The Alternative Copenhagen Agreement

A Proposal on
World Climate,
Justice
and
Biodiversity

Ecology Economy Equity

Facts and Visions
on avoiding
The Planet Going Down The Drain

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1 INTRODUCTION

We should beg on our knees every owner of a tree, or any other nature resource, please not to destroy it and kindly ask this owner what he needs to preserve it.

Failure is not an option.

Humans are causing global warming. The global warming is taking effect right now all over the planet. The sea level rises, the glaciers are disappearing, in some parts of the world rainfall decreases, in other parts it increases. The coming changes are multiple and they are going to effect the whole world. The global warming is already almost 1° celcius. If we do not take world wide action, very rapidly the temperature can go up with 3° to 5° celcius or even more. The maximum we can allow for is 2° celcius, but anything less is better. The current concentration of CO2 in the atmosphere has never been so high in almost one million years. Probably we have to aim at a maximum of 350 ppm CO2.

The cultures we know now have developed over the last 12 thousand years, which is precisely the period in which the planet experienced the most stable climate in history. The disbalance which is taking place now could possibly destroy all that.

1.1 WHY THIS DOCUMENT?

Coming up in December this year (2009) there will be the propably most important event in history, the climate conference in Copenhagen, COP15.

The two main reasons to write this document are:

- The Kyoto protocol is worthless, for climate and for justice. The Copenhagen Protocol is not going to be any better;
- I did not find any worthwhile, concrete, concise counter-proposal.

That is why I decided to write a counterproposal. This is really a paradigm shift. The ideas I developed seem so basic and logical that it must have been written down before. If anyone finds it let me know. I did not. I can not exclude the possibility that there are better mechanisms than the ones I present here. I just did not find them. I find support in reports, articles and books, but not the concrete and concise counterproposal that can replace the protocols of the UNFCCC. Please help me.

It can also be used as a starting point for reading for people who want to search for more relevant information.

The time we let policies depend mainly on economic theories must be over.

1.2 WHO IS BEHIND THIS DOCUMENT?

I was once trained as an ecologist in the seventies but because of lack of work I never worked like one. Having done also among others a 9 month training and research for my master on theoretical biology building simulation models with the famous Aristid Lindenmayer I had a nice base to study an extra year of pure computer science. My field of interest however always remained in general science, with a growing interest in environmental subjects as tropical forests, agriculture and the ever growing attention to the climate, combined with an interest in (un)equilaty amongst nations and people and in globalisation. One of the most important books that influenced my thoughts is the first Report for the Club of Rome in 1972, *The Limits to Growth*. I spent 23 years working in computers as a programmer, architect, project leader and consultant, in R&D and comercial projects, and still are.

Now I knew about the existence of the Kyoto Protocol, the Bali conference (COP13), carbon traiding, REDD, PES, and so, but I never read the real documents and had no knowledge of the details. So I started to search the internet and started reading a lot of things. I was stunned about the real content of the Kyoto Protocol. To be honest, the amount of documents about climate change, carbon emission right trade, the value of biodiversity etc. is so large, as are a number of the documents themselves, that I could and can not read all.

We loosely talked about going to Copenhagen with some people to demonstrate against or by the conference, but then I want to know exactly against what or in support of what? I could not find specific information on that. As the Kyoto protocol is worthless, and as it seems COP15 is supposed to deliver a sort of upgraded form of that, I started looking for the alternative. I did not find any up to now. That is, there is some document presented recently with support of some organisations like Green Peace and the WWF, but it seemed to me quite unreadable and not changing very much the fundamental flaws and fraud of the Kyoto protocol. It is the *A Copenhagen Climate Treaty version 1.0* by a.o. Greenpeace and the WWF.

1.3 THE STRUCTURE OF THE DOCUMENT

Chapter 1: Introduction.

Chapter 2: The Text: This is the core of the document, This is the text as it should be agreed upon in Copenhagen (My opinion that is). It will be referred to as Copenhagen Agreement (CA).

Chapter 3: Summary, for people with max 5 minutes to understand how to save the planet.

Chapter 4: Some explanations, maybe move parts of chapter 1 to chapter 4.

Chapter 5: Literature.

1.4 GENERAL REMARKS

The position of this document

This document contains only the main line of the decissions that **should** be taken at the Climate Conference in Copenhagen in December 2009. This will form the base document that will be the guideline for more detailed rule setting and action plans. When this document is approved all countries agree on the basic principles and will then go on to build the institutions and set the detailed rules for implementing this agreement.

The word *should* is used in the foregoing paragraph. It is meant that I am absolutely convinced that if the proposed measures are not agreed upon and not implemented then the possibility to save the world from disaster becomes remotely small. If the Copenhagen protocol is going to be an upgraded copy of the Kyoto protocol then it will be a worthless document. As far as we can understand preparations for COP15 it will be an upgraded Kyoto protocol. It will be vague, there will be no bounding rules and agreements, fraud in reduction calculations are already being invented using carbon emission trade, CDM and REDD. Immense injustice will remain towards mankind, especially the poor that did not damage the climate, and everything else that lives on the planet now and in the future.

The world ecological systems are on the verge of collapse. Urgent action has to be taken. Since the report *The Limits to Growth* in 1972 the world has proceeded with business as usual. Now I can assume that everybody with knowledge understands the immense problems and risks and that immediate action has to be taken.

The world faces other environmental problems, e.g. the oceans, fishery, corals. I will not deny these problems in any way but the subject of this report is climate and biodiversity on land. This is strongly interrelated as there are nations wanting to cut down forest to produce agrofuel, which is a very bad idea

and shall be avoided at any cost. Anyway, it is now widely accepted that damaging nature at the end is costing much more than preserving it.

I challenge everybody to come up with a different set of rules that will equally cause CO2 reduction and justice.

Green house gases (GHG)

This document talks about CO2. CO2 is the major green house gas, but not the only one.

The most important green house gases are:

- Carbon dioxide, CO_2;
- Methane, CH_4;
- Nitrous oxide, N_2O.

The most important source of CO2 is the burning of fossil fuel, but also deforestacion and cement production.

An important source of methane and N_2O is agriculture, for methane largely responsible is cattle.

Because reducing fossil fuel usage is going to have the major impact and CO2 is the most important factor in global warming, this problem has to be solved first, at the same time deforestation has to be stopped. The two reasons why deforestation has to be stopped immediately are that the process contributes almost 20% to CO2 production and that the forests contain an incredible amount of important biodiversity which can never be recovered once destroyed.

About the form of the document

In this document the term *nature resource* is used to refer to ecosystems. The term *natural resource* is avoided as this also refers to fossil fuels and mines.

The language of this document could possibly be polished. But I think we should be carefull that in the process of polishing it should not lose the power in expressing the things it is intended to express. It is exactly in the negotiations in the UNFCCC that a lot of time is wasted in the construction of nice useless phrasings instead of talking about important issues.

Literature

I will mention just a relatively small number of documents as reference in the list of literature. From these documents one can backtrack to vast amounts of literature on the subject.

Recently, in september 2009, a very important and clear report (240 pages) was published by the UN, *Promoting Development, Saving the Planet*. I recommend to read this first. There is a synopsis of some 30 pages, also in Spanish.

The document explains:

- The risks of global warming;
- That the risks are greater in the poor countries;
- That the poor countries have less possibilities for mitigacion and adaptation;
- That the global warming as a result of CO2 production is caused for 75% by the rich countries, with only 15% of the world population;
- Advises for mitigacion and adaptation;
- The large amount of money the rich countries have to provide, some $500 billion per year.

An example of the risks for South America that is explained is the risk of melting glaciers in the Andean region. With the disapearance of the glaciers disapears also the regulation of the effluents which during thousands of years have provided a steady flow of water. About 30 million people are going to be effected.

A good explanation about the errors in the Kyoto protocol is given by Lohmann, 350 pages. The document also contains an apendix called: *Climate Justice Now!*

The Durban Declaration on Carbon Trading. It is a 4 page document from oktober 2004 and is the result of a conference in which participated various organisations from over the world.

Starting Points

The following starting points are taken as facts:

- Deforestation is costing much more than it delivers in profit if all costs are being taken into account;
- Biodiversity has an enormous value and must be preserved;
- Net CO2 emissions must be reduced to zero as soon as possible;
- The foregoing points are strongly related and must thus be handled together;

The following opinions are proposed:

- Every human being has an equal right to the worlds atmosphere;
- The countries that produced CO2 in the past and present, must pay proportionally to the estimated accumulated amount of CO2 produced;
- For that purpose there will be a simple tax at the source of production of fossil fuel;
- The UN is the only legitimate organisation to set rules and manage the rules on a world wide scale;
- The money collected, as world taxes, must be put in a fund that will be managed by the UN;
- From the fund, countries must be payed to preserve forests and other ecosystems and build a sustainable society;
- Countries are sovereign entities, but the planets atmosphere and seas are common goods;

> The goal is clear, zero net CO2 emission as soon as possible and stopping deforestation NOW. The process however is unclear, full of difficult choices to be made. It is undeniable this is going to be very difficult but inevitable if we want to save the world from disaster.
>
> There is only one world and there is no choice.

There are two words that have to be explained in the context of the climate problem: mitigacion and adaptation.

Mitigacion

Mitigacion is the process of reducing the production of CO2. This includes for example construction of energy plants based on wind, sun and hydrolic power, isolation of buildings, changing to electric cars, using low energy lamps, travel less. According to the Stern Review, every dollar invested in mitigation is saved afterwards tenfold. If we invest $1 now we will save $10 in the future. According to Stern we have to invest between 1% and 2% of world GDP (each year!) in mitigacion and adaptation, but later, in 2008, he stated it has to be 2% for sure.

Adaptation

Adaptation is the process of adapting the way of life to what comes, like building dikes, change the way of agriculture, build projects for irrigation or other canals for water diversion, build along the coastline on higher sites.

Sovereignty

There are many justified concerns about the rights of people inside countries. I share these concerns. I am strongly in favor of democracy, equity and defense of the rights of indigenous people. They have historic rights to the land they live on, but more often than not they do not have these rights legalised according to national law. They must be rewarded for conservation of nature, which is beneficial to the whole world. However, trying to include these rules in this report would make is too complex. Every country has a different history and complex problems. These matters must be dealt with by e.g. UN departments on this matter.

To be discussed about currency

In this document the United States Dollar is used as currency just as an example. It shall be discussed if another existing currency or even a new intermediate currency should be used.

Rich and poor countries

I here use the terms rich and poor in contrast to developed and developing countries. I think certain countries can be well developed in certain ways but poor. They are not underdeveloped because they can not develop on own strenght and need help, they are poor because the rich world some 500 years ago had fire arms and tricks which lead to an unequal balance of power, resulting in the less powerfull countries to end up exploited and poor.

The process

The process has to be:

- Understandable;
- Managable;
- Just;
- Fast;
- In peace;
- Worldwide.

This will be the largest and most difficult operation the world has ever faced, and probably and hopefully ever will face, but again, there is NO CHOICE in the result to achieve concerning CO2 reduction to zero and stopping deforestation.

To keep the process understandable and managable, the measures, payments and negotiations must be on country level.

All countries should participate, the world cannot accept any longer some countries damaging the atmosphere that belongs to all.

The production of CO2 per year must diminish at least 3% every year on the base of 1-1-2010, so in 33 years the world will produce zero carbon on a net level.

If we loose time in emission reduction, the consequences will be ever worse. The best course is to reduce as quick as possible use of fossil fuels in order to have a bit more time for mitigacion.

Negotiations and calculations can be re-done and changed, saving the world has to be done NOW. Therefore an initial scheme is proposed which will inevitably give rise to large debates, anger and unwillingness among a number of nations, presumably the ones that produce the most CO2 at this moment. However, we have to implement this scheme right now.

I propose to fix the scheme for a period of 10 years. The start of the program has to be directly. There can be no discussion about that. The next 10 years can be used for re-negociacion and calculations. Possibly after this period the payment schemes can be adjusted.

Nuclear energy is not an option.

> We cannot solve problems
> by using the same kind of thinking
> that created them.
> (Einstein)

2 COPENHAGEN AGREEMENT TEXT

2.1 EQUITY PRINCIPLE

Some resources of the world are obvious worldwide and can not be assigned to certain countries or people. Most obvious example is the earths atmosphere. We all use it in an equal manner and have equal rights.

Every person on the world has an equal right to the general resources. Obviously, these resources have not been shared equally in the past and not in the present. This means the people that have had their unequally large share of the resources have a historic debt to the people who did not have their equal share.

2.1.1 SEAS

The equity principle applies to the worlds seas. Although not all countries of the world have contact with the seas we must consider the seas and everything in it also as a world resource, taking into account some special rules for territorial waters.

The seas are in tight connection with the atmosphere and CO2 is being absorbed by the seas, potentially it can also be released again. Thus the seas are part of the same global climate system as the atmosphere.

The coastlines are an important overlap between land and sea and here are ecosystems like mangrove areas and coral reefs that need special attention.

2.1.2 THE ATMOSPHERE

The atmosphere belongs to all people. Obviously the equity principle applies.

Fossil fuels belong to the country where they are found and extracted. We find it normal that the producing countries have the right to use and sell these fossil fuels as they wish.

To be able to use the fossil fuel, that is burn it, the atmosphere is needed. The CH in fossil fuel is combined with oxygen by burning to CO2 and H2O. So part of what is used is owned by the producing country, part of what is used belongs to all the people of the world. It is seen as normal *up to now* that the one part is being payed for, but the other not. Now if the atmosphere would have been an endless source and sink of O2, CO2 and H2O it could be debated if payment would be approriate. We do not pay anybody e.g. for the light we receive from the sun. But it is *not*. It is the sink function of the atmosphere for CO2 that proofs to be the limiting factor. That is, the atmosphere can take as much as you put in it, but the result is unacceptable global warming.

2.2 THE GOAL

The goal is to stop warming as quick as possible. The best way to achieve this goal would be to stop CO2 production right now. As this will be politically and socially impossible some compromise is proposed.

According to knowledge at this time we have to limit global warming to an absolute maximum of 2° celcius and hope the planet will remain habitable. This is the goal set, but anything less will be better.

It is estimated that to limit global warming with a 50% chance to 2° celcius the concentration of CO2 in the atmosphere has to be limited to 450 ppm. There is strong pressure to put the goal on 350 ppm.

The limit of 450 ppm implies there is a fixed amount of fossil fuel to be burned left from now till eternity. If it is burned fast or slow does not matter for the atmosphere. If it is burned fast there is less time than when it is burned slowly. It would be wiser to burn slow, thus reduce use as fast as possible.

The current concentration is 380 ppm, thus if the goal is 350 ppm then we are in overshoot already.

Measurments in the coming years and decades could indicate these figures should be adjusted. The yearly reduction will now be fixed for the coming decade.

2.3 MEASURES

2.3.1 REDUCTION OF PRODUCTION OF FOSSIL FUELS

Control of CO2 production has to be done at the source, that is where fossil fuel is extracted from the earth.

Production must be reduced by 3% per year on the base of 1-1-2010, that means reducing in a straight line down.

Every fossil fuel producing country must achieve this 3% reduction per year.

According to measurements of global temperature rise and CO2 in the atmosphere the reduction might be adjusted in the coming decades. Most probably the reduction rate has to be higher.

2.3.2 FORESTS

Deforestation of primary forest is not an option. Reforestation must be undertaken.

Production forests where primary forests have definitely been destroyed could be deforested only if it is replaced with an equal amount of forest on another place.

Reforestation to try to regain some form of original forest must be undertaken in all parts of the world.

Other valuable area's must be preserved as well as forests.

2.3.3 TAX ON FOSSIL FUEL

A tax shal be put on every amount of CO2 equivalent of the fossil fuels extracted. This will include all CO2 production at the production site and resulting from it, e.g. losses by escaping gasses or burning. The tax must be paid to the UN. The UN will set up a separate organisation for this purpose.

The tax shall be 10$ per barrel of oil *(define what type)* or equivalent starting at 1-1-2010.

Every year the tax shall be raised by $10 per barrel.

2.3.4 PAYMENTS

2.3.4.1 DIVISION IN TWO

The fund will be split in two parts.

2.3.4.2 PAYMENT PER CAPITA

One part will be divided over the world population, every person receiving an equal share.

The money will be payed to the governments of countries.

Countries should use the money to realise sustainable means of living as investment in the future and well being of next generations. After 2060 there will be just one way of living for everybody, which is sustainable. If countries do not realise these goals withing this time frame there is no solution.

Every country has the right to decide about its own solutions as long as they take into account the responsibility for the general resources, which may not be degraded.

2.3.4.3 PAYMENT FOR ECOSYSTEM PRESERVATION

One part will be payed to countries that deliver ecological services to the planet.

Example:

A rough estimate indicates that a hectare of tropical forest could deliver a profit of around $100,- per year if cut and replaced by e.g. soy production. This means that countries preserving their tropical forest must be rewarded with a yearly payment of $100,- per year per hectare. A rough estimate, as an example, for the Amazon region, shows that the yearly payments will amount to something like $70 billion per year.

2.3.5 PENALTIES

Countries that do not obide to the agreement will be treated with two penalties:

- There will be an embargo on all fossil fuel export and import to and from the country;
- The country will not receive any funding from the UN.

3 SUMMARY

- The rules set are valid for 10 years;
- The absolute acceptable maximum of temperatuere rise will be 2° celcius, anything less is better. This goal might need adjustment according to new insights in the next years;
- The acceptable absolute maximum of concentration of CO2 in the atmosphere will be 450 ppm. Anything lower is better. This goal might need adjustment according to new insights in the next years;
- Production of fossil fuel worldwide must be reduced by 3% per year on the base of 1-1-2010 starting from 1-1-2010;
- Every fossil fuel producing country must reduce production by 3% per year total for the country on base of 1-1-2010;
- The production of fossil fuel must be controlled and restricted at the source;
- There will be a tax on all fossil fuel at the source;
- The tax will start at 10$ per barrel of oil or equivalent starting at 1-1-2010;
- The tax will be raised by 10$ every year;
- The tax will be put in a fund of the UN;
- The fund will be divided in two parts;
- From part one every person in the world will get an equal share, payed to the governments of the countries;
- From part two of the the fund payments will be made to preserve nature;
- The payments will be made to governments of countries;
- Nuclear energy is not an option.

4 VIEWS, THOUGHTS AND EXPLANATIONS

4.1 WHAT IS WRONG WITH THE KYOTO PROTOCOL?

A lot.

See Lohmann with a lot of explanation on what is wrong with the Kyoto Protocol.

The deep fraud is that the rich countries obtained the right to produce the amount of CO2 they were producing. The world has given them for free this right which is worth probably trillions of dollars. On this base a just scheme can never be invented.

To start with the process. I have great respect for the United Nations as it is supposed to represent the World. That is all of us, as it should be. All countries are represented in the UN. How can one oppose to the World? One would think that here the power of money, large enterprises and rich people are in minority. As the largest part of the World consists of poor nations and they represent the largest part of the Worlds population the decissions taken in the UN represent the overall wish of the World. Well I think it is not.

In the process of writing the Kyoto Protocol the US, as the most powerfull nation of the World, the one with by far the most powerfull army, the most powerfull companies and by far the highest producer of carbon dioxide, used its great power to manipulate the Kyoto Protocol to its own wish.

A citation from Lohmann:

> In the 2000 UNFCCC climate negotiations in The Hague, to take one example, the US fielded 150 well-equipped delegates, housing them in a luxury hotel and sending well-rested and well-briefed representatives to every working group meeting, while Mozambique had to put up its three harried delegates in a noisy youth hostel occupied largely by Chinese tourists. During complex negotiations featuring many simultaneous sessions and drafts of hundreds of crucial documents flying around for continuous comment and revision, such numerical superiority can be decisive.

Then within the US, politics is ruled by the large companies, e.g. the large oil companies, the car manufacturers and energy producing companies. So with a kind of lever it seems the large companies in the US manage to rule the World.

4.2 TECHNIQUE VERSUS NATURE

When humans try to manipulate nature (too much) the result is almost always the same:

Nature strikes back!

Nature, is it the human body or ecosystems, is only understood very little. Engineers can build bridges, cars, radio's and vehicles to send a few people to the moon, but there it ends pretty much. We are allowed by the world's ecosystems to use a little of them for our benefit and they tolerate it. As soon as we take too much they degrade and die, and people die with them. People living of the land like in Bolivia and Ecuador understand and now made preserving nature part of the constitution. These people know since historical times to be carefull and respect nature, they do not need our universities or large companies for that purpose.

4.3 TAX VERSUS CARBON TRADING, REDD AND CDM

Raising the price of fossil fuel, by putting some tax on it, hoping the use will diminish automatically is useless, or the effect is uncertain at the least. The proposed tax is not for that reason. The tax is proposed as a way to take money

from the people who use more fossil fuel to people who use less. This is like putting a tax on releasing CO2 in the atmosphere. It is unjust to let people do this for free, as the atmosphere belongs to every person on the planet. Carbon trade could theoretically cause the same effect. But is does not. Carbon Reduction Rights could be obtained e.g. from countries that do not cut down forest. But some countries could NOT have any possibility to sell carbon rights. But every place on earth will suffer the effects of climate change. So every person is entitled to get his share as payment for ending up with a degraded atmosphere.

Of course there is really no price to put on damaging the climate for millions of years to come, but that can be no reason to give it away for free to the rich people.

Now carbon trade can and most probably will have a lot of undesired side effects (Lohmann).

Tax on export would not achieve the desired results. If e.g. production of carbon intensive industries would be moved to oil producing countries the tax could be avoided.

Tax on use would be incredibly difficult as there is a multifold of uses against a limited amount of sources. Fraud and evasion would be a great risk.

If the tax is at the source then the cost of fossil fuel will be automatically calculated in everything down the production chain. This way all products with lower fossil fuel use will get an advantage over other products. Of all products the low and/or zero carbon products will rapidly gain advantage in simply becoming cheaper every year compared to other.

4.4 TAX ON FUEL VERSUS TAX ON EMISSION

There are some proposals for tax on emission or on fuel in certain countries. I think this is an old fashioned solution not going to provide any just global solution. The same applies to carbon emission right trade, REDD and CDM as they are all similar resulting in giving emission rights to certain countries.

Under the UNFCCC rules the rich countries will provide some up to now vaguely or non defined help to poor countries. As turned out in the negotiations in Bonn, Bangkok and Barcelona in 2009 it is extremely difficult for the countries to reach an agreement. Lots of time is lost on nice but useless phrases about state of afairs and so. So we need a simple worldwide agreement which is easily managable. As stated before, the rich countries will opppose. I think the poor countries should unite and take a firm position.

4.4.1 WHY THE TAX HAS TO BE ON FUEL AT THE SOURCE

First of all, if the tax is on a nation level then the money stays in the country. What we need is to put the money in a fund to distribute over the world. In the scheme proposed here the nations wich use the most fossil fuel, which not surprisingly happen to be the wealthy nations, pay the most and the poorer countries receive the most. In the first year, 2010, the fund will receive over $300 billion. Divided per capita over the world population this will be ± $50. As an example, Ecuador with about 15 million habitants would receive over $600 million in 2010. The amount world wide will rise in 2033 to a maximum of $4 trillion per year, which is about $600,- per capita, meaning e.g. an income of $8.6 billion for Ecuador. After 2033 the amount will decline again because fossil fuel production goes down to zero before 2060. This rather large amount of money has to be used to get countries on the track of sustainable community in all aspects, energy, agriculture, building etc.

Let it be clear the poor countries are *not begging* for money. It is not an alm. It is the historic right for centuries of explotation in all kinds of horrible ways, economically, humanly, politically and environmentally.

Tax on emission in my opinion is almost impossible to implement. Fossil fuel is used in many ways, the fuel finds its way in a very fine network into the economy. Tax on e.g. plastic bottles produced from fossil fuel could be avoided,

but they are a potential source of CO2 if burned. If they are biodegradable they will release CO2 also. It is practically impossible to control all the sources of CO2 production as there are over 6 billion people with all kinds of activities producing CO2 from fossil fuel. So the only controllable way is at the source where fossil fuel is extracted from the earth. We have to count for the fact that all extracted fossil fuel is a source of CO2, sooner or later.

4.4.2 WHY TAX ON FUEL HAS TO BE GLOBAL AND NOT NATIONAL

First, tax should be worldwide consistent because we are dealing with a real global issue. The solutions proposed, also in the UNFCCC, still do not really recognise the globality of the problem. It might be recognised that the CO2 and global warming is a global issue, but the mindset is still on local solutions, bilateral or other solutions like carbon emission trade, REDD and CDM. We have to understand we are dealing with a unique situation in history and understand that probably the known mechanism in politics and economics will not work for this first in history unique global issue. New creative solutions have to be thought of, revised, discussed open minded without lock in into current theories or business as usual practices. The forelying proposal is trying to provide a different perspective.

use of fossil fuel is indeniably global

Fossil fuel is used partly for production of goods. These goods may be transported, exported, used again for production of other goods together with goods from other countries and so on until some final good is sold somewhere to someone. It might even be difficult to define when a good can be considered to be final. Now it might be unjust to fix a reduction level equal for all countries because it could well be that the real use is in other countries. At the end of the chain it is impossible to calculate the amount of CO2 produced for the product and the possible CO2 released at the end of life of the product. If the fossil fuel is taxed at the source then the price will be calculated all down the chain.

If certain developing countries now could still increase CO2 production some heavy industry could be displaced to this country. This is utterly useless.

price mechanism promotes sustainable energy

All products using fossil fuel will be more expensive every year, making it more profitable every year to develop techniques and products that use low or zero carbon. We know the difference between the price of sustainable energy and fossil fuel is not very large at this time. For example, it seems that wind energy can compete with oil when oil prices reach a level of $150 per barrel (UN DESA). The tipping point of sustainable energy being cheaper might be just a few years ahead if we implement the proposed scheme.

4.5 NOT ALM BUT PAYMENT

The paradigm shift here is it is not the rich countries providing *aid* to the poor. They provide them with the money that is rightfully theirs. Then these countries can use the money at their best knowledge to implement developments to reach a sustainable way of living. The challenge is to reach this in the 33 year period left.

4.6 REDUCING GLOBALLY

All countries are discussing and negotiating national reductions. Nobody wants to be ahead of others and are trying to gain a bit or a lot. However everybody (or almost) agrees the problem exists and CO2 concentration should not exceed a certain level in the atmosphere.

This means in fact there is probably now a majority on world level that agrees on real reduction. I suppose thus the majority could not object to reduction at the source as proposed. The problem is WHO has to reduce. With the proposed scheme this problem is solved. Everybody will still be able on an equal base to buy fossil fuel, but it will be more expensive. This would be a problem for the

poor countries, but as they do not use much fossil fuel they will benefit economically from the tax.

Sustainable living is a constraint, not a choice.

4.7 CONTROL ON DEFORESTATION

Current situation

In current circumstances corruption causes a lot of deforestation. Government officials on a high level can collect a lot of money selling rights for deforestation to wood companies. On a low level officials can allow illegal deforestation taking bribes. What seems to have contributed much to the large banking crisis was the reward in case of success, but no penalty in case of loss. Most of the times people taking money for deforestation get away with it, there seems to be no or very little risk.

Proposed situation

I believe the proposed mechanisms will ensure that deforestation will be stopped.

Requirement for the functioning of the mechanism is that the countries receiving payments are democratic. Now democratic might be a very diffuse term. Someone with more knowledge on the subject might try to define this more precisely. ???

Countries will be payed directly for preservation, and receiving a penalty by receiving less funding in case of deforestation. No population will accept people in government or otherwise that by taking money for personal profit cause loss to the country. If high officials will loose their job in case of deforestation then they will certainly control lower officials to do the job.

As in the CA is specified there will be a fund to pay for conservation of forest and other nature resources. This is roughly estimated to be realistic and just (by me) at around $100,- per year per hectare for tropical forest, maybe different for other ecosystems. The truth is that it is impossible to put a real price on nature. How to explain to our grand-grand-grand children some ecosystems were destroyed irreversibly because it was calculated in the year 2011 to be more profitable, according to economic calculation principles, to degrade the land to agriculture or produce biofuels for filling the tanks of SUV's in the US?

It is supposed to be possible to control the state of the forests exactly by satelite images. Random probes in situ could be added to the control. A country receiving funding will have a large incentive to preserve the forest. Presumably a (large) number of personnel will be assigned to each control a certain area. Now their responsibility is directly related to payment of their salary.

So I do not think (hope) we have to be afraid of corruption, at least not in relation to the state of the forests. What the use of the funding will be within the country is another concern.

4.8 SOVEREIGNTY OF COUNTRIES

This is a very complex problem. The most discussion I have had around this document concern this matter. At first I included some suggestions on what should an what should not be done with the money. However, the problem is so complex that I see it as impossible to include it in the climate negotiations.

4.9 DEGRADATION OF NATURE E.G. DEFORESTATION

It is stated in the introduction that *Deforestation is costing much more than it delivers in profit.* This is meant in a broad sense. Calculations have showed that changing sustainable ecosystems into agriculture or other use always delivers less than the costs. See e.g. *Living Beyond Our Means* for a short statement or the 700 pages document *The Stern Review* or the *TEEB report*. The problem has always been that costs have not been calculated completely, what is called factors are externalized. Costs for e.g. waste disposal, contamination of

rivers and the atmosphere are not included so the benefit on the short term for the land owner can seem or be positive. On a larger timescale and/or size however there are always damages that costs more than the direct use of the land delivers. And even then, it is not possible to put a price on the loss of ecosystems and biodiversity in the long term. Ecosystems interact with the planet and unexpected tipping points may be reached with unpredictable results.

4.10 POPULATION SIZE

World population has been growing at an incredible rate the last century. It grew from 1.6 billion in 1900 to 6.7 billion in 2008, a four fold increase. It is clear we cannot go on growing like that. The world will not be able to sustain more people. In fact it is very probable that we are in overshoot already. At least, it is clear that having more people reduces wellbeing of the whole world population. Although the growth rate is diminishining it is estimated that the population will grow to 8.9 billion in 2050 and close to 10 billion in 2150.

It is a fundamental human right to have children. This makes it a very delicate topic to bring up. However it is inevitable that we have to stabilise or even reduce population size for the best of everybody, rich and poor. It is known that education helps a lot to bring down birthrates. However, that will take at least a generation or more to start taking effect. There are signs that bringing health care, especially for women and children, combined with information on birth control and of course with offering affordable?? means to implement birth control, could have a faster effect. Giving the information and the means people generally are not willing to put a large amount of children on the earth.?? This way reduction of population (growth) could be achieved more rapidly.

4.11 WE WILL RUN OUT OF FOSSIL FUEL ANYWAY

If we go on with business as usual, it will take only a few years (an estimated maximum of 10 years) before the production of fossil fuel will go down, or at least oil and gas, because the reserves are depleted. It would be completely ridiculous if we damage the climate for future generations only to have a few more years of profit.

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I know this proposal has a very low probability of being accepted soon.
But I have the vision and the hope that humanity will be able to keep the planet a livable place in a form that every man can take advantage in an equal way of all nature resources.