	3,493,734	3,547,479	3,660,969	3,669,919	100.0	100.0

So how come the electricity consumption continuous to increase faster than the population in the most developed of our western economies although more and more things are being imported from Mexico, China and other parts of Asia.
The industrial electricity consumption had only a small increase of 7% but the major increase was for residential use with almost 50% and commercial use with 64% increase. More air conditioning, more shopping centers, more electric appliances, electronics and gadgets. The same trend that we now see in Canada, Europe, Japan, Australia and in the “emerging markets”.

www.eia.doe.gov

The US pollution raw model for CO_2

Table 7. Electric Power Industry Emissions Estimates, 1990, 1995, and 2001 Through 2006
(Thousand Metric Tons)

Emission Type	1990	1995	2001	2002	2003	2004	2005	2006
United States								
Carbon Dioxide								
Coal	1,572,389	1,697,952	1,895,181	1,912,656	1,947,172	1,962,742	2,001,237	1,974,057
Petroleum	118,386	76,280	116,084	90,208	110,955	114,653	115,944	67,326
Natural Gas	232,682	297,108	365,311	377,056	343,394	365,205	381,927	403,024
Geothermal	380	326	349	369	367	377	374	371
Other Renewables	7,411	11,844	12,821	14,759	13,793	13,956	14,128	15,023
Total	1,931,248	2,083,509	2,389,745	2,395,048	2,415,680	2,456,934	2,513,609	2,459,800

See footnotes at end of tables.

The use of fossil fuel for electricity consumption will pollute with carbon dioxide. And if the use of fossil fuel increases the pollution with CO_2 will also increase. So here our American raw model has a fundamental error. Both number of cars, size of cars and miles driven by cars are increasing. So does flying miles. This goes faster than fuel efficiency improves. In addition the use of fossil fuel for electricity increases. We are since long investing in renewable bio fuel as an alternative. But know we learn that to produce the bio fuel we actually need so much land and energy so the reduction in carbon dioxide emission will not be significant. The hydro power in US is to a great extent already harvested. To build thousands of wind plants will require steel and energy. So there is no fast track solution!

www.eia.doe.gov

California dreaming renewables

Table 4. Electric Power Net Summer Capacity by Primary Energy Source and Industry Sector, 1990, 1995, and 2001 Through 2006
(Megawatts)

Energy Source	1990	1995	2001	2002	2003	2004	2005	2006	Percentage Share 1990	Percentage Share 2006
Total Electric Industry	53,215	53,489	54,482	56,663	57,850	58,306	61,707	63,213	100.0	100.0
Coal	432	420	363	352	358	389	389	389	0.8	0.6
Petroleum	2,968[R]	1,866[R]	1,082	837	824	838	840	789	5.6	1.2
Natural Gas	26,075[R]	26,786[R]	29,444	31,712	33,290	33,438	36,700	38,001	49.0	60.1
Other Gases	107	176	281	226	225	235	191	171	0.2	0.3
Nuclear	4,746	4,310	4,324	4,324	4,324	4,324	4,324	4,390	8.9	6.9
Hydroelectric	9,767	10,446	10,331	10,364	9,947	10,078	10,088	10,083	18.4	16.0
Other Renewables	5,594	5,746	4,916[R]	5,102	5,177	5,308	5,479	5,693	10.5	9.0
Pumped Storage	3,526	3,730	3,730	3,730	3,688	3,688	3,688	3,688	6.6	5.8
Other	-	9	13[R]	17	17	8	8	8	-	*

See footnotes at end of tables.

Table D-1. Developed and Undeveloped Hydroelectric Plant Sites

Hydrologic Region	Developed Capacity KW	Developed Capacity Number	Proposed Developments Number	Total
North Coast	210,766	32	9	41
San Francisco Bay	1,087	3	3	6
Central Coast	7,425	10	3	13
South Coast	812,975	79	4	83
Sacramento River	4,890,855	151	30	181
San Joaquin River	3,217,435	75	8	83
Tulare	1,853,688	23	3	26
North Lahontan	6,450	2	1	3
South Lahontan	201,302	27	9	36
Colorado River	209,395	14	4	18
TOTAL	11,410,858	416	76	492

When I lived and worked in California during the 1980s there was a boom for renewable energy plants such as wind, solar and co-generation.
So what happened after this?
From 1990 to 2005 basically no investment in renewable energy while fossil fuel grew by 34%!
And there is no more hydro!

www.eia.doe.gov and http:/ww.rubicon.water.ca.gov

The two ”extremes” ?

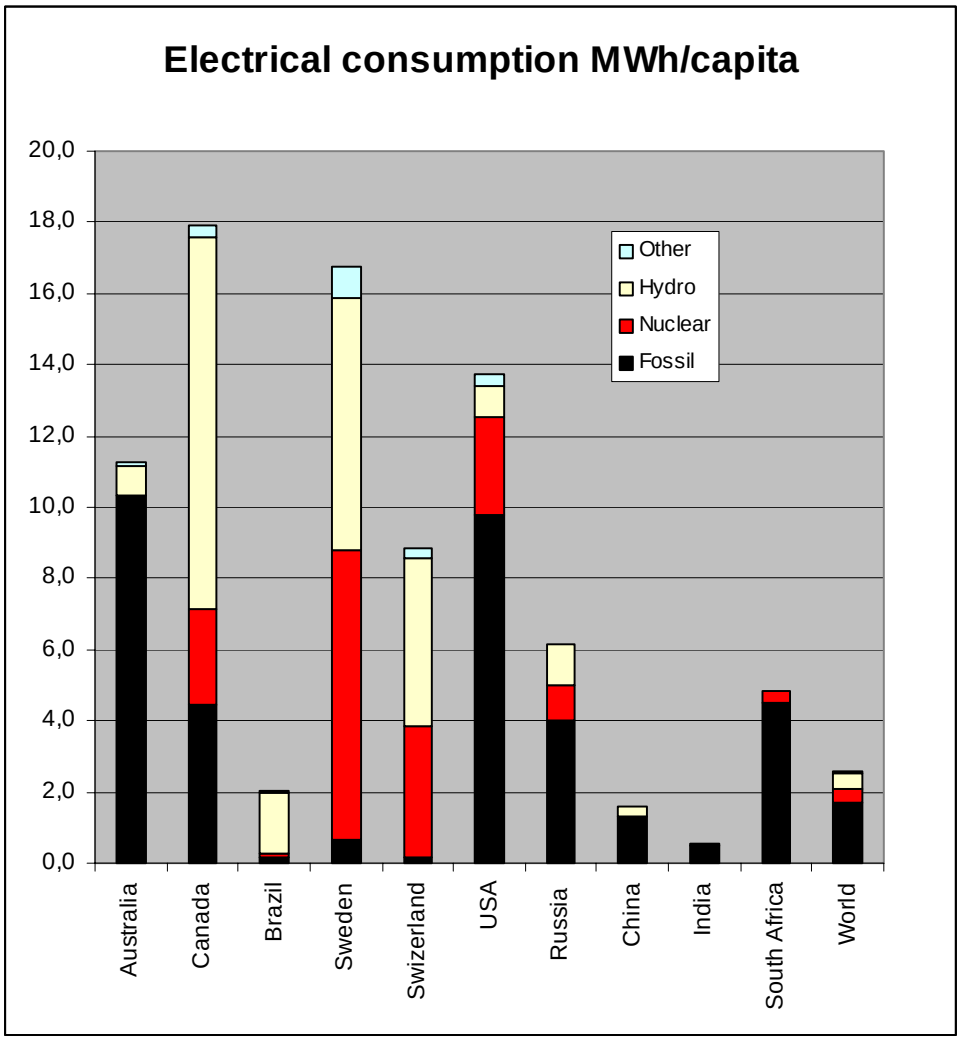
Table 8. Retail Sales, Revenue, and Average Retail Prices by Sector, 1990, 1995, and 2001 Through 2006

Sector	1990	1995	2001	2002	2003	2004	2005	2006	Percentage Share	
									1990	2006
California										
Retail Sales (thousand megawatthours)										
Residential	66,575	68,783	76,668	77,202	82,926	83,361	85,610	89,836	31.5	34.2
Commercial	79,691	80,874	96,459	102,587	109,578	118,953	117,551	121,255	37.8	46.1
Industrial	55,892	57,367	63,041	48,448	49,909	48,812	50,242	50,991	26.5	19.4
Other	8,935	5,580	11,591	6,976	NA	NA	NA	NA	4.2	NA
Transportation	NA	NA	NA	NA	809	900	846	877	NA	0.3
All Sectors	211,093	212,605	247,759	235,213	243,221	252,026	254,250	262,959	100.0	100.0
Texas										
Retail Sales (thousand megawatthours)										
Residential	82,548	92,831	117,343	121,435	121,355	120,330	126,562	126,843	34.8	37.0
Commercial	62,238	68,580	87,912	87,746	96,694	99,616	110,784	111,130	26.2	32.4
Industrial	84,087	90,093	98,208	102,251	104,547	100,588	96,841	104,689	35.4	30.5
Other	8,542	11,775	14,581	9,414	NA	NA	NA	NA	3.6	NA
Transportation	NA	NA	NA	NA	90	81	71	62	NA	*
All Sectors	237,415	263,279	318,044	320,846	322,686	320,615	334,258	342,724	100.0	100.0

Traditionally California and Texas has been considered as two extremes on political opinions. But they have more similarities from Cowboys to oil. The environmental legislation does however differ with stricter regulation in California. This can be seen in the fact that the industrial consumption goes down in California while it is still increasing in Texas. California has been “exporting” it’s heavy industry.

The commercial consumption has increased by 50% in California and 80% in Texas.

An electrifying world



Source EIA

If India would reach the same electricity consumption per person as USA they need to increase their power plants and network 24 times. If Brazil should use much fossil fuel for power production as USA or Australia the have to increase fossil fuel burning **fifty six (56) times**.

If the whole world would copy the US electricity mix the world has to expand fossil fuel burning plants and nuclear power plants six (6) times. Hydropower plants in existing rivers has to be duplicated. Wind, bio and solar plants has to be expanded seven (7) times – worldwide. But if everything should be replaced with renewable hydro, wind, bio and solar plants we need to expand this **thirty (30) times worldwide**. That is a lot of wind mills. But we also need to replace oil in cars, and population is increasing, and.....

A global problem with local solutions

Out of my home countries there are only two that has decreased CO_2 emission between 1990 and 2005. That is Russia and Sweden. The Russian decrease is due to the collapse of the Soviet Union. The Swedish decrease us due to along term policy to substitute fossil fuel with other energy from nuclear and hydro to combined cycle plants with waste and heat pumps for heating. But all other countries is increasing including the already high polluters Australia, Canada and USA. But the biggest increase is it China that soon will surpass USA as the largest polluter of carbon dioxide although the per capita emission is only ¼ of the US per capita emission. So how can we reverse this devastating development and reduce the emissions to an acceptable level less than 2 tons per capita and year. Is this possible? Yes because we have to! And we have to find individual solutions in each part of the world.

Environment > CO_2 emissions, 2005

	CO_2 emissions from fuel combustion[1]												
	Total, million tonnes of CO_2	% change 2005/1990	By type of fuel, Million tonnes of CO_2				By sector, Million tonnes of CO_2					CO_2 per unit of GDP	CO_2 per capita	
			Coal	Oil	Gas	Others[2]	Electricity and heat	Industry	Transport	Residential	Other	kg/2000 USD	t/capita	
Australia	376.8	45.1	214.5	110.0	51.9	0.5	219.1	42.4	79.7	7.9	27.7	0.80	18.40	Australia
Canada	548.6	27.9	110.8	267.2	170.1	0.5	126.7	90.9	160.2	39.8	130.9	0.67	17.00	Canada
Sweden	51.0	- 4.5	9.9	37.2	1.7	2.2	9.3	11.8	22.9	1.5	5.5	0.19	5.64	Sweden
Switzerland	45.0	8.9	0.6	34.7	6.5	3.2	1.6	6.5	16.7	12.2	8.0	0.17	6.00	Switzerland
United States	5 817.0	19.9	2 130.9	2 456.6	1 201.9	27.5	2 485.3	636.0	1 813.3	347.3	535.1	0.53	19.61	United States
Brazil	339.0	75.9	50.7	241.2	47.1	0.0	36.2	104.0	138.0	15.6	45.1	0.51	1.82	Brazil
China	5 059.9	128.9	4 171.8	802.4	85.7	0.0	2 468.6	1 592.6	332.1	243.0	423.6	2.68	3.88	China
India	*1 135.3*	*93.5*	*773.9*	*311.5*	*50.0*	*0.0*	*660.7*	*232.1*	*95.9*	*98.4*	*48.2*	*1.76*	*1.04*	India
Russian Federation	*1 543.9*	*- 29.5*	*429.5*	*315.5*	*783.4*	*15.6*	*872.2*	*221.9*	*206.0*	*116.0*	*128.0*	*4.41*	*10.79*	Russian Federation
South Africa	330.3	29.7	271.0	59.3	0.0	0.0	206.1	51.2	42.9	14.6	15.6	2.07	7.05	South Africa

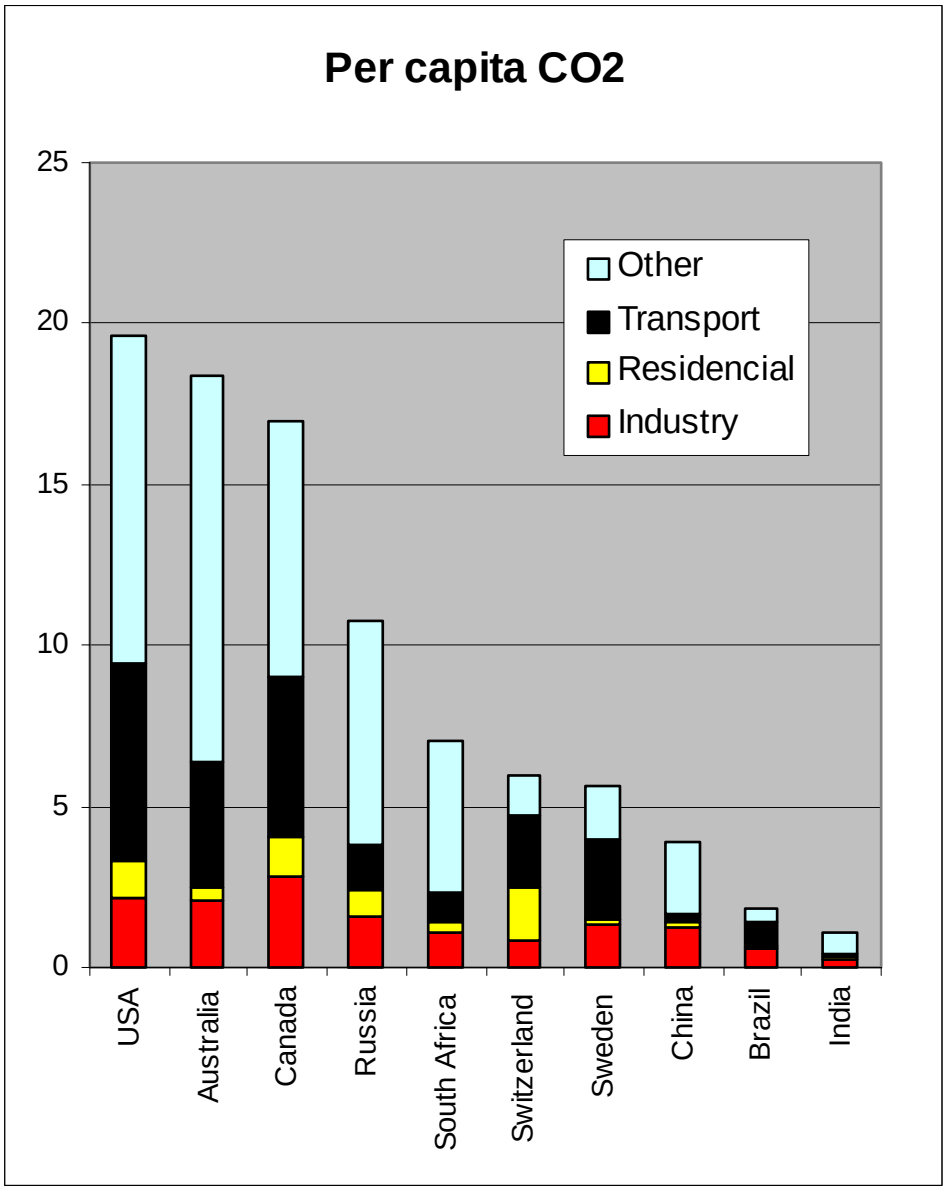
StatLink http://dx.doi.org/10.1787/OIF2007en22

1. CO2 emissions are calculated using the IEA energy balances, the IPCC Sectoral Approach and the default emissions factors from the Revised 1996 IPCC Guidelines for National Greenhouse Gas Inventories. They may differ from National Communications submitted by the parties to the UNFCCC.
2. Includes industrial waste and non-renewable municipal waste.

Figures in italics are provisional.

Sources:
CO2 Emissions from Fuel Combustion, IEA, Paris, 2007;
Energy Balances of OECD Countries, IEA, Paris, 2007;
Energy Balances of Non-OECD Countries, IEA, Paris, 2007;
Main Economic Indicators, OECD, Paris, 2007.

What is increasing the pollution?



The industrialization process requires energy. This process that started in the end of the 19th century in UK and accelerated the accelerated in US in the first half of the 20th century built the new western world after the second world war. The same process is now happening in the “emerging markets” 50 years later. The first wave of industrial consumption.

In China and Brazil the industry is causing 31% of the emissions but in USA and Australia only 11%. The reason is that are developed countries start using energy for convenience and luxury. And that we are centralizing and globalizing. The per capita emission from transportation in USA is 24 times China and 70 times India.

The other emission is from electricity and commercial energy. So if we do not need to create more emission to produce more food and more “things” what do we need it for?

The highway to hell?

The globalization mania

Our present model and religion based on continues growth require globalization. A small local company need to expend to a larger region to grow. A national company need to expand internationally. In the “old” economy about 50 years ago the industrial production was still based on local resources, local skills and local markets. Today the resources are imported, the skills are outsourced and the market is global. What is important is the branding. This means we just compared to some years ago have increased the number of brands more than 1000 times. We just have to look at tooth paste and cars as two examples. We have different manufacturers but we have also different brands and flavors. We can today select among such an enormous variety of the same thing. We send those things back and forth around the world and we call it trade.

All these products we now can choose from are manufactured somewhere, assembled and packed somewhere else and shipped to a third market. The product we buy today is very cheap to produce but it cost a lot to brand, market, pack, transport and sell to a super market somewhere. This is the system shift that during the last decades has increased trade, profits, energy consumption and pollution. It is a system and a model that continues to grow bigger and bigger until it bursts. And that is what now is happening.

We can see the same trend in all of my home countries but on different stages in this process. But the trend is clear. More people move to the cities. More supermarkets and trade. More consumption of energy. More pollution. Less and less people are actually working with farming to produce food and less and less people are actually working in our factories to produce the things we need like clothing and furniture. We think we are becoming more efficient but we are not. We are just redistributing the work. And it requires more and more resources and more and more energy. Someone has calculated that the carbon dioxide emitted for cheese burgers with fries in United States is 200 million tons per year. Because meet, wheat and potatoes is produced in different places using fertilizers, then shipped and packed to finally shipped and be cocked.

Small is beautiful and efficient. Big is ugly and inefficient. We do not need more globalization in global factories and global shopping malls. We need to return to a wll balanced local and regional community based on local resources and local needs. This has to bee done individually in each country and each region. Sometimes even in each village. This means we have to turn around 180 degrees. Now!

Sweden and the global environment

The Swedish climate with long winters and temperate summers with rainfall gives a rather short growing season. Still oat, rye and potatoes are cultivated as well as apples and some other fruits. The large forests offers plenty of berries and mushrooms. The many lakes, rivers and a long coast with many islands provides fish. Moose and deer is hunted during the fall. And the Laplanders populating the mountain regions keep rain deer. So Sweden has since long been self sufficient on locally produced food and could be so also in the future.

The Swedish industry was basically self sufficient after the second world war. Today these companies has become very successful on many export markets. But a large part of the production has also been moved to low cost countries. Still Sweden has locally the competence and resources to efficiently manufacture most products needed in the modern world. Sweden is small and will need to import something. But not everything. And not oil.

Sweden has since long been in the forefront in environmental regulation. The use of fossil fuel is one of the lowest for a developed country. Based on own resources Sweden could further reduce pollution and implement a low energy economy without the need for nuclear power. This would be based on decentralization with local energy and food production. Regional transportation by electrical trains and local transportation based on electrical hybrid cars with locally produced bio fuel will eliminate use of oil. So Sweden is fortunate. We could relatively fast return to a more balanced way of living utilizing new technology combined with old experience. This model will not allow more airplanes, shopping centers, more imported processed food and gadgets. But it will allow a healthier life.

Still Sweden cannot solve this alone. Further actions are needed in the Baltic region. Acid rain from the European fossil fuel plants has already poisoned lakes and rivers. The Baltic sea is polluted from fertilizers. The nuclear accident in Russia did pollute Sweden for several years. Sweden may not be so affected by the global warming as many other countries. The growing season may be prolonged. The climate change will however radically change the present flora and fauna. And we really not know about the Golf stream and how the weather will become. There is even a risk that a similar Ozone hole as in Antarctica will develop and give severe consequences.



USA and the global environment

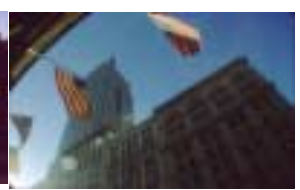
USA is a complete continent with almost all different climate zones from Alaska to Hawaii and California to Michigan. Everything can be grown somewhere. But the US version of farming is highly specialized with one crop cultivated in one area and in large quantities. Irrigation, fertilizers, pesticides and machines are used as well as genetically modified versions to increase productivity. The food is furthermore processed and packed in other locations, sold and consumed in a third location. American food production in generally and meat production especially is therefore very energy demanding. Much more energy is used for food production than the energy in the food. A change to sustainable alternatives will require a complete turn around and system change.

USA became around 1900 the largest industrial nation in the world. It still is in competition with Japan and now China. But there is some differences. While the US industry originally was self sufficient it now requires more and more imported raw materials including oil. Still more and more of the production of consumer goods is “exported” to Japan, Korea, China and India. The industrial use of energy therefore has been stabilized but on a high level while the consumption of energy for domestic, commercial and transportation use is increasing. But brilliant scientists has always been imported to USA that has unique scientific, technical and economical resources. If USA wanted to change and develop low energy and low consumption alternatives it could!

USA has been slow in environmental regulation both nationally and internationally. There are however large differences between different states. This means there is also big differences in carbon dioxide and other emissions between the states. Still the large environmental problems from some years ago has been improved. Los Angeles as an example has only 20 days per year with bad air today instead of more than 100. The emissions of carbon dioxide is however still increasing and the major sources of global warming. This will also affect USA. Flooding, hurricanes, dust storms but especially draught and water shortage will reduce food production in the south and central parts while Northern USA will have a longer growing season. USA has the biggest impact on the global warming both due to it’s own pollution and as a raw model for the rest of the world. But since USA is built with and for a very high consuming model of all resources the turn around has to be very drastic.





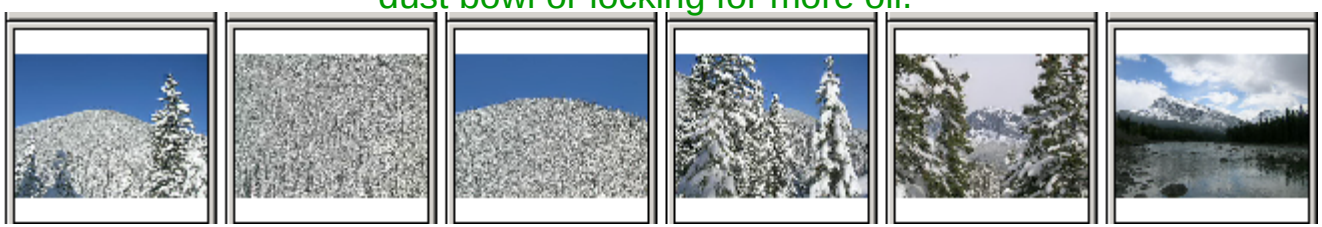




Canada and the global environment

The Canadian climate is continental with warm summers and cold winters. Due to it's size the climate is different from north to south and east to west. A large part of northern Canada is still wilderness. Lakes, rivers, the Atlantic Ocean and the Pacific provides a variety of fish. Canada could easily harvest food for it's population using sustainable and environmental friendly methods. But the Canadian fishing industry demonstrates another warning history. The first European explorers described the waters as being so full of cod you just had to lower a basket into the water to bring up it up full of cod. Small inshore boats took sustainable amounts of cod for centuries up to the 1950s. The bounty of the Grand Banks was enough for local and small-scale fishing and a healthy population of millions of harp seals. The cod catch based on industrial fishing steadily increased to 800,000 tonnes in 1968. By 1992 the cod had disappeared and 1993, all Canadian cod fishing was banned. But the cod did not return. Now the Canadian autorities has increased the hunt of seals to 350 000 per year. But no cod. In the western states like Alberta wheat and meat is mass produced in a similar way as in USA requiring more fossil fuel energy.

Alberta has large resources of oil and tar sand that mainly is exported to USA besides own use. Edmonton and Calgary is winter cities with much energy used for heating of indoor streets and shopping malls. Edmonton is for example known fro the largest shopping mall in the world. This makes Alberta to the largest consumer of energy and the largest polluter of carbon dioxide and other substances as published y NPRI – National Pollutant Release Inventory. Canada has much stricter environmental regulations than USA. Long term growth of carbon dioxide pollution, nevertheless remains large. Between 1990 and 2005 significant increases in oil and gas production, much of which have been provided to the United States, have resulted in a significant increase in the emissions associated with the production and transportation of fuel for export with almost 60%. The other greatest contributors to the overall increase were the 34.9 percent increase in emissions from the Electricity and Steam Generation sub-sector, and a 29.2 percent increase from Vehicles.

Canada will like Scandinavia get a warmer climate and an even better growing season. But with the same threat for a Northern Ozone hole. Canada will also most probably be an attractive country for Americans escaping the dust bowl or locking for more oil.



Australia and the global environment

Australia was long time ago separated from Asia and the evolution could progress by it self. Australia is therefore one of seventeen countries described as being “mega diverse”. Australia is home to between 600,000 and 700,000 species, many of which are endemic, that is they are found nowhere else in the world. These include, for example, 84% of our plant species, 83% of mammals, and 45% of birds.

The few humans who lived in this island lived with the Nature and this whole continent was untouched until the white man arrived in larger quantities some 150 years ago. But ever since this massive immigration Australia’s biodiversity - the plants, animals, micro-organisms and their ecosystems - is threatened from the impacts of human activities. Since European settlement, more than 50 species of Australian animals and over 60 species of Australian plants are known to have become extinct.

Australia also has one of the most diverse marine habitats.- The Great Barrier Reef. Climate change is recognized as the greatest long-term threat to the Great Barrier Reef. Projections show sea and air temperatures will continue to increase, sea level is rising, the ocean is becoming more acidic, intense storms and rainfall will become more frequent and ocean currents will change. The Great Barrier Reef is home to about 1500 species of fish, 350 species of hard coral, more than 4000 species of mollusks, 500 species of algae, 6 of the world’s 7 species of marine turtle, 24 species of seabird, more than 30 species of whale and dolphin and the dugong. And these are just the species that have been recorded so far. If the Reef would disappear so will a lot of this unique life.

But in addition the Australian continent will be hit by global warming. The wild fires are already harming the mountains around Melbourne and Sidney. Mostly caused on purpose or accidentally by man. The water is already a small resource. This will be even smaller after global warming. What is difficult to understand that even though Australia it self will be so affected by global warming the increase of carbon dioxide emission continues.





Switzerland and the global environment

Switzerland's federal forestry law of 1876 is among the world's earliest pieces of environmental legislation. Still in 1986, the Swiss Federal Office of Forestry issued a report stating that 36% of the country's forests had been killed or damaged by acid rain and other types of air pollution. 1986, as a result of a fire in northern Switzerland, some 30 tons of toxic waste flowed into the Rhine River, killing an estimated 500,000 fish and eels.

The Federal Office for the Environment in Switzerland states on their website: “The Swiss policy on environment and resources has produced positive results in several areas such as water quality, waste treatment and certain atmospheric pollutants. These are the findings of the report entitled «Environment Switzerland 2007» published by the federal government on 1 June 2007. However, the general state of the environment in Switzerland has not improved significantly. Our style of life and patterns of consumption have cancelled out the progress made in environmental protection. The main challenges for the future remain the use of resources and climate change.... The main reasons for the mixed overall results are that Switzerland is becoming more and more urbanized, mobility is increasing, and there is a continued shift towards the service sector. This trend and the resulting imbalance between regions increases pressure on the environment. Our way of life and patterns of consumption are canceling out the progress we have made in environmental protection and eco-efficiency.”

The following main environmental problems are according to FOEN: Emissions of greenhouse gases... are too high. Between 1970 and 2005 the average temperatures in Switzerland increased by 1.5°C. In the same way, emissions of ozone precursors and of particulate matter, which lead to winter and summer smog, are too high. ..... We still have little knowledge of the origins and effects of many chemicals, and the amount of waste we produce continues to increase. The loss of biodiversity continues, with 30 to 50% of indigenous species currently under threat. Fragmentation of the landscape and of habitats is still increasing.... The recession of glaciers, the melting of permafrost and changes in vegetation and precipitation mean that Switzerland has to face considerable challenges.”







Russia and the global environment

Russia is rich in natural resources. Particularly in energy reserves, being the largest producer of natural gas, the second largest holder of coal reserves, and the third largest producer of crude oil in the world. It has many minerals, large expanses of virgin forest and large fishing resources. It's four million square miles of Boreal forests, for example, contain over 20% of the world's forest cover, of global interest not only for wood products, but also significant as a carbon sink, in an area larger than the continental US. Russia also has a large portion of the world's fresh water. Lake Baikal, the largest fresh water lake in the world and a UNESCO World Heritage Site, holds 20% of the world's fresh water, and is home to 1500 species, many being unique to that ecosystem.

But Soviet Union became a major polluter in it's arms race with USA. Nuclear waste as well as pollution from the heavy industry spread throughout Russia but also in rivers, lakes and in the Oceans. The Chernobyl nuclear accident polluted Sweden. Aral Sea ha dropped by half it's size and been replaced by sand and salt. Russia's three military plutonium production sites have caused extensive contamination of Russian waterways. Russia is a major polluter of the Black and Caspian Seas as well as the Baltic Sea. So Russia has great potential to improve including a large renewable energy potential (geo thermal and hydro) that could completely replace it's coal.

The collapse of Soviet Union had many consequences. One was the reduced industrial activities that substantially reduced the carbon dioxide emissions. But in general the environmental situation did not improve, on the contrary. Many of the new companies have shut down corporate environmental protection departments and stopped or reduced the installation of pollution control equipment. In some cases, firms have shut off pollution controls. Russia also must confront many of the environmental problems associated with the consumerism and unchecked development associated with free market systems, such as burgeoning solid waste streams from packaged goods, traffic congestion, urban sprawl, and a rush by private firms to exploit natural resources. A potentially serious danger emanating from Russia would be radioactive fallout from an accident in one of Russia's nuclear power plants. The global warming will probably improve the productivity of farming in Russia but the melting of the tundra will give negative consequences for the global climate as well as the Russian ecosystem.








Brazil and the global environment

Brazil represents about half of the South American continent and can be divided in different climate zones from Rain Forests to Desert. The country has always been self sufficient of food. Although many are poor no one is starving. Brazil is also rich of minerals and food products but for many years the world market prices were low and Brazil therefore like many other Third World countries built up an enormous dept. Brazil did for many years operate as a closed country with high import duties. This means that both foreign and Brazilian owners invested in an internal industrial expansion. Then Brazil like the rest of the world was integrated in the global system. Higher prices on raw material and food gave more export. In addition Brazil now also exported manufactured products. This has given an large economic growth with a richer middle class and the foreign dept is now almost gone. But the main poverty problem is left. Thousands of people are moving to the large cities every day.

But the economic growth as well as the poverty creates ironically the same problem for the Amazon and Pantanal regions. Large areas of rain forest and wetland is converted to something else and normally bi fire. These regions are overwhelmingly the most biodiverse on Earth. Since 1970 and the construction of the Trans-Amazonian Highway about 15% of the rainforest in the Amazon has disappeared. And this is accelerating with economic growth. Rain forests are cleared for cattle ranches, soybean cultivation, and selective logging practices. A relatively small percentage of large landowners clear vast sections of the Amazon for cattle pastureland. Large tracts of forest are cleared and sometimes planted with African savanna grasses for cattle feeding. The increased world market price on Soya is another reason when large areas are cleared for Soya production. Brazil is now a large exporter of beef and Soya as well as ethanol produced by sugar cane. So the deforestation it self is a problem but now we in addition see the consequences of global warming.

Declining precipitation levels in the Amazon due to emission of carbon dioxide by us will create towards more frequent and/or intense dry events with possible wild fires. One report estimates that 55 percent of Amazon forests will be "cleared, logged, damaged by drought, or burned" in the next 20 years. The damage will release 15-26 billion tons of carbon into the atmosphere, adding to a feedback cycle that will worsen both warming and forest degradation in the region. The Brazilian government is trying with the new Plano Amazônia Sustentável - PAS to get this under control. But the global CO_2 emission will still endanger the rain forest and burn it to a desert.







China and the global environment

China covers a large region with different climates from the tundra in the north to the Monsoon rain forest in the south. The western high altitude part with Tibet and Mount Everest is the starting point not only for the Chinese rivers but for the whole region with India, Bangladesh, Burma, Thailand and Vietnam. Only 10% of the land is suitable for farming. This combined with the large population has resulted in the intensive farming technique using basically all available land along the Eastern coast. This region is for man only with few remains of the original fauna and flora. 1989 China revised it's environmental protection law. Today about 3% of the total area is protected. Panda, the Asian tiger and the snow leopard are three endangered species.

For centuries China has been a rural society with own food supply and local production. This means the environmental problems has been local. Almost everything has been recycled. The industrialization after 1949 did create some additional environmental pressure but the main concern is the increased use of fertilizers and the increase of rice production that by itself emits green house gases. China has increased the energy consumption ten times from 180 mtoes 1965 to 1800 mtoe 2007. Electricity consumption has increased five times from about 600 TWh 1990 to 3000 TWh 2007. The oil consumption in China is still smaller tan USA, 350 mtoe compared to 950, but the coal consumption is now twice as much in China compared to USA. The problem is that China per capita still only has about 4 ton CO_2 per capita and USA about 20 ton per capita i.e. five time more and that China now is both copying the US life style and becoming the major exporter to USA. The global impact is therefore large. The impact on China due to global warming will also be large The winter 2007-2008 was the coldest in southern China. The deserts are spreading in northern China. The melting of the tundra in the north and the ice in the west will definitely affect the climate. China has harvested it's hydro power resources and increased production from 20 to 400 TWh between 1965 and 2005. Now the big dam in Three Georges will give even more but also affecting people and nature in this region. China depends on water for irrigation and for electricity. The problem is that global warming may severely disrupt the water supplies. Himalaya and other mountains are melting. But the main concern is that the changing climate will disturb the food supply.







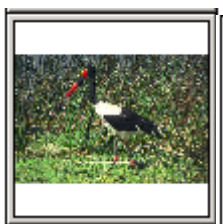

South Africa and the global environment

South Africa is another paradise of ecology. Dividing the Indian Ocean from the Atlantic Ocean it has a marine life. But also the land is home for a unique fauna and flora. The big five is the most well known but there are many more animals and plants. The “competition” between man and nature is also here an increasing problem with disappearing land for animals and plants. Invasion by alien species of plants and animals is another major problem in South Africa. Degradation of vegetation and soils is also a widespread problem in South Africa.

South Africa is also full of minerals and has the largest gold production in the world. The natural resources has generated money but also a lot of waste. South Africa still suffers from it’s Apartheid history. The resource use patterns that resulted were exploitative, and the problem was compounded by a large, unevenly distributed demand. Industry and agriculture used energy and water wastefully, as there were no incentives to use natural resources wisely, or to recycle. The high densities of low-income population in the homelands, forced unsustainable resource use. These activities created large distortions in the economy and distribution of wealth. Levels of resource use were unsustainable, and environmental degradation was widespread.

South Africa is a climatically sensitive country. Most crop agriculture in South Africa takes place where it is only just climatically suitable, particularly with respect to rainfall. Water is the resource most limiting to national development. Its availability now and in the future is closely linked to rainfall, temperature, management and land use practices. A large part of southern Africa is dry savanna or desert. At present almost half of Africa’s land area is vulnerable to desertification. Lack of water is the main concern. The Green Revolution in farming with more irrigation and use of more fertilizers could instead lead to land degradation due to Stalinization. The 2004–2005 drought was the most widespread in Africa in recent times. By 2020, in some countries, yields from rain-fed agriculture could be reduced by up to 50%. Agricultural production, including access to food, in many African countries is projected to be severely compromised. This would further adversely affect food security and exacerbate malnutrition







India and the global environment

India is basically a tropical country but with other cooler climate regions in the north. This gives India a large biodiversity with many species endemic to India. Most Indians are vegetarians. This is naturally positive since the meat consumption is very low. The main problem in India is still population and food. Rice and wheat are staple food together with vegetables. The “green revolution” also struck India with higher food production but also more irrigation. pesticides and fertilizers. Today salt is a problem and 50% of all land is threatened with erosion.

Although some regions has had a rapid economic development during the last decade the poverty is still wide spread. India has several billionaires and a growing middleclass but still almost one billion who has nothing and who suffer from fresh water and sewage problems. Energy consumption increased eight times from 50 to 400 mto and electricity consumption increase 2.5 times from 1990 to 2005. A large increase but still significant lower growth than China. One reason is that the growth is limited to a smaller part of the population. So this is the scary challenge. India will soon have the largest population of any country on earth with an estimated population of 1.6 Billion 2050. If those people would have the same carbon dioxide emission as in USA the total emission would be thirty times higher with 32 billion ton CO_2 compared to 1.1 billion ton 2005.

Another problem is water. Excessive use of surface and underground water, industrial pollution, and inefficient use of fresh water all contribute to water stress. There are also indications of unprecedented glacier retreats in the Himalayan-Hindukush region. Globalization result both in export and import. More than 90 per cent of the electronic waste produced globally every year ends up in Bangladesh, China, India, Myanmar and Pakistan.

India and the region will be hit by the global warming as well as the consequences associated with increased population, rapid urbanization, industrialization and economic development. Both ecosystems and human well-being are very vulnerable to climate change. Coasts and rapidly growing coastal settlements and infrastructure. South East Asian countries are at risk from any increase in coastal flooding and erosion due to sea level rise.








What is happening with the air

The air we breath is the result of millions and even billions of years with evolution. It's consistence is very delicate and a continuous balance between all life on earth. Sometime this balance is disturbed by Nature such as volcanic eruptions and even meteors. Such events is recorded through Earth history and has resulted in a significant change in life on Earth. But for a long time this balance has been stable with an exchange of oxygen and carbon dioxide between animals and plants. Until now! What we first noticed was the bad air and smog in our cities with SOx and NOx. The second was Ozone hole. But the worst was to come. Earth do need what we call green house gases or we would become ice cold like Mars. But if we get too much we would become hot like Venus. Anthropogenic greenhouse gases carbon dioxide, methane, nitrous oxide, ozone and CFCs. The main problem is the CO2 from burning fossil fuels but also from deforestation. The second problem is methane from livestock and paddy rice farming as well as landfills, wetland changes and melting tundra. The third problem use of fertilizers producing nitrous oxide. And this is global. No where to hide. Some of these gases may stay for up to 50 000 years. Will humans stay so long?

What is happening with the water





Life came out of water. All life depends on water. In many countries irrigation has reduced water supply and significantly lowered the ground water level.. 10% of the rivers in the world never reach the sea.

Local pollution of rivers, lakes and even the sea like the Baltic Sea and the Mediterranean Sea has been easy to detect including oil spill. Also the result of our over fishing resulting in a dramatically reduction of certain species we have understood. Even that we can detect our chemicals in animals living near the North Pole we seem to acknowledge.
But now the Oceans are affected with less pH value. Rising temperatures affects the coral reefs and the currents. More and stronger hurricanes are seen. The Arctic and Antarctic ice is melting destroying the wild life. And the sea level may rise.
The water is part of this cycle of life; Air, water, land, plants, animals, us.....





What is happening with the land

We share the land with all other life. The land needs air, water, plants and animals to stay alive or it will be reduced to desert sand. Man has succeeded to convert some of this desert sand to artificial life like Las Vegas or Dubai. But we have also been able to convert a much larger area from green nature to desert throughout our history. Today man is dominating 90% of all land. We are even cultivating most of it or using it for streets, roads and cities. There is a few islands like in Brazil but also here man is entering.

When land has been directly polluted with chemicals or even with too much fertilizers we have been able to detect this. Also the result of the acid rain was noticed. Urban sprawl when the Los Angeles model is exported is constantly growing worldwide. This can bee seen on Google Earth. But slow land degradation, erosion, desertification and increased salt levels destroying the soil over large areas is even worse. Because this is a long term effect. Almost as long term as the effects of nuclear waste, but not quite. Our Hamburger culture require land for cattle and land to grow food for cattle. Someone has calculated that only the hamburgers and cheese burgers consumed in USA represent an carbon dioxide emission of one ton per person.

What is happening with the forrest

One classical question is what the man that cut down the last tree on Easter Island was thinking.
We know what the men was thinking that cut down the Sequoia and Red Wood giants on the American west coast.
Tough job but good money.

A large part of the European and American (USA) virgin forests are gone. Still it is possible to find the oldest tree , Bristle cone pine on White mountain in California. It is 5000 years old and that is the same age as our civilization.

All trees but especially the rain forest is essential for life on Earth. The deforestation in Brazil and Asia is a problem. But an even larger problem is the effect of global warming on the forest. Draught and wildfires will not only be a problem for Australia and California but for Brazil and the Amazon forest.

What is happening with the animals

I have been very lucky to visit most National Parks in Western USA and Canada, the Brazilian rain forest and Pantanal, the Krüger park in South Africa. All fantastic experiences of Nature and animals. I am even more lucky to live near the forest and the lake with deer, foxes, birds and even a moose crossing in front of my house. It is easy to see when these animals disappears. The last few bison in Yellowstone, no more fish in the lake or lions in South Africa.

But it is difficult to grasp the genocide just now going on in oceans and inland due to our pollution and climate change. Species are gone for ever. No return! And because of us.

So what is really happening?

The conclusion is simple. My rich home countries are consuming too much energy and raw material. This is no longer needed to provide a good standard of living with food, water, housing, education and medical care. It is used for consumption of things we do not really need. And it is used to constantly buy new models of what we really do not need. And the more we consume the bigger crave we seem to get to consume more.

The situation in my poor home countries is different. After the globalization companies from my rich home countries are investing in the poor countries to first of all get access to a cheap workforce. But also to get access to a growing upper/middle class who can consume like in the rich countries. But a large part of the population is still lacking the basic needs. AIDS, high criminality and lack of medical care are large problems.
And so it is in USA.

Both in my rich and in my poor home countries the gap between the have a lot and the have not is growing. This whole machinery based of what we call fee market economy is based on this fundamental relation between rich and poor and the competition between the different market actors driving the consumption higher and higher.
It is a strange phenomena because the higher material standard we get the more we seem to want. We are never satisfied. And this is the driving forces behind our very model. Constant growth for ever. But this model that Earth can not sustain for ever.
It is impossible.

Like a drunken parrot

Not only me but many others has now for several years come to the same conclusion. And we will repeat this on and on like a drunken parrot:

"The mass consumer culture of twenties-century North America – and to a slightly lesser extent Europe and Japan – has been predicated on a high-energy society that has viewed inexpensive, abundant energy as something like a constitutional right. But Americans' energy intensive lifestyles, and U.S. –led global energy consumption trend of the past century – a 10 fold increase, with a quadrupling since 1950 – cannot possibly be a sustainable model for a population of more than 9 billion in the twenty first century."

From State of the World 1999 compiled by Lester R. Brown, Christopher Flavin and Hilary French.

We need to repeat this until politicians, media and we understand the very consequence of this statement. We need to change the way we live, the way we think and the way we interact with Nature. Our model based on endless growth, globalization and free competition of resources in order to make a few very rich but making the Earth poorer and poorer is not only wrong. It is a crime! This will require us to throw away our 18th century political and economical dogma and re-invent our society.
And we need to do this NOW.

So what is the solution?

My home countries are all rich countries. They have natural resources to sustain a good living but even more important they have a nature rich of life. The big animals of the African Savanna, the birds of the Brazilian Pantanal, the Swedish lakes and forests, the American Rocky Mountain, the waste wilderness of Siberia. But also the old Chinese and Indian culture and religion based on balance is a unique resource.

The solution is NOT to change this unique world of biodiversity to ONE global model. Especially since this model is not sustainable. This is the greatest mistake of our generation. Trying to uniform the world to live, work and think the same.

The world is different, the history, the culture the nature is different. Each part of the world, each one of my home countries has to find their way to a sustainable future. There is not ONE solution. So instead of globalization and centralization we need localization and de-centralization. To find our way back to the future when we re-discover or human values and our connection with our Nature.

The strength of the evolution of our human species has been our ability to work together. It has been a collective evolution. The individual “freedom” of our generation is naturally very satisfying – for those who has it all. The problem is that we are not alone – we all depend on each other. Right now our civilization is out of balance. To find our way back to a common future we need to work together. Within United Nations, within each nation, each region and each community. To find our unique solution for a sustainable life for humans and Nature.