

Carbon Credits

Carbon Credits

The way to make clean energy attractive
Or is it just a good business?

Carbon Credits

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Carbon Trade

Carbon Trade has three main targets:

- 1 – Determine and set the limits of CO₂ emission to avoid global temperature to rise significantly more than 2°C.
- 2 - Distribute the Allowances between all nations and install Carbon Permits Trade.
Clever countries with the best engineers may reduce their emission under their allowed limit. The spared allowances can be sold to countries who exceed their allowances.
- 3 – Determine the best locations where reduction of global emission is most effective.

- The origin of the 2 °C policy threshold is not entirely clear. Some trace it back to early assessments that the West Antarctic Ice Sheet may have collapsed in past climates that were more than 2 °C warmer. In current assessments, however, it appears related to a combination of factors:
 - Estimates suggest that current greenhouse gas concentration is around 430 ppmv CO₂e;
 - In order to allow policy and implementation some ‘room for manoeuvre’, some increase in this concentration is regarded by policymakers as inevitable;
 - stabilization at 450 ppmv CO₂e has been reported to provide a mid-value probability of a global average temperature rise of 2 °.
 - Set against a background of predicted progressive increases in scale and severity of impacts of increases in global average temperature, a focus for stabilization has become a range between 450 ppmv and 550 ppmv CO₂e (see, for example, the Stern Review [1]).

[1] N. Stern, The Economics of Climate Change: The Stern Review. (Cambridge University Press, Cambridge, 2006).

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The origin of the 2 °C policy threshold is not entirely clear. Some trace it back to early assessments that the West Antarctic Ice Sheet may have collapsed in past climates that were more than 2 °C warmer. In current assessments, however, it appears related to a combination of factors, including that

- estimates suggest that current greenhouse gas concentration is around 430 ppmv CO₂e;
- in order to allow policy and implementation some ‘room for manoeuvre’, some increase in this concentration is regarded by policymakers as inevitable;
- stabilization at 450 ppmv CO₂e has been reported to provide a mid-value probability of a global average temperature rise of 2 °C (see for example the Stern Review (5)); and
- set against a background of predicted progressive increases in scale and severity of impacts of increases in global average temperature, a focus for stabilization has become a range between 450 ppmv and 550 ppmv CO₂e (see, for example, the Stern Review [1]).

[1] N. Stern, *The Economics of Climate Change: The Stern Review*. (Cambridge University Press, Cambridge, 2006).

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Carbon Credits in Europe

The Directive 2003/87/EC of 13 October 2003 established a scheme of greenhouse gas emission allowance trading within the Community in order to promote reduction of greenhouse gas emission in a cost-effective and economically efficient manner.

<http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2003:275:0032:0046:EN:PDF>

Trading [1]

The Leipzig European Energy Exchange (EEX) will in future auction greenhouse gas emission allowances on behalf of the German government.

For the past two years German companies in the emissions trading scheme have no longer been receiving all allowances free of charge. Almost 10 percent of the total volume, i.e. 40 million allowances per year, are sold on the market. In 2008 and 2009 the KfW Bankengruppe offered the allowances on European emissions trading exchanges on behalf of the Federal Environment Ministry. From 2010 this sale will be replaced by an auctioning procedure.

[1] Leipzig European Energy Exchange EEX will be in charge of auctioning emission allowances
Weekly auctioning will start in 2010. BMU 18.11.2009.

http://www.bmu.de/english/current_press_releases/pm/45227.php

Costs

1 Ton CO₂ = 1 Allowance

NY

2009 Vintage Allowances Sold at \$2.05

2012 Vintage Allowances Sold at \$1.86

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Carbon Credits in Europe

Deutschen Emissionshandelsstelle (DEHSt) [1]

The German Emissions Trading Authority (DEHSt) is the national authority entrusted with the implementation of emissions trading, supporting participants in emissions trading. DEHSt is cost-effective as well as ecologically responsible.

The German Registry of Emissions Trading was hit by an EU-wide phishing attack via e-mail. [2]

[1] Umweltbundesamt - Deutsche Emissionshandelsstelle (DEHSt)
http://www.dehst.de/cln_162/nn_477442/DE/Home/homepage__node.html?__nnn=true

[2] Emissions Trading: Preventive Measures of the German Registry
Protection from EU-wide Phishing Attack via E-Mail 29.01.2010
http://www.dehst.de/cln_162/nn_484538/SharedDocs/Mailings__EN/2010/10-01-29__registry__phishing__email.html?__nnn=true

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Aviation

Aviation releases carbon dioxide, nitroge oxides, water vapour, sulphate and soot particles. Accordingt to the IPPCC the Total climate impact oif aviation is two to four times higher than the effect of its carbon dioxide emission alone. Also must be considered the highly uncertain cirrus cloud effects.

The aviation industry is included in Carbon Emissions monitoring and accounting due to the European legislation which starts to take effect in 2009, and takes full effect in 2012.

All airlines and aircraft operators must be seen to be doing their bit to monitor and reduce their carbon emissions for a 'greener' world. ETS Aviation provides a low cost aid to meeting these challenges.

Aviation Footprinter is a completely new software package designed for the aviation industry by ETS Aviation to enable easy recording, monitoring and reporting of carbon emissions as required by the European new regulations.

Most operators are just starting to become aware of the new requirements placed on aviation by the Emissions Trading Scheme. The company develops a fuel efficiency programm.

<http://www.etsaviation.com/?gclid=CLK4z-XfvZ8CFY1n4wodQimfzg>

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Aviation

Directive 2008/101/EC of the European Parliament and of the Council of 19 November 2008 amending Directive 2003/07/EC so as to include aviation activities in the scheme for greenhouse gas emission allowance trading within the community.

The directive entered into force on 02 February 2009.

Contrails

Here 8 contrails evolve to cirrus clouds at the heavy crowded European sky.

Carbon credits for airlines

There are 326 Airline companies in Germany. Half of them already published their monitoring system. Trading of carbon credits for airlines will start in 2012.



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Contrails and resulting cirrus clouds

Desert Energy Project

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According to Paulo Eduardo Barni the BR 319 Between Porto Velho and Manaus is planed to be bituminised. This will attract a high number of settlers which will get access to the surroundings of the road. When the construction of dams and hydroelectric power plants of Santo Antônio e Jirau at the Madeira River will be completed, he workers will spread along the roadm, increasing the pressure on the forest.

BR 319 Impactos alem do Amazonas. Adrea Franzeres 16.11.2009
<http://www.oeco.com.br/reportagens/37-reportagens/22916-impactos-alem-do-amazonas>

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Carbon Leakage

A main concern with implementing uneven GHG constraints is carbon leakage (i.e. an increase in emissions outside the region as a direct result of the policy to limit emission in a country or region in the form of a cap or a tax). Carbon leakage would imply that the domestic climate mitigation policy is less effective and more costly in containing emission levels.

When climate change mitigation policy introduces a cost for some but not others within the same sector, competition among companies is distorted. The implementation of the Kyoto Protocol potentially creates such a situation as some developed country Parties to the Kyoto Protocol have binding emission reduction targets (36 countries), while developing country Parties as well as other non-Parties, have no quantified emission reduction binding targets. The introduction of domestic or regional emissions trading schemes (ETS) that cap GHG emissions for sectors whose products compete internationally (e.g. the European ETS) can also trigger such conditions. Competitiveness concerns arise when this distortion becomes significant. For some industrial activities, this could be the case, but by no means for all.

[1] International Energy Agency: Issues behind Competitiveness and Carbon Leakage Focus on Heavy Industry.
http://www.iea.org/papers/2008/Competitiveness_and_Carbon_Leakage.pdf

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Channels of carbon leak by uneven carbon constraints

According to the International Energy Agency there are several channels of sector-led carbon leakage initiated by uneven carbon constraints, the three most important include: i) the short-term competitiveness channel, where carbon-constrained industrial products lose international market shares to the benefit of unconstrained competitors; ii) the investment channel, where differences in returns on capital associated with unilateral mitigation action provide incentives for firms to relocate capital to countries with less stringent climate policies; and iii) the fossil fuel price channel, where reduction in global energy prices due to reduced energy demand in climate constrained countries triggers higher energy demand and CO₂ emissions elsewhere, all things being equal.

Higher leakage rates would be expected in the steel and primary aluminium sectors than in the cement or electricity sectors – mainly because the latter are much less traded.

Example of Carbon Leak [1]

The German company ThyssenKrupp starts a project increasing the output of CO₂ of the whole state of Rio de Janeiro by 76%. It works under the name of “Companhia Siderúrgica do Atlântico”. It will have an emission of 9.7 million tons of CO₂/year which will profit from the lack of CO₂ regulations in the state. The emission of CO₂ of the whole State of Rio de Janeiro is 12.7 million tons and will upgrade to 22.4 million tons by this carbon leak from Germany to Brazil. ThyssenKrupp moved its investment from Germany to Brazil because of unconstrained environmental regulations.

[1] International Energy Agency: Issues behind Competitiveness and Carbon Leakage Focus on Heavy Industry.
http://www.iea.org/papers/2008/Competitiveness_and_Carbon_Leakage.pdf

[2] O preço do progresso. CSA aumentará em 76% o lançamento de dióxido de carbono na atmosfera da cidade. O Globo.
6.11.2009 pp10.

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To date, the focus of climate change mitigation policy has been on "preventing dangerous anthropogenic interference with Earth's climate system", where this underlies the United Nations Framework Convention on Climate Change (UNFCCC). Whilst there is no global agreement or scientific consensus for delineating 'dangerous' from 'acceptable' climate change, limiting global average temperature rise to 2 °C above pre-industrial levels has been emerging as a focus for international and national policymakers.

The 2007 Bali conference heard calls for reductions in global greenhouse gas (GHG) emissions to avoid exceeding the 2 °C threshold. In March 2007, the EU reaffirmed its commitment to making its fair contribution to global mean surface temperatures not exceeding 2 °C above pre-industrial levels and the July 2009 G8 summit recognized "the scientific view that the increase in global average temperature above pre-industrial levels ought not to exceed 2 °C". Thus, the 2 °C threshold has underlined much of the debate on global action to reduce emissions, although the actions required to achieve it are still to be taken.

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Most carbon removal technologies today are based on planting trees. Unfortunately, trees do not remove much carbon from the atmosphere until the trees mature.

the inclusion of the industry for the first time in Carbon Emissions monitoring and accounting. This is the result of EEC legislation which starts to take effect in 2009, and takes full effect in 2012.

The second change is part political, part cultural – it is the recognition that all airlines and aircraft operators must be seen to be doing their bit to monitor and reduce their carbon emissions for a ‘greener’ world.

ETS Aviation provides a low cost aid to meeting both challenges.

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Do special Activities reduce CO₂ emission?

Investments in wood and paper industry

Most carbon removal technologies today are based on planting trees. Unfortunately, trees do not remove much carbon from the atmosphere until the trees mature.

Investing in Eucalyptus plantations in Brazil creates monocultures in the Amazon region.

It will be used to candidate for carbon credits and will displace native population.

Investing in Eucalyptus plantations in Brazil will increase pressure on the Amazon region where these monocultures replace native forest.

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Aluminium:

Aluminium is heavily traded internationally: its high value per tonne means that transport costs weigh little in the final price and, consequently, in the choice of location of production facilities.⁶⁰ Production is traditionally located near low-cost electricity supply. Proximity to markets is much less important than for cheaper and heavier commodities like cement. As a result, 77% of total output is traded internationally (Baron et al. 2007).

[1]International Energy Agency: Issues behind Competitiveness and Carbon Leakage Focus on Heavy Industry.
http://www.iea.org/papers/2008/Competitiveness_and_Carbon_Leakage.pdf

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Cement

Due to the geographic abundance of its raw materials (i.e. limestone) cement is produced in virtually all countries. This is also explained by the low product price and the high cost of freight for such a bulky commodity (Reinaud, 2005a). Only 6% of global production is traded.

Cement can be imported as a finished product, or imported clinker may be milled and blended into cement at the point of arrival in a grinder (Ponssard and Walker, 2008). Clinker can be transported more easily and opens up the possibility to increase cement production without having to add clinker production capacity (Baron et al., 2007). This is an important factor as clinker production is where most of CO₂ is emitted in the cement manufacturing process.

Iron and steel

Steel is a widely traded commodity. In 2007, 40% of the steel production (i.e. over 300 Mt of steel) was traded globally, against 26% in 1990.

[1]International Energy Agency: Issues behind Competitiveness and Carbon Leakage Focus on Heavy Industry.
http://www.iea.org/papers/2008/Competitiveness_and_Carbon_Leakage.pdf

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What Can I Do?

Reduce the amount of carbon dioxide you personally contribute to the atmosphere. This may be accomplished by reducing carbon generating activities. Using more efficient sources of energy and light will reduce carbon dioxide in that when less electricity is needed, less coal or oil is burned. Public transportation will reduce the amount of fuel burned per person. Walking or riding a bicycle is even less carbon generating.

Giving up my automobile and walking everywhere is impractical!

Purchasing carbon credits or carbon offsets may be the answer.

1. Pay someone else to reduce their carbon dioxide emissions for you. As in a electricity consumer like a factory, to use hydroelectric, wind or solar power instead of coal fired electrical generation.
2. Pay for carbon dioxide to be removed from the atmosphere by some method for you.

The cap and Trade distraction

<http://content.globalmarshallplan.org/ShowNews.asp?ID=1609>

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The German Government has set two important targets:

- Reduce its greenhouse gas emissions by 40% by 2020 compared with 1990.
- Facilitate an international post-2012 agreement. The revenues from emission trading and other activities will be used for projects of The International Climate Initiative which finances climate protection projects in developing and newly industrialising countries and in transition countries in Central and Eastern Europe since 2008.

In its first year of operation (2008), 97 projects with an overall volume of approx. EUR 608.2 million, of which 120 came from the sale of CO2 emission certificate have been launched within the context of the Initiative.

Federal Ministry for the Environment, Nature Conservation and Nuclear Safety.

<http://www.bmu-klimaschutzinitiative.de/en/projects?p=1&d=282>

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Demonstration of Carbon Capture and Storage [1]

- The European Economic and Social Committee EESC endorses the mechanisms in the proposal for promoting the demonstration of CCS (Carbon Capture and Storage) in power stations, as set out in the Commission's Communication, however the lack of financing capacity and clearly established financing options for the medium (2010-2020) and long term (2020 and beyond) is a concern.
- Care should be taken to ensure that the lack of financing capacity by the Commission can be partly compensated by revenue generated via the European Emission Trading Scheme (EU-ETS) e.g. through the auctioning of emission allowances by the power

[1] European Economic and Social Committee: Plenary session 17 and 18 September 2008. Summary of opinions adopted.

http://eesc.europa.eu/activities/press/summaries_plenaries/index_en.asp

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Indonesia

JAKARTA, Dec 1 (Reuters) - Indonesian plans to set up a carbon trading market potentially worth billions of dollars to protect rain forests may fail because of widespread corruption in its forestry sector, Human Rights Watch said on Tuesday.

Indonesia is seen as a key player in the fight against climate change given it still has huge swathes of carbon absorbing tropical forests.

But partly because of deforestation, a 2007 World Bank report put Indonesia as the world's third-largest emitter of greenhouse gases and the country is under renewed scrutiny in the lead up to global climate talks in Copenhagen starting next week.

Indonesia could benefit from a United Nations-sponsored scheme called REDD, or Reduced Emissions from Deforestation and Degradation, under which poor nations earn money from carbon credits traded in exchange for the preservation of forests.

However, Human Rights Watch questioned in a report whether Indonesia could be a reliable carbon trading partner.

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Funds desperately needed for essential services that could help Indonesia meet its human rights obligations in areas such as health go instead into the pockets of timber executives and corrupt officials," the report said.

World Bank health experts estimated the average annual loss of \$2 billion would be sufficient to provide a package of basic health care benefits to 100 million of Indonesia's poorest citizens for two years, the report said.

The report recommended Indonesia's Corruption Eradication Commission (KPK) should be strengthened and banks should be pressed to reveal their customers and monitor suspicious transfers, particularly if they involved senior forestry and administration officials.

Data on the amount of timber logged should be more carefully compiled and made public, while other countries should pass laws requiring documentation proving timber is legal, it said.

[1] www.hrw.org/en/node/86705.

Indonesia "Wild Money" The Human Rights Consequences of Illegal Logging and Corruption in Indonesia's Forestry Sector
http://www.hrw.org/sites/default/files/reports/indonesia1209webwcover_0.pdf

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It is estimated that the Indonesian government lost \$2 billion in 2006 due to illegal logging, corruption, and mismanagement.

A significant portion of the country's sawmill industry with processing capacities of less than 6000 cubic meters per year are not required to report their wood consumption to the ministry.

The corruption causes consequences for the conditions in the once heavily forested West Kalimantan (Indonesian Borneo)

http://www.hrw.org/sites/default/files/reports/indonesia1209webwcover_0.pdf

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Recommendations to the Government of Indonesia

- Reduce illegal logging and associated corruption by enforcing existing forestry laws and anti-money laundering and anti-corruption laws.
- Implement timber and revenue tracking mechanisms.
- Implement transparency legislation.
- Strengthen anti-corruption efforts.
- Improve health spending and access to care.
- Avoid complicity in illegal logging.
- Avoid trafficking in illicit funds.

To Indonesia's International Donors, including the World Bank, Australia, the European Union, and the United States

- Avoid climate change initiatives that exacerbate corruption.

Indonesia has one of the fastest rates of forest loss in the world. The destruction of the country's peatlands alone accounts for 4% of global human induced greenhouse gas emissions, propelling Indonesia to become the world's third largest greenhouse gas emitter, after the US and China.

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Illegal deforestation and peatland clearance

Unilever, Nestlé and Kraft produce margarine, ice cream, soap, shampoo confectioneries and snacks. They announced stop to buy palm oil from the Indonesian company PT Smart whose parent group Sinar Mas is engaged in widespread illegal deforestation and peatland clearance.

To avoid further bad image in media and their customers these companies make sure now that palm oil comes from sustainable plantations, and not from Sinar Mas. These decisions were a reaction to the Green Peace report of illegal forest clearing.

Greenpeace says Sinar Mas operations in Sumatra, West Kalimantan, and Papua destroy environment of these areas. Sinar Mas holds 200,000 hectares of Indonesian rainforest and have plans to acquire a further 1.1 million hectares, mainly in Papua. Greenpeace calls for an immediate halt to all expansion into forests and peatland. Further, they are calling for a moratorium on any further forest conversion.

[1] Sinar Mas - 'Forest and Climate Criminal'. Green Peace. March 19, 200
<http://www.greenpeace.org/usa/news/sinar-mas-forest-and-climat>

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Pulp and Paper [1]

A new Greenpeace report shows that Sinar Mas subsidiary, Asia Pulp & Paper (APP), has been responsible for massive deforestation in Indonesia for the past 30 years. The report ‘APP: Thirty Years of Forests Destruction’, APP China’s paper product contain fibres from natural tropical forests in Indonesia.

The report “Illegal Forest Clearance and RSPO Greenwash” [3], shows the Sinar Mas Group breaking the law in their palm oil operations by clearing forest without the correct permits, and illegally draining and converting deep peat.

On 28 March 2005, APP started production at its massive new pulp mill: Hainan Jinhai Pulp Co. Ltd. With a capacity of over one million tonnes a year and a cost of US\$1.3 billion, it is the largest pulp mill in China.

[1] Greenpeace releases more evidence of Sinar Mas forest and climate crimes. Green Peace
December 18, 2009

<http://www.greenpeace.org/seasia/id/en/news/sinarmas-more-evidence>

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APP China [1]

(May 2007): Asia Pulp & Paper (APP) is the one of the world's largest pulp and paper companies and is infamous for its forest crimes. Vast tracts of ancient forests in Indonesia lay at their mercy, and more recently the company has started to encroach on natural forests in southern China as well.

By 2003, according to a report by the Chinese State Forestry Administration, the remaining natural forest in Hainan had dropped to 0.57 million hectares by 2003, a reduction of more than 66,000 hectares compared to the forest area two years previously.[7] There can be no doubt that APP has contributed to the decrease in forest area. If the damage caused by APP are not stopped quickly, we cannot see any future for Hainan's natural forest. Over the coming years, the forest - which is one of the largest natural forest areas in China - will disappear to be replaced by plantations of Eucalyptus.

[1] APP China. Greenpeace
<http://www.pulpmillwatch.org/companies/app/>

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The UN – REDD Programme

The United Nations Collaborative Programme on Reducing Emissions from Deforestation and Forest Degradation in Developing Countries (UN-REDD Programme) established in July 2008 allows donors to pool resources and provides funding to activities towards this programme. [1]

The UN admitted that REDD schemes were dangerously open to abuse. "Where countries are corrupt the potential for Redd corruption is dangerous. [In Papua New Guinea], people have tried to take advantage of the market in an unacceptable way, said Tiina Vahanen, a senior officer at UN-Redd. [2]

Real Climate Solutions

- Solid Caps
- Strong Laws
- Citizen Actions
- Carbon Fees

[1] UN – REDD Programme Fund
<http://www.undp.org/mdtf/un-redd/overview.shtml/>

[2] UN's forest protection scheme at risk from organised crime, experts warn. Gardian.co.uk. 5.October 2009.
<http://www.guardian.co.uk/environment/2009/oct/05/un-forest-protection>

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Deforestation: Forest net loss 1990 to 2005

Brazil	42.3 m
Indonesia	28.1m
Sudan	8.8m
Burma	7.0m
Congo	6.9m
Tanzania	6.2m
Nigeria	6.1m
Mexico	4.8m
Australia	4.2m
Bolivia	4.1m
Phillipines	3.4m
Cameroon	3.3m

Hectares planted Forest net gain 1990 to 2005

China	40.1m
Spain	4.4m
India	3.8m
Italien	1.6m
France	1.0m

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Around three-quarters of the world's oil palm is grown in Indonesia and Malaysia where much of the recent expansion of the industry has been onto peatland and into tropical rainforest,” according to Unilever’s website.

“The clearance and burning of South-East Asia's peat forests release 2bn tonnes of greenhouse gases every year. According to some estimates, deforestation in Indonesia alone accounts for 4 per cent of global greenhouse gas emissions – making it the third-highest emitter behind the US and China.”

<http://www.greenpeace.org/seasia/id/en/news/sinarmas-more-evidence>

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Pulp and paper from Eucalyptus in Brazil

Bahia Pulp: Bahia Pulp is one of nine pulp mills in the state of Bahia. It was built about 100 kilometres from its eucalyptus plantations.

Bahia Pulp produces soluble cellulose (under the trademark Solucel) which is used as a raw material in the production of textile filaments, food, pharmaceutical products, special cellulose products, acetate and so on. The production capacity of the company is 115,000 tonnes a year and the company is currently expanding its capacity to produce 365,000 tonnes a year - an increase of 200,000 tonnes a year. [1]

Aracruz: Aracruz is the world's largest producer of bleached eucalyptus pulp, producing a total of 27 per cent of the world's bleached eucalyptus pulp. The company produces a total of 3 million tonnes of pulp a year, and has an area of almost 280,000 hectares of industrial tree plantations plus about 90,000 hectares grown under contract with farmers.

Aracruz took over land from the Tupinikim and Guarani Indigenous Peoples, as well as state lands and land covered by Atlantic forest. [2] (May 2007)

[1] Bahia Pulp. Greenpeace.
<http://www.pulpmillwatch.org/companies/bahia-pulp-s.a/>

[2] Aracruz. Greenpeace
<http://www.pulpmillwatch.org/companies/aracruz/>

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In many countries in the Global South, from Brazil to Thailand, from South Africa to Chile, local communities are protesting the impacts of the pulp industry and the vast areas of industrial tree plantations that provide the raw material for the pulp mills. In Brazil, the world's largest land rights movement, the Movement of Landless Peasants (Movimento dos Trabalhadores Rurais Sem Terra, MST), has repeatedly targeted pulpwood plantations in its land occupations.

The pulp industry is planning a dramatic expansion of capacity in the South. The result will be increased poverty, loss of livelihoods and environmental destruction. This report is an attempt to hold the financiers of the pulp industry accountable.

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Wood for energy

Wood as a source of energy is classed as biomass - a renewable and CO2 neutral source. The EU has set ambitious targets to increase Europe's use of renewable energy and electricity. One way for member states to meet these targets nationally is to subsidise renewable energy sources.

Subsidising wood as an energy source is problematic – a balance has to be kept to ensure that the many environmental benefits of using wood as a raw material (e.g. the ability to recycle wood based products) are not overlooked. For the paper industry it's also problematic because such subsidies create unfair competition for one of its main raw materials, potentially limiting supply and damaging its competitiveness. For these reasons, the paper industry promotes the use of wood as a raw material first, and then finally at the end of its life cycle (when it has been reused and recycled several times), as an energy source.

The European paper industry is actually the largest industrial producer and user of renewable energy in Europe today. It produces more than 20% of all renewable energy used by industry. Moreover, half of all the energy consumed by the European paper industry is renewable.

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In Europe, the use of wood as biofuel has begun to compete with pulp and therefore increased the cost of wood. The CEPI is lobbying for intervention at the EU level, by pointing out that European policies promoting renewable energy sources are "putting pressure on the availability of the pulp and paper industry's main raw material." At the same time, the pulp industry in the North is looking at the possibility of converting pulp mills to biorefineries, to produce biofuels. But whether pulp mills are used to produce pulp or biofuel.

Industrial logging and plantation establishment inevitably release large amounts of carbon held in forest biomass and soils. Plantation establishment on peat soils, as is happening today in Indonesia for pulpwood and oil palm, is responsible for more than a billion tonnes of CO₂ emissions annually, making Indonesia the world's third largest greenhouse gas emitter, after the USA and China.

http://www.pulpmillwatch.org/media/pdf/BPP_A_FIN_2.pdf

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The unique thing about forest is that it is an inherently renewable resource - it can be regenerated in a perpetual cycle, almost indefinitely. Very few natural resources, if any, can claim the same thing. But if we want to make sure that the potential renewability of forests is realised then managing forests has to be responsible, structured and systematic.

Wood is renewable, easily available throughout Europe and the different types lend themselves well to making a wide range of paper.

Using annual crop fibres (e.g. kenaf, hemp, cotton, linen, straw, rice, etc.) instead of wood has been explored. These crops

have some advantages for energy consumption and fibre content, but they also present problems that make their use for

paper currently unfeasible:

- They are not normally available in sufficiently large quantities.
- They require large amounts of water to grow, often in areas where it is needed for other reasons.
- They would need huge storage capacities, as their harvest is only seasonal, to be able to ensure a continuous delivery of raw material to pulp mills.

Additionally, the potential use of chemicals to grow these fibre sources could have a negative impact on the environment.

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Neutralising CO₂

The German city Kassel manages natural gas for home heating and cooking for its citizens.

The city maintains a carbon credit modality of its own, called “netralisation”.

The amount of CO₂ produced by Kassel in Germany, according to the technocrats, is being “neutralised” in Brazil introducing sustainable types of energy at local factories.



The city of Kassel proudly presents the example of the brick factory Cerâmica São Judas Tadeu in Brazil.

This is an example of misled carbon management. The money of Kassel heats up the economy of Brazil. Small, inefficient factories like Cerâmica are induced to increase their output due to input of investments from abroad.

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Here German CO₂ is being “neutralised”.

Cerâmica supposedly “neutralises” the CO₂ of the German city, burning rice and peanut peelings instead of wood. However, this company is in real bad shape. It has no filters in its stacks and Brazil must “neutralise” its own greenhouse gases which were emitted during plantation and harvest of these agrarian products. Global balance is therefore not being achieved by heating up a dormant economy of developing countries.

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Rice and peanuts are harvested only once a year. Such a short supply is soon exhausted. Wind and solar energy instead of such an unrealistic project should be pursued.

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As soon the limited stock of peelings are exhausted wood will be used again.
A global program of solar and wind energy is unavoidable to decarbonise the energy economy.

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Kassel 2010

The cold side of society: While the city of Kassel sponsors the development of Brazilian industry beggars are sit in their streets. Where is the “social” German State? Where are the social groups. Why is there nobody to look what happens at home? According to Our Food.com it is important to maintain economic, ecological and cultural isolated units. If we loose the grip on reality we do not care any more about our neighbour. So with environment. We have to stay at home and do our work in front of our door.

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Diversification of the economy of the GCC states

Makram Malaeb 2006 stresses that despite some success in establishing a variety of industrial activities the dependence on oil as the main determinant of the economic wellbeing of GCC states is unbroken. Developing the economy in a more diversified form needs major reforms in GCC countries.

Including hydrogen and electricity in the export portfolio of the Arabian countries is a diversification which meets the change to a global clean energy. Those who miss the changes of the technology will be the loser of the world of tomorrow.

Diversification of the GCC Economies: Analysis of the Preceding Decade (1993 – 2003) By: [Makram Malaeb](#) Publication Date: October 2006 Publisher: Gulf Research Center Publication Category: [Gulf Papers](#) No of Pages: 77 Pages
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