

# GREENBUDGETNEWS No. 24 – 10/2009

## GreenBudgetEurope

### EUROPEAN NEWSLETTER ON ENVIRONMENTAL FISCAL REFORM

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**Chief editor:** Dr. Anselm Görres

**Editors:** Kai Schlegelmilch, Sebastian Schmidt, Damian Ludewig, Jacqueline Cottrell, Lindsay Condit

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### *Quotation of the Fall*

*“Don't blow it - good planets are hard to find.”*

*Quoted in Time Magazine. [www.time.com/time](http://www.time.com/time)*

## 1. EDITORIAL

Dear readers and friends of Green Budget Germany and Green Budget Europe, GBE and GBG had quite a busy few months.

The annual Green Budget Europe conference in 2009 took place in London, King's College. The main topic was the environmental policy in times of financial crisis. We had many high-ranking speakers from politics, administration and science. The discussion showed again that the instruments we need to implement to fight climate change and to get a sustainable economic recovery are well known, that they work and that only political obstacles are still strong and inhibit the solutions to be applied. There were about 100 participants. More information about this conference and the presentations can be found at:

<http://www.foes.de/veranstaltungen/dokumentationen/2009/london-17072009/>

Just two days before the conference, on July 15th and 16th, the final conference of the petrE project, co-ordinated by Professor Paul Ekins, entitled "Environmental Tax Reform in Europe - the Key to a Resource-Efficient, Low-Carbon, Competitive Economy" took place. More information to this conference is available directly on the project website:

<http://www.petre.org.uk/events.htm>

We are proud to announce that GBE has issued four policy papers on different topics. The papers can be used by everybody for lobbying and awareness raising. We are grateful for their dissemination and their display on conferences. The papers can be found here:

<http://www.foes.de/internationales/green-budget-europe/policy-papers/>

Papers in detail:

- "GREEN PUBLIC PROCUREMENT" by Catherine Pearce (EEB)  
<http://www.foes.de/pdf/2009-09-GBE-GreenPublicProcurement-Final.pdf>

- "A GLOBAL CONTRACT BASED ON CLIMATE JUSTICE" by Taina Järä and Klemens Riegler  
[http://www.foes.de/pdf/2009-10-GBE-ClimateJustice\\_final.pdf](http://www.foes.de/pdf/2009-10-GBE-ClimateJustice_final.pdf)
- "GREENING TRANSPORT BY THE USE OF MARKET-BASED INSTRUMENTS" by András Lukács  
<http://www.foes.de/pdf/2009-09-GBE-GreeningTransport-Lukacs-final.pdf>
- "GREENING THE ENERGY TAX DIRECTIVE" by Yannis Paleokrassas,  
long: [http://www.foes.de/pdf/2009-10-GBE-GreeningtheEnergyTaxDirective\\_final.pdf](http://www.foes.de/pdf/2009-10-GBE-GreeningtheEnergyTaxDirective_final.pdf),  
short: [http://www.foes.de/pdf/2009-09-GBE-ETD-Summary\\_V03.pdf](http://www.foes.de/pdf/2009-09-GBE-ETD-Summary_V03.pdf)

The Green Budget Europe Steering Committee has meetings planned for 26<sup>th</sup> November of 2009 and January of 2010. These meetings aim primarily at supporting the Swedish and Spanish EU presidencies with the revision of the Energy Taxation Directive. As part of the revision process the European Commission (Directorate General for Taxation and Customs Union) will host the conference "What taxation for a low carbon economy?" in Brussels on November 30<sup>th</sup> 2009:

[http://ec.europa.eu/taxation\\_customs/taxation/gen\\_info/tax\\_conferences/low\\_carbon/index\\_en.htm](http://ec.europa.eu/taxation_customs/taxation/gen_info/tax_conferences/low_carbon/index_en.htm)

More information on the conference can be found in section 7.

Another Steering Committee meeting is planned in Brussels in June 2010 previous to the Belgium EU-presidency. The Annual Conference of GBE in 2010 will take place in Budapest in Hungary. We will very probably hold the conference on July 1st-2nd or 8th-9th. We plan to organize it together with the Hungarian Economic Association, which is a very prestigious organisation. Moreover CEEweb for Biodiversity will cooperate in the organisation of the event.

As we did not succeed in getting major funding from public or private bodies for GBE, we are still dependent on the receipt of membership contributions from our country delegations. GBG is spending a significant part of its general budget for GBE-purposes since the work began two years ago. Donations are thus always welcomed:

Account Holder: Forum Ökologisch-Soziale Marktwirtschaft, Name of the bank: GLS Gemeinschaftsbank, Bochum, IBAN CODE: DE 87430609678043713000, SWIFT CODE : GENODEM1GLS, postal address: Seestraße 116, 13353 Berlin.

**Please note that the GBG office will move on November 2nd:** Schwedenstraße 15a, 13357 Berlin, Tel.: 030/ 510530800

We also had elections here in Germany, and continuing to work with and advise politicians from all parties, now especially the conservatives with a certain understanding of sustainable economic development, on environmental issues.

GBG held a conference on October 9<sup>th</sup> in Berlin to discuss economic instruments in environmental policy and social justice. It was quite successful, with a great turnout and lively discussions in our three workshops regarding ticket taxes, company car taxes, and nuclear energy taxes.

The GBG project from the German federal environment agency is coming along. We are speaking with corporate actors, local youth, and trade unions to come to a consensus on environmental fiscal reform.

On behalf of the European Climate Foundation GBG had a press conference in September, where leading economists stressed, that coal based energy production will not be profitable in the future anymore. In a joint declaration, more than sixty economists caution against the financial and climatic risks of new coal-fired power plants in Germany. More information in section 7. and here:

[www.wiwis-kohle.de](http://www.wiwis-kohle.de)

Moreover GBG has conducted a study on behalf of Greenpeace summing up the public subsidies in the German nuclear sector. We have determined that the subsidies can be measured in two different ways, and from 1950-2008 have cost Germany more than €165 billion.

In this issues of Green Budget News we have to highlight the announcement of the French government to implement a carbon tax, to be found in section two.

Your GBG Editorial Staff

## 2. GREEN BUDGET REFORM IN EUROPEAN MEMBER STATES

### *French Government Unveils Details of Carbon Tax*

[ENDS Europe, Friday, October 2, 2009] The agriculture and fisheries sectors in France will be partially exempted from a carbon tax that will be introduced next year. These sectors would still have to pay the tax, but they would get most of their money back.

The announcement was made on Wednesday as French economy and finance ministers Christine Lagarde and Eric Woerth unveiled the government's budget proposal for 2010. The proposal foresees the introduction of a CO<sub>2</sub> tax in January, confirming a plan outlined earlier this month.

As reported before, the tax will apply to oil, gas and coal consumption in sectors not covered by the EU's emissions trading scheme (ETS), starting at €17 per tonne. An expert group said the tax should increase to €100/tonne by 2030. Households paying income tax would benefit from tax breaks. Others will receive a "green cheque".

The agriculture and fisheries sectors should not pay the full amount straightway to "give them time to adopt more energy efficient transport and production modes", the government says. The existing energy taxation di-

rective allows member states to give farmers tax breaks or exempt them altogether.

Other aspects of the French budget proposal include a tightening of the "bonus-malus" tax and subsidy scheme for encouraging low-carbon emission cars. Buyers of cars emitting more than 160 grams of CO<sub>2</sub> per kilometre currently have to pay a premium of up to €2,600. This threshold will be lowered to 156g/km from 2010.

<http://www.endseurope.com/22279?referrer=search>

### ***A Budget Designed to Accelerate Environmental Transformation***

*[Translated by Lindsay Condit, from the Ministère de l'Écologie, de l'Énergie, du Développement durable et de la Mer, September 30, 2009]* Jean-Louis Borloo presented the 2010 Ministry of Sustainable Development budget on September 30, 2009. After 2009, a year marked with the launching of numerous programs, "2010 will be a the year for the acceleration of our projects," declared the Minister of State.

#### *The Acceleration of Ministry Projects*

The acceleration of greening the budget with the setting up of the carbon tax as of January 1, 2010, and its compensation for low building consumption, which will become the norm by 2013, the launch of a debate with parliament about the adaptation of other sectors.

Acceleration of green growth with the rise of investments in research, the launch of an electric vehicle plan, the doubling of allocation of funds for renewable heating, the pursuit of a reform regarding ports, which will be taken up by the authority of combined transport.

Acceleration of efforts in terms of protecting biodiversity with the setting up of a green framework and the pursuit of contractualising Natura 2000, the creation of six new natural parks, and a total of 27 million Euros will be dedicated to the protection of marine biodiversity in 2010.

- Improvement of efforts in terms of prevention of risks: rehabilitation of polluted areas, waste plan.
- An increasing budget for housing: an increase in the budget for individual assistance, the continuation of the plan for the revival of the construction industry.
- A Budget Constructed to Accelerate Environmental Transformation
- The 2010 budget will be dedicated to advancing France in terms of sustainable development, a major theme in light of the climate negotiations in Copenhagen at the end of the year.

#### *The Ministry Budget by Center:*

- Ecology Center: again, a budget with a strong increase (618 M € +16%), in particular to finance the actions of the Grenelle Government.
- Transportation Center: budgetary credits of 4,806 M €
- Energy Center: allocation of 820 M € in 2010 to be used for the struggle against climate change.
- Research Center: an allocation of 1419 M € for AE (+4%) and 1304 M € for CP (+1.2%) in 2010 which allows for research in the area of sustainable development.

[http://www.developpement-durable.gouv.fr/article.php3?id\\_article=5993](http://www.developpement-durable.gouv.fr/article.php3?id_article=5993)

### ***Questions/Answers Regarding the Climate Energy Contributions in France***

*[Translated by Lindsay Condit, from the Ministère de l'Écologie, de l'Énergie, du Développement durable et de la Mer, September 15, 2009]*

*Is the climate/energy contribution a tax or an after-tax supplement?*

No, it is not an after-tax supplement since the sum of the contribution will be transferred in full to specific projects and enterprises. The climate energy contribution is a "price signal" that functions based on the same model as the

ecological bonus: if a particular project modifies its behaviour to consume less energy, it will be a beneficiary.

*Why create a climate/energy contribution?*

It serves to send a “price signal” to consumers to encourage them to buy those products that require temperate amounts of carbon and energy. It allows equality of production for our companies that favour green technologies and thereby pollute less.

*Is it a good deal?*

Yes! The ecological bonus on cars allowed for a reduction of CO<sub>2</sub> emissions of new cars sold in France by 1 g/month instead of the 1 g/year reduction seen before. Between the end of the year 2007 and the beginning of the year 2009 the percentage of clean vehicles on the market rose from 15% to 54%.

*Why now?*

Fossil fuels are principally responsible for the concentration of CO<sub>2</sub> in the atmosphere and therefore for climate change. In addition, we know that the available reserves will not be able to cope with our needs in the long term. Therefore our industries have to anticipate this evolution and modify their modes of production and consumption today.

*Where does this measure come from?*

The idea of a climate energy contribution was thought up in the ecological treaty by Nicolas Hulot, signed by all the republican candidates for the presidential election. It was then amended by the participating parties in the final conclusions of the Grenelle government. Parliament validated its assumptions almost unanimously at the time of the vote on the Grenelle Law I. And now several European countries have also implemented it.

*Is France the only country to put a climate energy contribution into place?*

No. Sweden and Denmark were the first countries to create a climate energy contribution at the beginning of the 1990s. As of now five European countries have arranged a climate energy contribution and Germany is in the process of arranging one to start in 2012.

In Sweden, the initial level of the contribution was fixed at 27 €tonne of CO<sub>2</sub>. Today the sum is 100 €tonne of CO<sub>2</sub> and it is accompanied by a bonus.

*Who will be subject to the CEC and who will benefit from the bonus?*

The CEC will concern households as well as professional sectors not subject to the community system of exchange of emissions quotas like transport and industry are. The big companies have already contributed because they are subject to the European system of emissions quotas.

*Will the CEC be applied to all products?*

No. The CEC will apply only to fossil fuel pollutants like petrol, diesel, gas, fuel, and coal.

The CEC doesn't concern electricity. Why?

Electricity is excluded from the scope of the CEC because its production is already subject to the community system of emissions quotas and the public service contribution for electricity.

*Has the government anticipated measures to help consumers to change their behaviour, for example in terms of transport?*

The Grenelle government has planned the construction of 1500 kilometres of supplementary public transportation lines. The government has already mobilised an initial budget of 800 million Euros for the fulfilment of 50 public transportation projects in 36 towns. The French can profit equally from an ecological bonus for buying clean vehicles or those that don't emit much. In addition, 6 months from now all the big French manufacturers will be able to advertise an electric vehicle. The government has also planned a “super bonus” of 5,000 € for the purchase of a vehicle of this type. An “electric vehicle” plan will be presented on September 23.

*Has the government planned any measures to aid the consumer in changing behaviour at home?*

Yes. The state has, in this regard, a number of fiscal measures to help households reduce

their energy consumption: extension and prolongation of sustainable development tax credit, the creation of an eco-loan at a rate of 0% for financing the work necessary for thermal renovations, greening of all devices that assist with the attainment of property. We are also working on the expansion of "intelligent" electricity meters.

*Why have the price of a tonne of carbon fixed at 17€? Isn't that too low?*

There is an international carbon market. The government has determined the average price of a tonne of carbon over the course of the last few years. It also acts to allow for time for households and companies to adapt and modify their behaviours.

*Will the price of a tonne of carbon always remain at 17€?*

No. The price of a tonne of carbon will be gradually increased. The transferred bonuses to the French will increase in exactly the same rhythm.

*That represents an increase by how much?*

That represents an increase of:

- 4 cents per litre of petrol (+3%)
- 4.5 cents per litre of diesel (+5%)
- 3.5 Euros per MWh for gas (+7%)
- and 5.8 Euros per MWh for coal (+28%)

*What form will the bonuses for households take?*

Those households that pay tax on their income benefit from a tax credit. Those who don't pay tax on their income receive a green cheque. This compensation will be paid starting in February of 2010. This takes into account two criteria: the household size and the distance from urban centres. For example, for a household with children in an urban area, the compensation would be 112 € For a household with children in a rural area, the compensation would be 142 € In addition, if a household changes its behaviour and consumes less energy, it will be a beneficiary.

*How will you reach this sum?*

For a single person the compensation will be 46 € For a couple, it will be 92 € Every child adds a premium of 10 € The system accounts for a "rural premium" of 15 € per adult. For a household with two children in an urban area it would be 112 €, and for a household with two children in a rural area it would be 142 €

*What form will the bonuses for companies take?*

Companies will benefit from a removal of the professional tax if they bear upon investment. Certain sectors, like agriculture, fishing, and transport, depend strongly on fuel: the government will propose specific measures for this in the coming weeks.

*How can it be assured that the profits from the CEC will be returned in full to the French?*

The government will create an independent commission charged with making sure that the profits of the CEC will be rightly returned. This commission will consist of representatives from companies, consumers, experts, heads of ecological associations and elected representatives from the majority as well as from the minority.

*Do we have an idea of how this sum will be redistributed?*

The climate energy contribution will allow for 4.55 milliard Euros to be collected that will then be redistributed in full. The state proposes to redistribute the proceeds of the carbon tax portion of the VAT to households in the framework of its 2010 finance law.

[http://www.developpement-durable.gouv.fr/article.php3?id\\_article=5866](http://www.developpement-durable.gouv.fr/article.php3?id_article=5866)

### ***Paris and Berlin to propose EU border tax on CO<sub>2</sub>***

[ENDS Europe, Monday, September 21, 2009] The French and German governments will propose a border adjustment mechanism "within days" to protect EU companies' competitiveness if some countries fail to agree CO<sub>2</sub> reduction measures under a post-2012 climate policy framework, French president Nicolas Sarkozy said.

The two governments will call for an EU border tax on CO<sub>2</sub> or a different mechanism that would achieve the same result, Mr Sarkozy said following a meeting of European leaders in Brussels on Thursday. The idea was initially proposed by France in 2006, but it has not received a lot of support.

EU governments are now warming up to the idea because it is "more and more understood, not as a protectionist measure," but as a way of "correcting imbalances", the French president said. "We cannot tax European companies and exempt others", he added.

The European Commission's preferred option for tackling carbon leakage is to give free carbon allowances to at-risk sectors. However it has also said a carbon tax on EU imports is a second possibility. The WTO has backed the idea of border tax adjustments.

<http://www.endseurope.com/22194?referrer=search>

### ***Individual Carbon Taxes Take Center Stage***

*[Business Week, by Mark Scott, September 11, 2009]* What's the best way to reduce carbon emissions? When it comes to companies, policymakers have favored (often complicated) cap-and-trade systems that set limits on CO<sub>2</sub> emissions, then let the market figure out the rest. But for Joe Public, that approach is unwieldy. Better, so the theory goes, to create a flat carbon tax that individuals must pay depending on their greenhouse gas output.

On Sept. 10, France took a step closer to creating such a system. Under the proposal legislation (expected to become law next year), people will pay an initial tax of €17 (\$25) per metric ton of CO<sub>2</sub> emissions produced. It will apply to fuel for cars, houses, and small factories, with people paying less if they use more eco-friendly energy sources. Natural gas, for instance, produces less carbon than coal, so households fueled by gas will face a smaller CO<sub>2</sub> tax bill. French President Nicolas Sarkozy says the carbon tax will rise over time.

To be clear, the proposal will effect those firms (and households) not already included in the European Union Emissions Trading System, the world's largest mandatory cap-and-trade scheme in the world. And the hope is people/companies will switch to cleaner energy sources to avoid forking out the cash. A flat tax also is something individuals already understand, and should help avoid confusion about who pays what and where.

But there still are downsides to the French proposal. For one, critics say it's a government attempt to fill its coffers just when other tax revenues are in a tailspin. Poorer households (often with out-dated – and inefficient – heaters) also could face disproportionately high bills, though French policymakers say they'll get state aid. Politicians may similarly lack the market-based incentives provided by cap-and-trade, and could funnel the eco-revenue into pet projects or uneconomical technologies.

Despite the concerns, many countries are mulling (or already have passed) carbon taxes for individuals. That, combined with a global push for cap-and-trade schemes, will likely mean high energy costs, for everything from driving your car to paying your monthly energy bills. France certainly isn't the first to propose such a tax. And it won't likely be the last.

TrackBack URL for this entry:  
<http://blogs.businessweek.com/mt/mt-tb.cgi/15480.1284812849>

### ***France: Carbon Tax as an Alternative for Curbing Emissions***

*[Lindsay Condit, October 20, 2009]* Many in the economic world argue that implementing a universal carbon tax, whose level is set by decree, is a good idea because it's so simple. However, many countries in Europe, as well as the United States, are averse to such a tax because individual governments do not often favour relinquishing control over their systems of taxation. Governments who favour autonomy tend to opt instead for market-

based cap and trade systems, where they can provide input, and in many cases, render profits.

However, in light of the coming deadlines for Copenhagen, and with 2020 goals looming, the progress made through cap and trade systems seems modest. Some countries, including France, are now looking for a different solution.

French president Nicolas Sarkozy has recently revealed plans for a French carbon tax that would directly affect individual consumers, not just big businesses. By setting an initial tax of 17 Euros per tonne of carbon dioxide emissions, thereby raising the costs of driving or heating, Sarkozy hopes to encourage conservation among French households.

Although many in the government and the environmental lobby are excited about the proposed tax, members of the opposition, as well as French citizens, are not quite as enthused. Ifop for Paris Match produced polling data that claimed that 65 per cent of those polled were not in favour of the tax, 55 per cent were doubtful as to how useful the tax would be in offsetting climate change, and 84 per cent feared the added tax burden, especially for those with low income.

In a country that is just starting to recover from a recession, such scepticism is unsurprising. Although the tax is supposed to be revenue neutral, the details for offsetting the tax burden have not yet been specified. The French Socialist Party in particular is worried about the effect on low-income households. Even some members of the ruling party are fearful of the political backlash come the next election cycle.

Still others worry that this is just another tax to symbolise effort without actually accomplishing its goals, and worry where the revenue will go. Colette Lewiner, the head of the energy practice at Capgemini in Paris questions, "Will it go back to the people or will some of it be used to pay down the government deficit?"

Environmental advocates warn that change will not occur overnight. Jos Dings, the director of Transport and Environment in Brussels, states, "Sure, people can drive more slowly or skip a journey in the near term, but don't hold your breath for a huge reduction in fuel use the week after this is introduced."

Although some in France doubt the effectiveness of the tax, those in Scandinavia who have already had such a tax in place for several years claim that their carbon taxes have been very effective in lowering emissions.

Sweden, which has had a carbon tax in place since 1991, started its tax rate at 28 Euros per tonne of carbon dioxide emitted, and has now raised that level to 128 Euros per tonne. Susanne Akerfeldt from the Ministry of Finance in Sweden claims that without the tax, their emissions would be 20 per cent higher, while the economy has still grown by 44 per cent since its implementation. "We have found that our carbon tax is entirely compatible with economic growth," she said. She also said that Denmark, Finland, Norway, Switzerland, and parts of Canada have followed suit, and are using similar programmes.

Because of the large budget deficits created by the recession, some experts believe that other EU nations will follow France's example in implementing a carbon tax as a new source of income. This is helped by the assumption that such a tax may be less likely to raise the unemployment rate or damage output levels when compared to other methods of raising revenue.

It is suggested that, on average, heating costs would rise by anywhere from 25 to 75 Euros per year in France, depending on the type of building and the method of heating in use.

Sweden, currently holding the presidency of the EU, has been campaigning for the expansion of carbon tax policies through the EU. Although this would be very difficult because of varying governmental models, the debate in France proves both interesting and useful in encouraging such an expansion.

***Irish carbon tax proposed - Eco-taxes in double benefit; Raising revenue while appearing to save the planet***

[By Finfacts Team, September 7, 2009] An Irish carbon tax of about 8 cent per litre on petrol and diesel is expected to be imposed in December's budget if a key recommendation of today's final report by the Commission on Taxation is adopted by the Government. Eco-taxes have a double benefit for the beleaguered administration, in raising revenue while providing the junior coalition partner, the Green Party, with a "core" fig leaf for its declared mission of saving the planet.

The report by the 17-member commission, chaired by former head of the Revenue Commissioners Frank Daly, will be published today.

It contains more than 250 recommendations, including the introduction of a "revenue-neutral" carbon tax; a new property tax; a new higher marginal rate of income tax; new rules for tax exiles; and the abolition of the PRSI earnings ceiling and the incorporation of various tax levies within the existing income tax system.

The commission recommends a carbon tax on fossil fuels of €20 per tonne and says that this measure will raise €480 million for the exchequer in 2010, rising to an estimated €500 million by 2012.

However, the increase in tax-take would be compensated by reduction in other areas in order to fulfill the commission's terms of reference that the measure be revenue neutral. The pricing mechanism for the levy is tied to a number of factors, one of which is the price for which carbon is trading on the European Unions Emissions Trading Scheme.

*Revenue-neutral?*

The terms of reference for the commission were set out by the then Minister for Finance Brian Cowen, in February 2008. So given the tsunami that has hit the economy in the interval, in the absence of a constitutional amend-

ment, take the "revenue neutral" blather with a pinch of salt.

Deutsche Bank economist Frank Zipfel, said in a commentary last Friday, that given politicians' lack of discipline with respect to spending, it is possible that they will turn their attention to "eco-taxes" in their search for ways and means of consolidating public finances. This raises the question of the productivity and the responsiveness to growth of this source of funding. Experience shows that revenues cannot grow vigorously if ecological goals are taken seriously.

Zipfel says the revenue raised from environmental taxes in Germany has been flat since 2003. Their share of total tax revenue has actually been falling continually since then. At last reading (2008) it only came to 9.7 % and was thus even lower than in 1998 (9.8%), the year before the ecological tax reform came into force. The "environmental" taxes include energy tax (previously called petroleum tax), vehicle tax and electricity tax. From 1999 to 2003 the burden of these taxes was raised in five stages as part of the so-called ecological tax reform (electricity tax was not introduced until 1999). This explains the continual increase in revenue and the increase in the share between 1999 and 2003. Where tax rates have not changed, however, revenues have not increased.

The economist says this data reveals an interesting development in the consumption of (taxed) petroleum products. Since 1998 it has been on the decline overall. Only diesel consumption has risen, but this was outweighed by the decline in petrol and light heating oils. He says it remains unclear how much of the decline is due to phenomena such as drivers crossing the border to buy cheaper fuel, but the decrease is probably the result primarily of more economical vehicles and machinery.

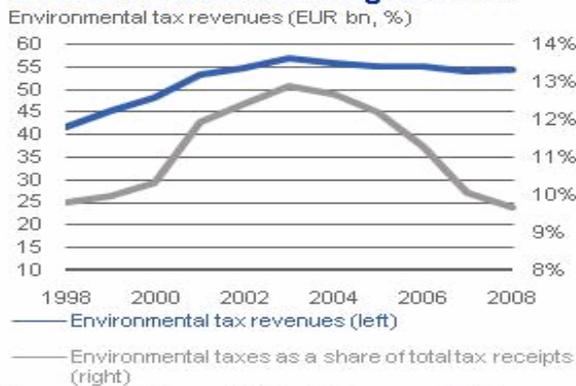
Zipfel says an "eco-tax" by name does not actually exist; it has however become a standard term used in association with the ecological tax reform. It signifies increasing the cost of energy by raising taxes in order to re-

duce consumption and thus environmentally damaging behaviour. This effect is also called the steering function of a tax, since taxes can also be deployed for this purpose as well as in order to generate revenue (fiscal objective) and redistribute income (redistribution objective).

The steering and fiscal objectives regularly conflict with one another, as the steering objective seeks to stop or reduce the frequency of an action (in this case energy consumption), which ultimately leads to a decrease in tax revenues, however. In other words, the more effectively the steering function is performed, the lower the revenue. Taxes of this kind are therefore not necessarily suitable as sustainable sources of public revenues that are responsive to growth. Zipfel says experience also shows that the steering objective can also be used as a cover for fiscal objectives. The signs that this is the case are clearer with the tobacco tax than with the petroleum tax. To date, there has still not been a government that has come up with the idea of raising the tobacco tax high enough to bring about a significant decrease in consump

[http://www.finfacts.ie/irishfinancenews/article\\_101782\\_4.shtml](http://www.finfacts.ie/irishfinancenews/article_101782_4.shtml)

**Falling "eco-tax" share shows effectiveness of steering function**

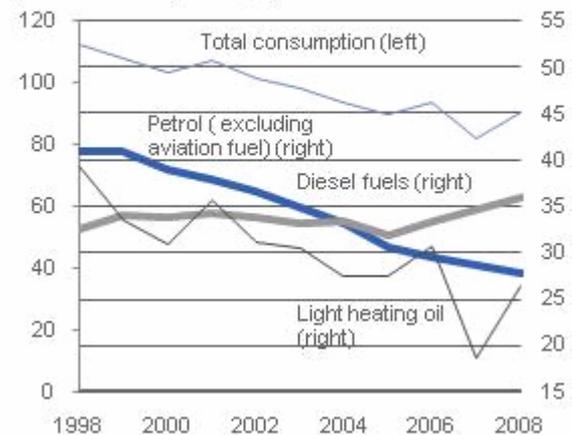


**GBE calls for nuclear Energy Tax**

A considerable proportion of costs that are caused by the use of nuclear energy in Germany are not borne by the operating companies. A recently published study by "Green

**Petroleum consumption falling - diesel increasing**

Consumption of (taxed) petroleum, cum million (excluding gases and heavy heating oil)



Sources: Federal German Statistical Office, own calculations

Budget Germany”(FÖS) claims: By introducing a nuclear energy tax of 2,5 Ct/kWh until 2012 and of 3,5 Ct/kWh from 2013 onwards, the polluters should bear at least part of these costs. In Germany, the new conservative Government currently debates about the extension of nuclear power plants’ operational life-spans.

By the European Emissions Trading Scheme, operators of coal- and gas-fired power plants are charged (at least to some extent) for the external costs due to CO<sub>2</sub>-emissions. “Consequently, also nuclear power generation should internalise a certain proportion of their environmental harmful costs, in order to compensate for distortion of competition”, says FÖS-executive Sebastian Schmidt. The nuclear external costs comprise e.g. storage costs of nuclear waste or the risk of radiation and nuclear incidents. Concrete occasion for a nuclear tax is given by follow-up costs of decommissioning and renaturation of nuclear installations and storage, that will burden the federal government budget with presumably more than 7,7 billion €(e.g. for disposal zones “Asse II” and “Morsle-ben”).

According to a study of the German LBBW-Bank, the generation costs of nuclear power amount to about 2,2 Cent per kWh, while it can be sold by operators for 5,1 Cent (under certain scenarios, 8 Cent might also be possible). Thus, the possible and reasonable ab-

sorption of so called “windfall profits” lie between 2,9 and 5,8 Ct/kWh.

The rate of taxation should correspond approximately to the burdening of fossil fuels by the Emissions Trading Scheme, while the responsible operators of nuclear power plants should be charged for the follow-up costs of nuclear power generation. Thus, the proposed tax rate of 2,5-3,5 Ct/kWh can be rated as rather moderate. Under the assumption of perpetuating the nuclear power phase-out in Germany, the proposed tax would carry a tax yield of about 30 billion € until 2020. The budgetary surplus could be spent for the rehabilitation of brownfield sites and for subsidising renewables’ R&D or the promotion of energy efficiency measures.

Other countries that have already introduced a nuclear energy tax are Sweden and Japan. Finland and Belgium are planning its introduction during the next two years.

The study is available at

[http://www.foes.de/pdf/2009-10-Konzept\\_Atomsteuer\\_final%20%282%29.pdf](http://www.foes.de/pdf/2009-10-Konzept_Atomsteuer_final%20%282%29.pdf)

### ***Car-tax in Germany: Two Euros per Gramme of CO<sub>2</sub>***

[Lindsay Condit, October 2009] As of July a new basis of calculation for the car-tax in Germany has been implemented. The cylinder capacity no longer determines the amount of the tax, but rather the amount of triggered CO<sub>2</sub> emissions. The new rule, however, concerns only newly registered vehicles (as of July). The first 120 grams of CO<sub>2</sub> emitted are free until 2011. Every further gram emitted will cost two Euros per year. In 2012 the amount permitted free of cost will be lowered to 110 grams, as of 2014 to 95 grams – still only regarding newly registered vehicles. As a consequence, automakers will have an incentive to offer vehicles that pollute less.

The Ecological Transportation Club of Germany (VCD) has disputed this. They claim that the new car-tax will in no way act to steer automakers and buyers in favour of more sparing vehicles. Instead of adding high costs

to gas guzzlers and rewarding energy efficiency, the new car-tax favours diesel vehicles above all.

### ***Germany: Average Price Falls due to scrapping scheme***

[Lindsay Condit, October 2009] As a result of the wrecking premium, for the first time in 30 years the average price of new cars sold in Germany has dropped. According to the analysis of the CAR-Center at the University of Duisberg-Essen, the average list price lay around 21,430 Euros in the first six months of this year – about 3,400 Euros or 13.8 per cent less than a year ago. The main reason for this was the impetus created by the wreckage premium to buy small and compact cars.

### ***Germany: Five Cent Toll Charge per Kilometre***

[Lindsay Condit, October 2009] Prognosis: In 2004 about 14.4 million tonnes of goods were transported across the border near Frankfurt (Oder). It is estimated that in 2025 the amount of goods transported will be 44.6 million tonnes – an increase of 210%.

The Toll: Until 2037 the corporation in charge of operation of new stretches of the Autobahn is Austostrada Wielkopolska SA. The toll should charge five cents per kilometre for cars and 10 cents per kilometre for trucks.

### ***Britain Extends Temporary Car Scrappage Scheme***

[ENDS Europe, Tuesday, September 29, 2009] The British government is going to extend its temporary car scrappage scheme to an estimated 100,000 vehicles with an additional €108.6m funding (£100m) to help owners of older cars and vans buy new vehicles, it said on Monday.

The scheme will now cover cars purchased before 28 February 2000 and vans bought before 28 February 2002. So far 227,750 new vehicles have been bought through the scheme. On average, emissions from new cars are 25% lower than those sent to scrap yards.

The government said the scheme was still scheduled to end in February 2010 despite its extension. Total funding for the programme now amounts to €434m. The government offers a €2,172 discount for each scrappage order.

<http://www.endseurope.com/22253>

### ***New Vehicle Taxation Measures in Portugal***

*[Sergio Vasques, University of Lisbon, 2009]*

The Portuguese Budget Law for 2009 comprises several new environmentally-minded measures on vehicle taxation. These measures are a follow-up to the comprehensive Vehicle Taxation Reform of 2007, in result of which both Vehicle Tax, due on purchase, and Circulation Tax, due on a yearly basis, are now for the most part calculated upon CO<sub>2</sub> emissions.

First and foremost, the Vehicle Tax CO<sub>2</sub> brackets have been revised in order to keep up with the industry's technological progress. Tax brackets for diesel-powered cars have been reduced by 10 g/km and now have their highest bracket starting at 170 g/km, while tax brackets for gasoline-powered cars have been reduced by 5 g/km and now have their highest bracket starting at 205 g/km.

In second place, from 2009 on diesel-powered vehicles lacking particulate filters will be subject to a tax penalty of EUR 250. Up to now diesel-powered vehicles fitted with particulate filters benefitted from a Vehicle Tax rebate of EUR 500.

Thirdly, some tax incentives have been subject to environmental criteria. The existing 50% Vehicle Tax rebate for rent-a-cars has been limited to the purchase of vehicles with emissions up to 140 g/km. Likewise, the Vehicle Tax incentive of EUR 1.250 for the scrapping of used cars has been will now only be granted upon the purchase of cars with emissions up to 140 g/km.

The Budget Law for 2009 has also introduced an allowance in personal income tax for the

purchase of electric vehicles, which already benefit from a total exemption of both Vehicle Tax and Circulation Tax. Such tax incentives will be available to all plug-in models coming into the market in the next few years.

In a different initiative, the Portuguese Parliament has also passed a new law in December which among other things alters the tax treatment of company cars. All yearly expenses incurred by companies on passenger cars will now be subject to a specific tax of 5% or 10% depending on their CO<sub>2</sub> emissions.

### ***Miliband's Manifesto to Make Britain a Low-Carbon Economy***

*[The Independent, July 16, 2009, by Michael McCarthy, Environmental Editor]* The national strategy to cut emissions published yesterday comes at a price. But are we willing to pay it?

Thousands more wind turbines, millions of "smart" electricity meters for homes and new cars emitting 40 per cent less pollution than they do now all are on the way in the next decade under ambitious plans to slash CO<sub>2</sub> emissions from every sector of the economy.

They form part of the UK Low Carbon Transition Plan, a national government strategy for cutting greenhouse gas emissions in the fight against climate change, which was launched by the Energy and Climate Change Secretary, Ed Miliband, July 17<sup>th</sup>.

Although the detail may sound familiar – many of these projects are already on the drawing board – it is the bringing them together into an all-inclusive society-wide plan which is new, as the Government faces up to its legally-binding target of cutting UK carbon emissions to 34 per cent below 1990 levels by 2020.

Under last year's Climate Change Act, ministers have bound themselves to hit the target with a system of rolling five-year "carbon budgets", and the strategy shows in detail for the first time how they intend to do this.

Its central component is a seven-fold increase – in just a decade – in the amount of Britain's energy for power generation, transport and home heating supplied from renewable sources such as wind, wave and solar power (from just over 2 per cent to 15 per cent).

This leap will mean that by 2020 about 30 per cent of electricity alone will come from renewables (up from 5.5 per cent today) and this huge expansion will derive principally from much more wind power. Although no precise figure was given, this will involve, Mr Miliband said, "thousands" of new wind turbines, both onshore and offshore (one current estimate is about 7,000).

By the 2020 date another 10 per cent of electricity will come from non-renewable low-carbon energy sources, principally the new nuclear power stations whose construction the Government is backing, and the infant technology of carbon capture and storage (CCS), which takes the CO<sub>2</sub> emissions from power stations and buries them underground. Demonstration power plants fitted with CCS should be coming onstream by 2020.

The Government accepts that low-carbon energy will be more expensive for consumers and gave two sets of estimated increases on power bills. Just paying for the new system might add £77 to electricity and £172 to gas bills each year but when all climate change measures are taken into account – such as home insulation which will save consumers money – the total addition is likely to be between £75 and £92 by 2020, the Government said. On the other hand, the White Paper foresees a substantial increase in employment from the changes, with as many as 400,000 new green jobs being created.

*The Low Carbon Transition Plan: Major cuts in five sectors of society*

- Energy Generation (responsible for 35 per cent of UK emissions)

The plan envisages 40 per cent of UK electricity coming from low-carbon sources by 2020 – 30 per cent from re-

newable energy sources and 10 per cent from nuclear and clean coal. Later this year there will be a national Policy Statement on Nuclear Power which will assess potential sites for new atomic power stations. The Government has already said that any new coal-fired power stations will have to be fitted with Carbon Capture and Storage technology. Later this year plans will be published for a "smart" version of the National Grid which will be more flexible.

- Workplaces: Industry and Business (20 per cent of emissions)

High-carbon industries will be included in the EU Emissions Trading Scheme which will save around 500 million tonnes of carbon dioxide a year by 2020. There will be financial incentives to save energy and invest in low-carbon technologies. The Government will seek to boost green industries with £405m for new technologies, up to £120m of investment in offshore wind, and £60m for marine energy and to help develop the South-west as the UK's first Low Carbon Economic Area.

- Homes and Communities (13 per cent of emissions)

Emissions will be cut from homes by 29 per cent on 2020 levels by much greater energy efficiency achieved through the wider use of insulation. Smart meters, which enable people to understand exactly how much energy they are using in real time, and maximise their energy saving opportunities, will be rolled out to every home – 26 million – by 2020. The obligation on energy suppliers to help households save energy will be extended. From 2016 all new homes will have to be zero-carbon and rental properties may have to have Energy Performance Certificates.

- Farming, Land Use and Waste (11 per cent of emissions)

Farmers will be encouraged to cut emissions by 6 per cent by 2020 through more efficient use of fertiliser and better management of livestock and manure. Although the UK now recycles or composts a third of its waste, more must be done. There will be support for anaerobic digestion (a technology which turns waste and manure into renewable energy) and there will be a push to reduce the amount of waste sent to landfills, and also for better capture of landfill emissions.

- Transport (20 per cent of emissions)

By 2020 transport emissions will be cut by 14 per cent on 2008 levels, and the first step will be to improve the fuel efficiency of conventional vehicles : CO<sub>2</sub> emissions from new cars will have to fall by 40 per on current levels across the EU by 2015, to 95 grams per kilometre. British government vehicles will comply with this by 2011. £30m will be invested to deliver several hundred low-carbon buses and there will be more support for new technology for low-carbon cars. £140m is being invested to promote cycling and £5m is being spent on new cycle storage at rail stations.

<http://www.independent.co.uk/environment/climate-change/milibands-manifesto-to-make-britain-a-lowcarbon-economy-1748282.html>

### 3. GREEN BUDGET REFORM ON EU-LEVEL

#### *EU-De-Briefing ECOFIN 21st October 2009*

[Saija Kononen/ Sebastian Schmidt, *Green Budget Germany, October 21<sup>st</sup> 2009*] On Wednesday 21<sup>st</sup> October the German Ministry of Finance was briefing about the Ecofin

Council meeting held on 20<sup>th</sup> October. There were some interesting points on the agenda. State Secretary Joachim Würmeling from the Ministry of Economics talked about revolutionary results and also department chief of Ministry of Finance, Wilfried Steinheuer started his demonstration with similar words. In many places, though, they could have saved their words of praise.

The ministers agreed that an exit-strategy, i.e. phasing out the economic stimulus and recovery measures, would be put into action at latest in 2011 in all Member States. Both fiscal and monetary policies and direct financial aids will be taken into account.

Four principles were agreed:

- coordinated proceeding
- starting the exit-strategy in 2001 at latest
- ambitious goal in cutting the deficit: over 0,5% GDB/Year
- national debt brakes should be established

A “risk board” for surveillance of the finance market will be set up. There will be an early warning system but no control authority in every institute. The control of the single institutes will lay on a new surveillance authority, founded for this purpose. The agreement over the details is awaited by the end of 2009.

In financing of climate change the Member States were divided into two different groups. One of the groups wanted to see the EU at cutting edge in fighting climate change. The others, among others Germany, wanted to take more moderate steps. In a memorandum of the Commission, there are calculations about the situation in developing countries. According to the memo the developing countries will need approximately 100 bn € every year, starting in 2020, for green house gas-reduction, adaptation and mitigation. There are different proposals how to finance it.

A new model of burden sharing will be up on discussion: sharing would base on national

reduction goals and the GDB. Germany does not agree.

In the matter of CO<sub>2</sub>-Taxation, Germany underlines that the directive can be approved only if it fits to the national taxation law. Steinheuer seemed calm about this issue, does not really believe that there will be an agreement over a new energy tax directive – it has been on the table for so many times in the past 5 years and still nothing has happened. Although in Gothenburg, at the Environment Council meeting, nobody actually opposed László Kovács, they did not cheer either. They anticipate him resigning soon.

### *Ministers cautious on EU-wide CO<sub>2</sub> tax proposal*

[EurActiv.com, October, 5, 2009] The European Commission's plans to introduce an EU-wide carbon tax to leverage money for financing a post-Kyoto climate treaty received a positive but cautious welcome from finance ministers last week.

#### *Background*

Since the early 1990s, there have been several attempts to introduce a unitary carbon tax across all EU member states.

But an EU carbon tax has never materialised, as countries like the UK were unwilling to render national competencies on taxation to Brussels. Moreover, the member states affected worst by the current financial crisis, including Spain and Ireland, argued that they would be hit harder by the tax than more industrialised countries.

Consequently, the EU built its climate policy around an emissions trading scheme instead (EU ETS; see EurActiv LinksDossier), which requires large industrial plants to buy and sell permits to release carbon dioxide into the atmosphere.

However, the shortcomings of the EU ETS have led to doubts about its emissions reduction potential. The initial over-allocation of pollution credits sent carbon prices plummeting and forced a rethink of the CO<sub>2</sub> cap, lead-

ing to 10% fewer CO<sub>2</sub> allowances than requested for the 2008-2012 period (EurActiv 29/10/07).

Moreover, the EU ETS does not include two key polluting sectors, agriculture and transport, which could be easily covered by a carbon tax.

In an attempt to find more effective ways of regulating carbon emissions and filling the state coffers, countries previously averse to the idea - and most notably France - are now engaged in debating national carbon taxation schemes.

The Commission hopes that an EU-wide tax would also help finance the international climate treaty to be agreed in December (see EurActiv LinksDossier on 'The Road to Copenhagen').

Meeting in Sweden on 1-2 October, the Commission floated the idea of imposing a carbon tax on sectors outside the EU's emissions trading scheme (EU ETS; see EurActiv LinksDossier) for the first time at ministerial level.

"There were not many reactions but those reactions were all positive," said Taxation Commissioner László Kovács, speaking to journalists after the meeting. He indicated that the Commission had been encouraged to propose the legislation next year at the earliest.

"The introduction of a new tax in the European Union has never been easy and particularly it's not easy in the time of a financial and economic crisis," Kovács said. "But it is evident that climate change is an even more disastrous global challenge than the current financial and economic crisis."

The EU ETS only covers around 45% of the EU's greenhouse gas emissions, leaving out major emitting sectors, notably agriculture and transport. The Commission has been drafting a proposal to review the current Energy Taxation Directive in order to address these and small industrial installations excluded from carbon trading (EurActiv 29/09/09).

As taxation is the sole competency of the member states, any EU proposal will require unanimity in the 27-state Council of the European Union. The taxation commissioner stressed that the EU executive is under no illusions that it will be possible to get a deal before the UN climate conference in Copenhagen, where an agreement on a new international climate treaty is due to be reached.

Nevertheless, the EU hopes to use the possible adoption of the new market instrument to leverage greater commitments from other countries in the negotiations, which have stalled on funding in particular.

"The revenue could be used both to compensate lower-income households and also to build trust between developed and developing countries, simply putting money on the Copenhagen table," Kovács said.

#### *Pressure on the US*

The ministers also stepped up pressure on the US to bring more to the negotiating table.

Anders Borg, finance minister of Sweden, which currently holds the EU presidency, stated that while the new US administration is making the right kind of noise, it has yet to put its full weight behind securing an ambitious agreement in December.

"We have some countries that are very, very sceptical, and if we're going to make progress, it can't only be Europe that takes leadership. We must also see US leadership, and we will do our utmost to convince the US on this issue," he said.

Developing countries have repeatedly pointed out that the historical responsibility for emissions lies in the industrialised world. They want to see the EU and US devote around 1% of their GDP to helping them cope with climate change.

The EU is so far the only region to have produced tentative figures for how much funding would have to flow from industrialised nations to developing countries to finance efforts to cut emissions and adapt to inevitable consequences of global warming. Last month,

the Commission presented its blueprint for climate aid, suggesting that the EU earmark €-15 billion per year per year by 2020 to poor countries (see EurActiv 11/09/09).

EU leaders hope to finalise the bloc's position at their meeting in Brussels on 30 October. Preparation for the summit will take place during meetings of finance and environment ministers the previous week.

#### *'Convergence' on burden-sharing?*

The EU's position on financing is steadily coming together, the Swedish finance minister stated after last week's meeting. Previously, EU debates have stalled on disputes over how the burden should be shared between member states, with Eastern European countries in particular concerned that their contribution will become too high.

But the Swedish finance minister spoke of "a very strong convergence" on burden-sharing that emerged at the discussions in Sweden. He argued that "very few" were now arguing against the Commission's assessment of how this could be done.

At the same time, however, Polish Finance Minister Jan Rostowski was reported as saying that his country would not agree to a mechanism that could lead to an unjust proposal for the parties in the international agreement.

"From our point of view it's totally unacceptable that the poor countries of Europe should help the rich countries of Europe to help the poor countries in the rest of the world," Rostowski said.

<http://www.euractiv.com/en/climate-change/ministers-cautious-eu-wide-co2-tax-proposal/article-186073>

#### ***Fiat Made Cleanest Cars Sold in Europe***

[*Bloomberg, By Beth Mellor, September 15, 2009*] Fiat SpA produced cars with the lowest average carbon-dioxide emissions sold in Europe in 2008, while Daimler AG made the most-polluting autos, according to the European Federation for Transport & Environment.

Turin, Italy-based Fiat made cars with average emissions of 138 grams of carbon dioxide per kilometer, while PSA Peugeot Citroen's cars averaged 139 grams of CO<sub>2</sub>, followed by Renault SA, whose autos emitted an average 143 grams, the Brussels-based environmental group said today in its fourth annual report since 2006.

Overall, carmakers reduced emissions by 3.3 percent to 159 grams of CO<sub>2</sub> per kilometer in 2008, short of a voluntary industry commitment to cut average emissions to 140 grams last year, researchers led by federation director Jos Dings said. European Union lawmakers in December approved legislation requiring manufacturers to reduce average emissions to 130 grams by 2015, and are aiming for a further 95 grams average target by 2020.

Reaching the 130-gram requirement is "a piece of cake," Dings said in a telephone interview. "Take a company like Volkswagen – all they have to do is bring their entire fleet up to the level of their best models now." Volkswagen AG ranked 12th in the average amount of CO<sub>2</sub> emissions.

Fiat rose as much as 11.5 cents, or 1.3 percent, to 8.94 euros in Milan. Peugeot climbed as much as 84.5 cents, or 4.1 percent, to 21.68 euros in Paris trading after the carmaker, Europe's No. 2, scaled back its loss forecast for the year.

#### *Daimler and Nissan*

Stuttgart, Germany-based Daimler AG, the world's second-largest maker of luxury cars, and Nissan Motor Co., Japan's third-largest automaker, made the least environmentally friendly cars, according to the study. Daimler-built cars including Mercedes-Benz produced an average of 175 grams of CO<sub>2</sub> per kilometer, while Nissan's cars averaged 161 grams.

Daimler fell as much as 51.5 cents, or 1.5 percent, to 32.89 euros in Frankfurt trading. Nissan declined 132 yen, or 2 percent, to 578 yen in Tokyo trading.

Munich, Germany-based Bayerische Motoren Werke AG, the largest luxury-car manufac-

turer, cut average CO<sub>2</sub> emissions by more than 10 percent, to 154 grams, the biggest decline of any carmaker, the researchers said. The stock slipped as much as 67.5 cents, or 1.9 percent, to 34.35 euros in Frankfurt.

The overall 3.3 percent improvement this year is more than in any other year under the industry's voluntary commitment to reduce emissions, Dings said.

#### *'Industry Can Do More'*

"This shows that the industry can do more than it was doing the whole time the pressure was not on," he said. "It shows that voluntary commitments do not work and regulation is much more effective."

Among European Union member states, the most fuel-efficient cars were sold on average in Portugal, France and Italy. The most environmentally unfriendly cars were sold in Sweden, Estonia and Latvia, the report said. Germany, the region's biggest car market, was ranked 20th.

The report included the world's 14 largest car manufacturers by number of cars sold. The study was based on vehicle-registration data collected in 2008 by the European Commission in 25 of the 27 EU countries. Bulgaria and Slovakia failed to provide data in time to be included.

To contact the reporter on this story: Beth Mellor in London at [bmellor@bloomberg.net](mailto:bmellor@bloomberg.net)

<http://www.bloomberg.com/apps/news?pid=20601085&sid=aQMEPhaAcW4A>

### ***Environmentally harmful subsidies in fishery***

[*Saija Kononen, Green Budget Germany, October 21<sup>st</sup> 2009*] The EU Commission is planning a "whole-scale and fundamental reform" of the Common Fisheries Policy (CFP) as one part of the new Financial Framework after 2013. A "Green Paper" was published in April 2009 to promote discussion about the subject. The aim of the reform is to encourage a change in the current, rather sad, reality of European fishery industry. The main prob-

lems according to the Commission are overfishing, fleet overcapacity, heavy subsidies, low economic resilience and decline in the volume of fish caught by European fishermen. The last changes done in the CFP in year 2002 could not bring about a noteworthy change.

The well-known problem of overfishing still is a topical issue in Europe like all around the world. Up until 2004 the fishery policy of the EU went totally to the wrong direction: a large share of the money was spent on building powerful new fishing vessels and given to other practices compound-ing overfishing. The last CFP was aimed to bring this development to halt but like the Commission itself writes “the objectives agreed in 2002 to achieve sustainable fisheries have not been met over-all”. As a result most of the fish stocks have now been fished down. One problem is that also the Member States that do not adhere to the agreement from 2002 keep cashing subsidies. Besides, on national level the Member States are free to allocate their share however they want. Between the years 1994–2006 Spain got 48 % of all subsidies dispensed. In Spain, most of the funding went to building new boats (and not to scrap them like recommended in the CFP). A huge trawler named by Greenpeace as the most egregious offender against vulnerable stocks of Mediterranean blue fin tuna enjoyed EU subsidies of more than 4 million euros.

There certainly is a need for new guidelines and a new binding CFP. At the same time the surveillance of the allocation in the national states should be more effective and the complying with the CFP should be a precondition for getting subsidies. There is no need for new rules and principles if they are not to be followed. The subsidies should be aimed to revitalize the industry and not to encourage emptying the seas. The structural change should be accepted – the more sustainable policy is likely to lead to reduction of employees in the sector. The subsidies should not be aimed to sustaining the jobs, on the contrary, they

should support the transition by creating new jobs in new areas.

Although subsidies to fisheries are much less substantial than those to agriculture, they are significant in terms of their potential impact on the environment, and also given the size of the industry in several countries. Like Commission Says in the Green Paper: “In several Member States, it has been estimated that the cost of fishing to the public budgets exceeds the total value of the catches. In simple terms, this means that European citizens almost pay for their fish twice: once at the shop and once again through their taxes.” The fact that fisheries subsidies can have the effect of increasing fishing effort and thus have negative impacts on the level of fish stocks has been universally accepted in the fisheries subsidies literature. Nonetheless, European fisheries are eroding their own ecological and economic basis and the EU keeps unwisely maintaining it.

If you want to get more information or participate in the consultation, please click here:

[http://ec.europa.eu/fisheries/reform/consultation/index\\_en.htm](http://ec.europa.eu/fisheries/reform/consultation/index_en.htm)

### ***Environment to Round off GDP as Measure of Europe's Success***

[Circle of Blue, September 12, 2009] At a time when Europe struggles to emerge from economic recession, the European Union vows to create indicators for its well-being that go beyond calculating the Gross Domestic Product (GDP). The European Commission said Tuesday that it will propose in 2010 a pilot environmental index that complements GDP as a measure of progress by gauging water use and pollution, greenhouse gas emissions, loss of natural landscapes, air pollution and waste generation.

The EU also plans to implement more timely social indicators, including more accurate reporting on inequality.

“GDP was not intended to be a measure of well-being,” a Commission press release said

Tuesday. “It doesn’t pick up on issues that are vitally important to the quality of our lives such as a clean environment, social cohesion or even how happy people are.”

The proposals are part of the Union’s efforts to make the shift towards a low-carbon, resource-efficient economy.

“To meet the challenges of the 21st century we need more integrated and transparent policies,” European Environment Commissioner Stavros Dimas said in the press release. “To change the world we need to change the way that we understand the world, and to do this we need to go beyond GDP.”

The proposed actions, however, will only complement, and not replace, GDP as a yardstick of economic and social development.

Introduced after the Great Depression in the 1930s, GDP measures the total final market value of all goods and services produced within a country during a given period. Although it effectively indicates a country’s economic growth, it has long been criticized by civil society groups for overlooking non-marketed economic activities as indicators of well-being and wealth.

Despite the Commission’s plans to move beyond it, however, some NGOs are still skeptical, *EUobserver* reported.

“Fifteen years have passed since initial discussions, and we are no closer to implementing measures for environmental sustainability, societal progress and well-being,” said Tony Long, director of the European Policy Office at the World Wildlife Fund (WWF).

He added that the Commission’s plans also exclude other indices, such as WWF’s “Living Planet Index” – which reflects the health of the planet’s ecosystems – and the “Ecological Footprint” – which shows the extent of human demand on these ecosystems.

<http://www.circleofblue.org/waternews/2009/world/environment-to-round-off-gdp-as-measure-of-europes-success/>

### *Environmental Quality as a Component of GDP*

[*Lindsay Condit, October 2009*] The European Union has recently announced plans to add an environmental indicator to the world’s leading economic reference point: gross domestic product (GDP): The indicator will take into account environmental harm and pollution levels in EU member states, as well as consider elements such as biodiversity, water use, climate change, and waste generation.

GDP is a measure of short-term spending and is not necessarily compatible with today’s policymaking, which aims to keep environmental and social objectives in mind. In short, GDP is not, on its own, intended to measure well-being.

Stavros DIMas, the head of the environment directorate of the European Commission, says, “To change the world we need to change the way that we understand the world. And to do this we need to go beyond GDP:”

In order to accomplish this, the EU is implementing an environmental indicator to supplement GDP measurements, a move that will act as a stepping stone for the development of a “Green GDP” measurement.

Critics of GDP have been citing undervaluation of non-commercial goods for years, which includes natural resources. Environmental damage does not yet have an official monetary value, meaning that events like Hurricane Katrina in 2005 showed up as economic growth, when in reality, the money injected into the economy was \$80 billion to cover damages.

During his 1968 presidential campaign, Senator Robert F. Kennedy called for similar reforms, saying, “Gross national product counts air pollution and cigarette advertising, and ambulances to clear our highways of carnage. It counts special locks for our doors and the jails for the people who break them. It counts the destruction of the redwood and the loss of our natural wonder in chaotic spraw. Yet the gross national product does not allow for the

health or our children, the quality of their education or the joy of their play.”

The process of adding an environmental indicator to GDP has been ongoing for the last ten years in Europe. The reason this change is so slow to come is that it has proven very difficult to develop monetary values for ecological services, and carbon and ecological footprints, which already exist, neglect other values; ecological footprints ignore water impacts and carbon footprints focus too narrowly on greenhouse gas emissions.

In addition, environmental data needs to be more quickly produced, and is something the EU has promised to improve. Environmental data have typically lagged two to three years behind, while the turnaround time for GDP is usually only a few weeks.

The EU would ideally like to publish an environmental indicator annually along with GDP for each of its member states. Initially the indicator will focus on environmental harm, but should extend to environmental quality in the future, something that is even harder to measure.

The ultimate goal, say Dimas, is an index that will be “as simple, as reliable, and as widely accepted as GDP. It would be an index where populations take pride in positive results. It would change the way we understand progress and would be a catalyst for changing the way we live.”

### ***Europe Produces Realistic Expectations for Climate Funds***

[Lindsay Condit, October 2009] The current plan for helping developing nations combat climate change is for EU member nations, among others, to pay €2 billion to €15 billion from their national budgets annually by 2020. However, there has been some dispute over these figures.

The European Union’s commissioner for the environment, Stavros Dimas, said that these funds “cannot be a blank check.”

In addition, the president of the European Commission, Jose Manuel Barroso, urged, “I am determined that Europe will continue to provide a lead, but developed and economically advanced developing countries must also make a contribution,” apparently a strong hint at China.

The figures were determined using a formula based on GDP and emissions levels, and Mr. Dimas claims the wide range resulted from different methods of balancing the criteria.

Using the same formula, the United States should be accountable for €3 billion to €12 billion annually by 2020.

This announcement comes at a crucial time, and the addition of concrete figures should prove enormously helpful in avoiding obstacles before the climate treaty talks in Copenhagen in December. Not only is the timing crucial, but the announcement itself is crucial because developing countries have refused to agree to emissions cuts as part of a worldwide treaty unless more developed countries help fund their adaptation and technological developments.

However, environmental proponents have claimed that the amount of money discussed was inadequate both for the persuasion of developing countries to take part, and for what is actually needed to accomplish the goals in the developing world.

“The EU is trying to get away with leaving a tip, rather than paying its share of the bill to protect the planet’s climate,” said climate and energy policy director for Greenpeace Europe, Joris den Blanken.

Mr. den Blanken has criticized MR. Dimas for reducing the sum from a range of €13 billion to €24 billion per year to help win approval for the plan, as many member states are reluctant to pledge large sums of money before other wealthy nations declare their intentions.

There are some in the political sphere, however, who have praised Mr. Dimas’ offer as

politically realistic and as something that could be negotiated.

Bernice Lee, an expert in energy and environment at Chatham House, a London-based research group, declared, "It's an opening gambit. I assume the commission is, at this point, testing the political appetite among key member states in Europe to see if they can offer more and still win their approval."

Mr. Dimas has said that the total cost of aiding developing countries would approach €100 billion annually by 2020. He said wealthy nations would have to take the money from their public finances to make up even one half of that sum, and that the private sector would have to make up for the rest through initiatives like emissions-trading programs that encourage companies to invest in green technologies in the developing world. He also stated that he hopes the developing world will aid in encouraging investment by taking steps on their own to improve energy efficiency.

### *Carbon Leakage and the EU*

[Lindsay Condit, October 2009] Throughout 2009 the European Commission has been tasked with amending the EU ETS Directive (2003/87/EC, passed in 2008) with respect to carbon leakage. Most of this work involves analysis of statistics to determine which sectors or sub-sectors will be at risk for carbon leakage.

A preliminary definition of carbon leakage would be prudent to such a description of the situation. Carbon leakage can be defined as an increase in CO<sub>2</sub> emissions in one state or region as a result of an emissions reduction by a second state or region with a strict climate policy. Strict climate policies often raise local costs, thereby implementing a trade advantage for another country. Demand remains at the same level, but the production costs will shift, and end up being taken over by a country that can produce goods more cheaply. Another possibility is for a premium to be added to certain fuels or commodities. In that case,

demand falls, causing the price to fall. The demand then shifts to a country without said premiums, which then takes over demand using the same supplies. If by implementing more environmentally friendly policies the end result is not a reduction of CO<sub>2</sub> emissions, but rather simply a shift in location of CO<sub>2</sub> emissions, the policy is not effective. The European Commission is therefore tasked with researching which sectors could be affected by this carbon leakage, and then postulating what to do to compensate for it, or how to avoid it.

The European Commission is still in the analysis stage, and has determined three categories that sectors can be divided into. First are those sectors where evidence is present to suggest that there is risk of carbon leakage. Second, those that require further analysis (border-line cases, those that lack statistics, those whose quality of statistics is questionable, and those with sectoral specificities). Lastly, those sectors with no evidence of risk of carbon leakage. A further group that the European Commission is paying special attention to includes sectors with low profit margins. Low profit margins indicate a high competition pressure, making it much more difficult for those companies to invest in innovative new technologies and techniques (for example, casting of light metals).

Many conferences have been held by the Commission that have gathered together members of the EU and representatives from various industries to discuss research conducted on the matter. So far timetables have been set up, as well as lists of data compiled to show which sectors will be affected. Those sectors at significant risk should be determined by June of 2010, and the Commission will report on the risk of carbon leakage by June of 2011. In the meantime more research will be conducted and the Commission will continue to schedule bilateral meetings with stakeholders to determine the best outcomes from both a policy and business perspective.

### ***Effectiveness of EU Cohesion Spending on the Environment***

[EEA, September 3, 2009] Structural Funds and the Cohesion Fund are the European Union's main financial instruments to reduce the gap between poor and rich regions. In its new report, the European Environment Agency evaluates the effectiveness of these funds in achieving environmental goals by focusing on investments in wastewater treatment, biodiversity, and energy efficiency and renewable energy in three pilot countries: Austria, Italy and Spain.

The new EEA technical report 'Territorial cohesion – analysis of environmental aspects of the EU Cohesion Policy in selected countries' supports the European Network of Environmental Authorities' evaluation of the environmental impact of cohesion spending. In addition to specific analyses and recommendations linked to the three case studies, the report includes overall recommendations for more effective management of cohesion spending.

Most effective cohesion spending occurs when clear environmental policies and strategies are developed outside the Structural Fund programming and then fully integrated into the programmes. Some regions have encountered difficulties in spending all the resources allocated to them, in particular for innovative environmental projects such as those linking biodiversity protection and rural development. Fewer problems were seen for 'traditional' projects, such as wastewater treatment plants. To address such issues, EU-wide initiatives could be established to promote 'best spending' practices.

The report recommends that the funds be used to promote new and more sustainable mobility patterns, as well as minimising the negative impacts of transport and infrastructure projects supported. Moreover, guidelines on green public procurement should be developed to ensure that cohesion spending helps achieve the objectives of the EU Sustainable Development Strategy.

Current and future challenges related to adaptation and vulnerability to climate change will also need additional attention. Here, the report highlights a shift in spending priorities. Policy goals for climate change, for example, were given a much higher priority in the spending cycle for 2007–2013 than previously.

But the report also notes that the link between spending and results has not always been easy to evaluate: for some regions, the right data were not available. The EU needs to do more to ensure and demonstrate that funds are spent effectively.

More information:

<http://www.eea.europa.eu/publications/territorial-cohesion-2009/>

[http://ec.europa.eu/environment/integration/structural\\_funds\\_en.htm](http://ec.europa.eu/environment/integration/structural_funds_en.htm)

<http://www.eea.europa.eu/highlights/effectiveness-of-eu-cohesion-spending-on-the-environment>

## **4. GREEN BUDGET REFORM WORLDWIDE**

### ***Achieving the G-20 Call to Phase out Subsidies to Fossil Fuels***

[Summarised by Lindsay Condit, from *The Global Subsidies Initiative Policy Brief, October 2009*] In its most recent policy brief, the Global Subsidies Initiative (GSI) outlined the recent steps the G-20 has undertaken to dismantle subsidies to fossil fuels. As many countries move forward with economic and environmental policies aimed at reducing carbon dioxide and other harmful emissions, they realise that it is counter-productive to subsidise the use of fossil fuels simultaneously.

Many kinds of subsidies are identified in this brief. Countries like China, India, Indonesia, Russia and Saudi Arabia particularly favour “consumer subsidies”, where fossil fuels are supplied to consumers at prices below a reference or “world” level, especially petroleum and kerosene products. In addition, many OECD countries provide indirect support for consumption, through subsidies for airline

service to remote areas, for example. A further type of subsidy provided by most G-20 countries benefits the producers of fossil fuels, through direct grants, preferential tax treatment, below-market payments for access to publicly-owned resources, subsidised or government guaranteed loans, and government assumption of liability for accidents.

The IEA has provided estimates that put the amount of subsidies to fossil fuels and electricity at \$310 billion in 2007. These estimates are incomplete, however, because they ignore consumer subsidies in other countries and the producer subsidies believed to be provided in almost all countries. The GSI estimates the current figure to be at least \$500 billion, or approximately 1 per cent of world GDP.

A recent OECD study found that removing just the consumer subsidies to energy in the 20 largest developing countries over the next decade would reduce global greenhouse gas emissions by 2 per cent in 2020, rising to 10 per cent in 2050.<sup>1</sup> In addition, these subsidies are an enormous drain on government finances, are often diverted to purposes for which they were not intended, and they often promote smuggling and corruption.<sup>2</sup>

Subsidy reform is often hindered by misconceptions and the influence of special interest groups. They often argue that lowering the cost of fuel and electricity helps the poor, thereby meeting social policy objectives. In reality the subsidies tend to benefit the wealthy, as they comprise the sector of society that generally can afford motor vehicles and have higher rates of ownership of electrical goods. Subsidies on domestic production are often defended as means to achieve energy self-sufficiency, which is erroneously equated with national security. Governments would do better to compensate the poor using

more targeted instruments, and production subsidies serve to exhaust the domestic resource earlier than otherwise would have occurred.

The GSI calls for several policy reforms. First, the G-20 countries need to establish standardised and regular reporting on fossil-fuel subsidies and an international framework for monitoring them. Greater awareness of consequences would lead to avoidance of some new, poorly-designed policies being adopted, and pressure for the reform of existing ones. Second, policy-makers need to understand the complex political motivations and interest groups behind each subsidy in order to plan effective communication and consultation strategies for successful reform. Third, that planning an effective subsidy reform strategy requires: clear objectives and timeframes; rigorous and thorough research to identify subsidies and evaluate their effects; a coherent package of policies (including flanking measures to cushion any negative effects of the reform); a communications strategy combined with extensive consultation with stakeholders; the creation of an ongoing monitoring system; and a peer review process for reviewing progress.

The G-20 communique calls for individual Energy and Finance Ministers to develop implementation strategies and timeframes, and to report back to Leaders at the next Summit in Hunstville, Ontario, Canada in June 2010. The G-20 has also called on international financial institutions to provide support to countries during this process.

Although this subsidy reform will be difficult, especially politically, it is not impossible; it can be accomplished through painstaking, structured work and political leadership.

### ***Resource Governance – Managing Growing Demands for Material on a Finite Planet***

*[Declaration of the World Resources Forum - Sept. 16, 2009]*

<sup>1</sup> Burnlaux et al., *The Economics of Climate Change Mitigation: How to Build the Necessary Global Action in a Cost-Effective Manner*, OECD, 2009.

<sup>2</sup> Jennifer Ellis, *Approaches to Assessing the Impacts of Fossil Fuel Subsidy Reform*, will be released in November 2009.

*Preamble*

The recent financial crisis has dramatically shown how flimsy the banking and investment institutions are that were supposed to be so robust, and how vulnerable they are to false expectations of continued rapid growth and consequent over-exploitation of the monetary and fiscal arrangements that serve as surrogates for the real economy.

What is true of the economic system is also true of the ecosystem. Beyond a critical threshold, the services that the biosphere has evolved and provided over millions of years can breakdown with little warning and with much loss to human, social and economic values.

The underlying deficiencies that can cause failure or collapse of ecosystems are much the same as for economic systems: short term profit maximization, toxic by-products, wrong pricing signals, and the failure by governments to implement precautionary policies because of insufficient controls and inadequate early warning systems. The surprise element is enhanced by the absence of proper accounting methods and the scarcity of requisite skills in systems analysis and management.

The extent to which the economy and material wealth can grow are constrained by the limits set by the Earth's resource endowments. Technology and innovation can in some cases extend these limits, but rarely by very much.

We, the supporters of this Declaration, strongly believe that economic stability in our finite world depends on how quickly we can introduce low impact production systems that can satisfy human needs and bring quality of life to all people.

Traditional environmental technologies are no longer enough. Decoupling the meeting of human needs from the use of nature's resources will require radically new infrastructures, goods, services, processes, systems and business models. While some changes in lifestyle, consumption patterns and production systems will certainly be necessary, it is tech-

nically possible to achieve this without abandoning the things that we value most.

It is now widely accepted that wellbeing is more than material consumption. Human fulfillment includes factors such as education, health, safety, freedom from violence, environmental quality, social embeddedness, leisure, and equity. Despite huge technological progress, many aspects of human wellbeing have not increased in industrialized countries since the mid 1970s; some are even declining.

We call for a new global strategy for governing the use of natural resources that generates fair access to them for present needs while maintaining their availability for future generations. By combining efficiency and resource productivity targets with sufficiency norms evolved through participative mechanisms, it should be possible to avoid the traditional type of growth rebound effect sometimes experienced.

*Alarming Signs*

Rising global over-use of natural resources (metal ores, fossil energy carriers, biomass, non-metallic minerals, water, and land surface) is beginning to affect the life sustaining ecosystemic services of the earth, which are a prerequisite for human life, and are not replaceable by technical means. Climate change, widespread water shortages, desertification, massive erosion and increasing natural disasters show that several of the environment's safety thresholds have already been surpassed. And yet, only some 20 percent of humankind enjoy the full benefits of the mainstream economic model, while all people - in particular the poor - have begun to suffer the consequences of its flaws.

There is observational evidence from all continents - and most oceans - that natural systems are being affected by regional climate changes (IPCC 2007). Climate change is only one example demonstrating how inordinate resource flow (in this case of fossil fuels transformed to CO<sub>2</sub>) can affect human quality of life on earth. Other alarming signs are the

loss of the global forest area, which shrank at an annual rate of 0.2 percent between 1990 and 2005 (UNEP 2007) and species extinction rates increasing 50 to 500 times the natural rate (World Watch Institute 2008).

To some degree, different world regions face specific problems resulting from global over-use of natural resources (UNEP 2007): In Africa, land degradation is the main issue of concern; in Asia and the Pacific urban air quality, fresh water stresses, degraded ecosystems, agricultural land use, and increased waste are priority issues; in Europe the still increasing emission of green house gases, biodiversity loss, land-use change, and fresh water stresses are issues of concern. In Latin America and the Caribbean, growing cities create threats to biodiversity and ecosystems, degraded coasts and polluted seas are threatening signs, as is regional vulnerability to climate change.

North America, consuming over 24 % of global primary energy with 5.1% of world population, faces urban sprawl and fast growing freshwater stresses. In West Asia, land degradation, freshwater stresses, degradation of coastal and marine eco-systems, urban management, peace and security are priority issues.

Global resource extraction grew from 40 billion tons in 1980 to about 55 billion tons in 2002 and is expected to grow to 80 billion tons by 2020 (OECD, 2008). If one also takes into account the materials displaced from their natural settings, but not used to create commercial value, this number more than doubles. We should seek to stabilize resource use at 6 to 10 tons per capita per year by 2050 with reductions at the top of global society and catch-up from the bottom. The range of 6 to 10 tons is based on present best estimates and based on the current total resource use divided by the world population. Considerable research has to be invested in order to arrive at more specific policy options.

If we continue with business as usual, development in industrializing parts of the world

and population growth will lead to a projected two-and-a-half fold increase in annual global resource extraction with corresponding serious reactions of the ecosphere.

#### *Respecting Physical Limits*

Satisfying the needs of a growing world population within physical limits is a challenge to economic and environmental policymakers. Globalizing the traditional model of economic growth is rapidly increasing the extraction of limited natural resources, thus augmenting ecological disruption. Current economic and environmental policies have not stopped these trends. As a consequence, we are losing ever more the freedom to shape the future of humanity.

Moreover, key technologies that we will need for the transition to a more sustainable economy depend on chemical elements that are currently being dissipated regardless of their geochemical scarcity. These include antimony, copper, gallium, germanium, indium, lithium, niobium, platinum, ruthenium, selenium, and tellurium, which are particularly important for emerging energy supply technologies as well as for information and communication technologies. Technology cannot replace the life-sustaining services of nature.

However, we can improve the ways in which we make use of these services, creating quality of life for more people with less strain on nature. Eco-Innovation is capable of achieving this goal without loss of end-use satisfaction, but only if economic incentives support such a development (gws Discussion Paper 2009/5 of Prof B. Meyer et al, ISSN 1867-7290; Europe Innova 2008).

Accepting this challenge means that the global average of per capita yearly material resource use should by no means be allowed to rise any further. This means that a process of convergence needs to be initiated in which the wealthy industrialized countries substantially reduce their resource consumption in order to leave space for others to improve their standard of living. Developing countries

should not be encouraged to invest in expensive infrastructure without a future, but be supported in leapfrogging the wasteful modes of production and consumption in which the wealthy countries have presently locked in.

#### *The Political Challenge*

Traditionally environmental policies have focused on specific problems. In certain respects this approach has been quite successful. For instance, this strategy has cleaned up water pollution in rich countries, taken dangerous goods off the market, recycled certain products, and stopped ozone depletion.

But these policies are toothless against the problem of exploding global resource consumption. What we urgently need is economic policies that make the global economic system take into account the inherent limitations and the value of the cost-free life sustaining services of nature. The politically defined economic framework conditions have to be adjusted to protect the global ecosystems, and to preserve resources for future generations – while lowering the cost of labor.

These conditions must include incentives to make planned transitions now, rather than being forced upon us by catastrophes. Major increases in resource productivity would occur if all relevant markets operated perfectly instead of being blind to the environmental costs of growth, and if there were no barriers to entrepreneurial innovation.

However the markets are not operating perfectly, market prices are wrong due to discounted externalities, relevant information is not available to the actors, and innovation barriers exist. No incentives or policies currently exist for a sufficiently resource efficient economy. Adjusting the fiscal framework is therefore the most fundamental and urgent pre-requisite for approaching a sustainable future. Subsidies that increase the consumption of natural resources must be eliminated, and economic instruments should be deployed such as a shift away from overheads on labor and toward taxing raw materials - with the

side effect of creating new jobs and redistributing income to developing countries where many of the resources come from - and market creation policies including tradable permits. Instead of applying value added taxation to final goods it may be more effective to tax natural resources at the point at which they are removed from nature or where they enter the industrial metabolism.

However, because of market failures, economic instruments may not work in all cases. Therefore other instruments and measures should be considered too - such as information and coordination instruments, and command and control mechanisms as, for instance, adapting standards. The choice of policy options should depend on the relative desirability of dematerializing goods and services while maximizing employment opportunities, improving international equity and per capita welfare.

#### *Call for Action*

For the reasons stated above we urge political leaders to adopt a strategy of resource governance consisting of the following elements:

1. <sup>0000</sup> Seek international agreements on worldwide per-capita targets for natural resource extraction and consumption to be effective by 2015 at the latest, the main objective being to bring about an absolute decoupling between economic development and resource use, the implication being less resource inputs for more value.
2. <sup>0000</sup> Introduce effective policy measures to greatly enhance resource productivity as well as curbing demand over time, in the form of standards, higher taxes on resource use with the possibility of reduced taxes elsewhere, cap and trade mechanisms, etc.
3. <sup>0000</sup> Introduce with urgency resource use targets in areas of particular concern – like fresh water, marine resources and tropical forests – to put a halt to the rapid destruction of ecosystem services and biodiversity.
4. <sup>0000</sup> Focus research and development on the goal of increasing resource productivity. The resulting innovation will create space for economic and social development. As a side-effect, national economies and cities

will become less dependent on resource imports, in particular fossil energy carriers.

5. <sup>0000</sup> Seek societal consensus by 2012 on ecological and economic indicators (on micro-, meso-, and macro-levels) in tune with the laws of nature and beyond GDP. These indicators must be applied by industry and governments when reporting on the progress attained toward sustainability, and they must become the subject of learning processes at all levels of education.
6. <sup>0000</sup> Reshape the framework conditions for the economy to account for the scarcity of natural resources and recognize the need for their extraction and sale to promote the environmental sustainable development of the countries in which they take place.
7. <sup>0000</sup> Seek dialog with the business community to help redesign business models where revenues would be increasingly derived from quality of services rather than by selling material products.
8. <sup>0000</sup> Initiate process to rethink lifestyles and help develop consumption patterns based on sufficiency and careful use of natural resources. Traditional knowledge, wisdom and spirituality should inspire help frame education and policies.
9. <sup>0000</sup> Strengthen education to increase awareness for resource limits, especially among economists, and foster the ability of decision makers to analyze long-term and systemic trends and to implement sustainability-driven innovation.

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### *World forum calls for natural resource tax*

[*EurActiv.com, September 15, 2009*] To combat soaring consumption of natural resources, the World Resources Forum (WRF) is calling for a global strategy to frame a new economic model that would directly tax raw materials instead of products and labour.

The World Resources Forum 2009 (WRF) on September 16<sup>th</sup> will adopt a declaration calling for a new global strategy governing the use of natural resources.

The forum will call for goods and services to be "dematerialised" and employment opportunities to be "maximised", as well as demanding international equity and per capita welfare improvements.

The draft declaration argues that while traditional environmental policies have in some cases been quite successful regarding water pollution in rich countries or recycling and removing dangerous goods from the market, for example, these policies are "toothless" when it comes to fighting the depletion of natural resources.

#### New economic framework

The draft declaration stresses that "politically defined economic framework conditions have to be adjusted to protect global ecosystems" and preserve resources for future generations. Such conditions should include incentives to make planned transitions immediately, instead of waiting for catastrophes to force the changes, it adds.

There are no incentives or policies in place to create a "sufficiently resource-efficient economy," notes the draft, while current markets are "blind to the environmental costs of growth" and hamper major increases in resource productivity. This is largely because market prices do not include environmental externalities and information is not made available to the relevant innovative stakeholders, it adds.

Tax resource use, not labour or end products

Adjusting the fiscal framework is "the most fundamental and urgent pre-requisite for approaching a sustainable future," the draft states.

It calls for subsidies that increase resource consumption to be eliminated, and highlights the need to shift away from taxing labour to taxing raw materials. This would have the "side effect of creating new jobs and redistributing income to developing countries where many of the resources come from," WRF notes.

Going even further, the declaration suggests that instead of applying VAT to end products, "it may be more effective to tax natural resources at the point at which they are removed from nature or where they enter the industrial metabolism".

'Dematerialising' goods and services and introducing low impact production systems will also require "radically new infrastructures, goods, services, processes, systems and business models," as traditional environmental technologies are no longer enough to decouple the meeting of human needs from the use of natural resources, WRF underlines.

Europe urged to measure resource use

Michael Warhurst of Friends of the Earth Europe (FoEE), an environmental NGO, deplored that Europe "has no targets" for reducing resource use, while "new policies are not assessed for their potential to increase our resource efficiency".

In a joint report with the Sustainable Europe Research Institute, FoEE is calling on the EU to measure its resource use and adopt new policies, such as higher recycling targets, to increase resource efficiency.

They suggest that Europe should measure its use of materials in particular, but also its land and water use and greenhouse gas emissions, taking account of the impact of Europe's consumption on the rest of the world in terms of imported resources.

<http://www.euractiv.com/en/sustainability/world-forum-calls-natural-resource-tax/article-185401#>

### ***Cold front on climate change***

*[The Star, September 14, 2009, Global Trends by Martin Khor]* News from Europe of a threat to impose import taxes, and the offer of only small funds for developing countries, may impact negatively on a climate deal.

Hopes for a global deal on climate change by December look less bright after two disappointing developments in Europe.

First was a threat that Europe could introduce trade measures to block products from developing countries as part of its policy to address climate change.

French President Nicolas Sarkozy on Sept 10 called for a European carbon tax on imports.

It follows his previous proposal for Europe to place import tariffs on goods from countries that do not commit to international targets on Greenhouse Gas emission reductions.

Sarkozy said he "will not accept a system that imports products from countries that don't respect the rules in France. I will fight for a carbon tax at the borders of Europe."

He referred to the recent passing of a Bill in the United States House of Representatives containing measures to impose a charge on imports based on emissions, saying: "I don't see why the US can do it and Europe cannot."

This confirms the fear of developing countries that since the US is embarking on trade-protectionist measures in the name of climate change, there will be strong pressures in Europe to do likewise.

The developing countries are the targets and they will be the losers if these threats are carried out. Compared to the developed countries, they have less funds and technology to make their production systems less polluting.

The developed countries which are mainly responsible for the climate crisis should be assisting developing countries, instead of making them victims doubly – of the effects of climate change, and of climate-linked trade protectionism.

At the climate talks in Bonn in August, India and other countries protested against the looming trade measures and proposed that the Copenhagen climate conference in December proclaim that such measures be prohibited.

If the threat of protectionist measures continues, it will sour the negotiating atmosphere and make a deal in Copenhagen more difficult.

The second adverse development was the release also on September 10 of Europe's offer of financial resources to developing countries.

The European Commission said that developing countries would need 100 billion Euros a year (by 2020) to act on climate change.

But it added that the governments of developed countries should fund only 20% to 40% of that, while the carbon market will come up with 40% and the developing countries will self-finance 20% to 40%.

It proposed that international public financing for climate activities would be 22 billion to 50 billion Euros in 2020, of which Europe would fund 2 billion to 15 billion Euros.

And in the near term, 2010-2012, there would be only 5 billion to 7 billion Euros a year, with Europe contributing .5 billion to 2.1 billion Euros.

These figures are extremely low, especially since they cover the whole range of activities – mitigation (reduction of emissions), adaptation (coping with the effects of climate change), capacity building (the development of institutions) and technology development.

The proposed amounts pale in comparison with the estimates made by many organisations of what is needed by developing countries to fight climate change.

Two weeks ago, the United Nations' Economics and Social Department published a detailed report estimating that \$500 billion to \$600 billion is required annually by developing countries for mitigation and adaptation.

The economist Nicholas Stern (who authored the Economics of Climate Change for the British government) estimated that the annual

cost of global climate action is about 2% of world GNP (around \$1,000 billion today or \$2,000 billion in 2050).

He advocated \$130 billion per annum of public funding from developed countries for use by developing countries (\$15 billion for forest conservation, \$40 billion for R&D and \$75 billion for adaptation), and also estimated another \$50 to \$100 billion flow to developing countries for mitigation, through carbon trading.

On adaptation alone, the UN Climate Convention secretariat estimated the global annual costs at \$40 to \$170 billion.

But the actual adaptation costs are three to three times higher in the sectors covered by the report, according to a recent study by the International Institute for Environment and Development and the Grantham Institute of Imperial College London.

And if sectors left out of the secretariat report are included, the cost would be higher still.

For example, the cost of protecting ecosystems could cost \$350 billion.

Another study by scientists in China estimated the cost of reducing China's emissions as \$438 billion per year within 20 years.

The developing countries' grouping, the G77 and China, have called for developed countries to provide 0.5% to 1% of their GNP (which is around \$200 to \$400 billion a year) to fund developing countries' climate actions.

Besides being so inadequate in quantum, the European proposal also comes with many conditions and assumptions.

These include that some developing countries should also contribute to the international funding, that they must agree to cap their emissions and take part in carbon trading within a certain year, that much of the funding will go through existing channels such as bilateral aid and the World Bank.

It practically ignores the G77 and China proposal for a big fund to be set up under the UN Climate Convention. Many of these conditions are counter to the Convention's provi-

sions and principles, and are likely to be opposed by many developing countries.

Finance is a crucial part of any global climate deal, and it was hoped that the long-awaited offer from Europe could help break the impasse in the climate talks.

Unfortunately, it may have the opposite effect.

<http://thestar.com.my/columnists/story.asp?col=globaltrends&file=/2009/9/14/columnists/globaltrends/4708778&sec=Global%20Trends>

### ***Taxes that help protect the environment***

[*The Star, September 7, 2009, Part 1 in a 2-part series*] Remember Anya Hindmarch's "I'm NOT a plastic bag" that created queues at Suria KLCC and which sold for astronomical prices on eBay? Hong Kong recently implemented its anti-plastic bag programme by requiring 50 cents tax per plastic bag. This tax led to a dramatic 85% drop in the issue of plastic bags by shops and supermarkets in the first two days!

Green taxes are in fashion globally. No, I am not referring to Islamic taxes like *zakat* and *fitrah* but rather, eco-taxes. Just as green-striped ties are in vogue, tax designers worldwide are creating green taxes.

In a groundbreaking initiative in April 2009, Britain presented the world's first carbon budgets alongside its traditional fiscal budget when Alistair Darling, Chancellor of Exchequer, stipulated legally-binding carbon emission targets.

Barack Obama has also set out to green the United States. Through Uncle Sam, he offered tax credits to consumers who acquire hybrid cars from 2009 and homeowners who install energy-efficient items like air conditioners, windows, roofs and water heaters.

In Taiwan, a cabinet-level reform committee proposed an energy tax and an environment tax to be implemented in 2011. And so the list continues as governments must be careful to be seen to be environment friendly.

Regulations alone fall short of the measures needed to protect the environment; green taxes are essential. The beauty of eco-taxes is that they incorporate costs of environmental damage into the prices of goods and services which cause this effect.

Green taxes, if sufficiently significant, can modify behavior or at least contribute to the cost of reinstatement, for example, the damage caused by the recent floods in Taiwan.

The principle is – let the polluters pay. Green taxes spur technological innovation and the embracing thereof by the marketplace. Further, eco-tax can also be used as a means of reducing income tax by shifting part of traditional taxation to greener pastures.

Some examples of green taxes include Hong Kong's plastic bag tax which was also implemented in Ireland years ago. (Interestingly, in certain parts of India, the use of plastic bags attracts a jail term of up to seven years or a fine of up to 100,000 rupees i.e. RM7,000.)

Japan has removed duties on biofuel and decreased taxes on cars with low emissions such that these cars are now a status symbol and more popular while China offers tax incentives for companies which reduce water consumption.

China, however, taxes disposals of waste, including water, whether by companies or households and also levies tax on energy consumption.

Sweden has increased recycling by taxing waste disposal. Norway taxes certain products which contain fluorine and this has encouraged sales of refrigerators which use environmental-unfriendly products.

Britain doubled its air passenger duty in 2007 and increased revenue but did not significantly dampen inelastic air travel.

Another method of decreasing carbon emissions is through carbon trading. The EU Emission Trading Scheme is the largest tradable permits programme in the world.

Initially, governments set caps on carbon dioxide (CO<sub>2</sub>) emissions and issue permits to that extent with annual reductions until the target level is reached.

Companies acquire these permits, perhaps through an auction process, to enable them to legally emit a quantity of CO<sub>2</sub>. Companies are permitted to buy and sell permits.

With all taxes, avenues are provided for tax planning. Eco-taxes provide for tax avoidance and indeed encourage this in the same way that tax incentives work in the realm of income tax.

The green tax man does not seek to merely increase tax revenue but more importantly, to enhance the noble aim of preserving the environment.

Every time there is a shift to environment-friendly assets, goods or services resulting in less tax revenue, the green tax man rejoices!

Regrettably, where taxes are high, unintended evasion is promoted, for example, tobacco smuggling where duties are high, and illegal landfills and illegal sales of fuel in relation to high eco-taxes. The green tax man would then see red and take action.

McDonald's recently migrated its European headquarters from Britain to Switzerland, a more income tax friendly country. In the absence of a coordinated global tax initiative, companies in countries with high eco-taxes may choose to migrate to jurisdictions with lower or no such taxes or which grant environment tax holidays. There is thus a need for a worldwide protocol, amidst challenges, because poor countries may suffer more.

On an individual level, green taxes are said to be regressive because the poor are more affected than the rich. These are real concerns which need to be addressed, for example, through redistribution of green tax revenue, or else political leaders may suffer the same fate as Margaret Thatcher.

Part II of this article will focus on Malaysian green taxes, especially in view of Budget

2010. What will Malaysia do to reduce its carbon footprint?

*Ronnie Lim is country tax leader of Deloitte Malaysia.*

<http://biz.thestar.com.my/news/story.asp?file=/2009/9/7/business/4656008&sec=business>

### ***Maldives President Plans Green Tax for Tourists***

*[The Telegraph, September 7, 2009]* Mohammed Nasheed, the President of the Maldives, said he plans to introduce a \$3 (£1.80) a day green tax for all tourists at the Indian Ocean nation's popular island resorts.

The tax would help to pay for the country's ambitious goals in fighting climate change.

Since taking office last year, President Nasheed has emerged as an important voice on the impact of climate change amid fears that within a century, rising ocean levels could swamp the Indian Ocean archipelago. Its islands average 7ft above sea level, making the Maldives the lowest-lying nation on Earth.

Mr Nasheed has announced plans for a fund to buy a new homeland if the 1,192 low-lying coral islands are submerged. He has also promised to make the Maldives, with a population of 350,000, the world's first carbon-neutral nation within a decade.

He said on Monday that rich and poor countries need to look beyond national interests if the world is to reach a deal on fighting climate change.

Mr Nasheed said the issue of climate change is too important to allow disagreements to stop a deal. Climate change soon will be seen as a national security concern, not just an environmental one, as countries compete for natural resources, he said.

"But the core point is, there's hope. It's not doomed," he said. "We can reverse the situation."

Mr Nasheed will not be attending the United Nations climate summit in Copenhagen in December. In light of his nation's financial

crisis, he has decided to stay home to save money.

<http://www.telegraph.co.uk/earth/copenhagen-climate-change-confe/6152517/Maldives-president-plans-green-tax-for-tourists.html>

### ***Taiwan: Government Proposes Introduction of 'Green Tax'***

[China Post, August 4, 2009] A Cabinet-level tax reform committee proposed that the government impose a “green tax” to help reduce the emission of greenhouse gases, a plan that spurred concerns and skepticism among business leaders.

Under the committee's proposal, the tax would begin in 2011. Once the plan passes the legislature, it would enable the government to levy an energy tax and an environmental tax on high energy users and environmental polluters in efforts to cut carbon emissions.

By the tenth year of the tax's imposition, the government will have received a tax revenue of NT\$810.1 billion, according to the proposal.

A committee meeting was convened to discuss the direction, parameters and details of the proposed green tax. The meeting was attended by officials from the Ministry of Finance, including Finance Minister Lee Sushder, as well as academics from research think tanks and representatives from the industrial sector.

According to the tax reform committee's plan, the energy tax will be tied to the production and consumption of fossil and nuclear energy, while the environment tax will target the production of greenhouse gas emissions and pollution of the air, surface and underground water, land, and ocean regions.

As the tax is expected to have a strong impact on the industry, Lee said the government is also considering certain “non-tax tools” to discourage carbon emissions.

He didn't specify what these non-tax tools were and only said the Ministry of Finance has requested that the Ministry of Economic Affairs, Council of Economic Planning and

Development and the Environmental Protection Administration work out a plan within a month.

He also said the government may consider scrapping other taxes, such as commodity tax, printing tax and entertainment tax, to reduce the green tax's impact.

Daigee Shaw, president of the Chung-Hua Institute for Economic Research, said that the green tax should be based on a “users and polluters pay” principle and designed to encourage energy conservation while granting incentives to those who meet specified targets.

Shaw said the green taxation system his think tank is proposing is not meant to increase taxes on the public, but rather is a two-pronged strategy for improving environmental protection and simplifying the taxation system.

Under a “financially independent” model, added revenues that the government collects via the green taxation system would be used to finance the overhaul of outdated taxation systems, the operations of mass rapid transport systems and research on energy conservation and emission reduction, he added.

He estimated that the green tax will help cut carbon dioxide emissions by 19.67 million tons within one year and by 78 million tons within 10 years.

<http://www.chinapost.com.tw/business/asia/b-taiwan/2009/08/04/219083/Govt-proposes.htm>

## **5. RENEWABLES: WINDPOWER**

### ***Wind Power-20 Year Plan for Offshore Wind Grid***

[EV Wind, September 15, 2009] A 20 year plan for the development of European offshore wind power was presented by the European Wind Energy Association (EWEA) at the world's largest-ever meeting on harnessing Europe's most plentiful energy source.

EWEA's 20 year offshore network development plan, launched to 4,000 business and government participants at the European Offshore Wind 2009 Conference today in Stockholm, provides a comprehensive approach to constructing a transnational offshore power grid.

Building on the 11 grids already in place and the 21 being studied by grid operators in the North and Baltic Seas, EWEA proposes eight additional offshore grids by 2020 and six more by 2030.

2010 is a key year for planning Europe's future electricity grid, which needs massive upgrading, as the European Commission is due to publish a Blueprint for a North Sea Grid while European electricity network operators will publish a 10 year plan for developing a truly European grid -essential for a single European energy market, harnessing renewable energies and improving security of supply.

"EWEA's new offshore network plan will provide a truly pan-European electricity super highway", said Christian Kjaer, Chief Executive of EWEA. "This will bring affordable electricity to consumers, reduce import dependence, cut CO<sub>2</sub> emissions and allow Europe to access its largest domestic energy source – offshore wind.

"EWEA urges the European Commission to incorporate our plan when drafting its Blueprint for a North Sea Grid, and the European Network of Transmission System Operators to do the same when drafting its 10 Year Network Development Plan", Kjaer went on.

European offshore wind projects would, if implemented, supply 10% of Europe's electricity whilst avoiding over 200 million tonnes of CO<sub>2</sub> emissions every year.

It is fitting that a new plan to power Europe in the future with a massive increase in offshore wind energy was released today here in this historic 13th century city of islands on Sweden's southeast coast where Lake Malaren meets the relentless Baltic Sea.

Swedish mariners have known for more than eight centuries that the combined power of wind and water is an unstoppable force to be reckoned with, feared, admired and exploited. Today in Stockholm, at the Offshore Wind 2009 conference, politicians from Sweden and throughout the European Union learned from a new report called Oceans of Opportunity that the 100 GW of offshore projects already being planned could produce 10% of Europe's electricity.

The same report, published by the European Wind Energy Association (EWEA), told politicians and others at the conference that those offshore wind projects could avoid 200 million tonnes of CO<sub>2</sub> emissions annually.

Not only that, the 66-page publication begins with the statement that Europe's future depends on offshore wind. "Europe is faced with the global challenges of climate change, depleting indigenous energy resources, increasing fuel costs and the threat of supply disruption," the report says. "Offshore wind power provides the answer to Europe's energy and climate dilemma – exploiting an abundant energy resource which does not emit greenhouse gases, reduces dependence on increasingly costly fuel imports, creates thousands of new jobs and provides large quantities of indigenous affordable electricity."

On a similar note, Maud Olofsson, Swedish Deputy Prime Minister and President of the EU Energy Ministers Council, said wind power off Europe's coastline is a resource ready for exploitation and developers are eager to get started. "Provided governments are ready to play their part," she said, "we can revolutionise Europe's energy future."

Stan Messemakers is one of the more than 3,000 people at the conference, Europe's biggest-ever gathering to plan the harnessing of its huge offshore wind energy potential. Like Olofsson and the Oceans of Opportunity report, Messemakers has faith in the amazing power of wind on water.

“It’s going to be a booming business and a good one,” said Messemaekers, who is Geo-Sea’s offshore wind assistance manager. “I sincerely believe that oil-based energy will come to an end and offshore wind will help fill that void, certainly in Europe.” He said GeoSea, which started in 2005 and is headquartered in Antwerp, has about 100 employees working across the entire offshore wind sector. The company, he added, is optimistic that offshore wind has an illustrious future. “It’s a necessity.”

With positive thoughts like that ricocheting throughout the conference, it seems a certainty that offshore wind power will help greatly improve the future for Europe’s economy, energy system and environment. All we have to do is continue to believe in wind, just like those hearty and courageous Swedish sailors from yesteryear who depended on fully-charged sails bringing them safely back home across the formidable Baltic Sea.

*Europe’s offshore wind potential is enormous and able to power Europe seven times over.*

- Huge developer interest
 

Over 100 GW of offshore wind projects are already in various stages of planning. If realised, these projects would produce 10% of the EU’s electricity whilst avoiding 200 million tonnes of CO<sub>2</sub> emissions each year.
- Repeating the onshore success
 

EWEA has a target of 40 GW of offshore wind in the EU by 2020, implying an average annual market growth of 28% over the coming 12 years. The EU market for onshore wind grew by an average 32% per year in the 12-year period from 1992-2004 – what the wind energy industry has achieved on land can be repeated at sea.
- Building the offshore grid
 

EWEA’s proposed offshore grid builds on the 11 offshore grids currently operating and 21 offshore grids currently be-

ing considered by the grid operators in the Baltic and North Seas to give Europe a truly pan-European electricity super highway.

- Realising the potential
 

Strong political support and action from Europe’s policy-makers will allow a new, multi-billion euro industry to be built.

*Results that speak for themselves*

This new industry will deliver thousands of green collar jobs and a new renewable energy economy and establish Europe as world leader in offshore wind power technology.

A single European electricity market with large amounts of wind power will bring affordable electricity to consumers, reduce import dependence, cut CO<sub>2</sub> emissions and allow Europe to access its largest domestic energy source.

Offshore wind power is vital for Europe’s future. Offshore wind power provides the answer to Europe’s energy and climate dilemma – exploiting an abundant energy resource which does not emit greenhouse gases, reduces dependence on increasingly costly fuel imports, creates thousands of jobs and provides large quantities of indigenous affordable electricity.

This is recognised by the European Commission in its 2008 Communication ‘Offshore Wind Energy: Action needed to deliver on the Energy Policy Objectives for 2020 and beyond’. Europe is faced with the global challenges of climate change, depleting indigenous energy resources, increasing fuel costs and the threat of supply disruptions. Over the next 12 years, according to the European Commission, 360 GW of new electricity capacity – 50% of current EU capacity – needs to be built to replace ageing European power plants and meet the expected increase in demand. Europe must use the opportunity created by the large turnover in capacity to construct a new, modern power system capable of

meeting the energy and climate challenges of the 21st century while enhancing Europe's competitiveness and energy independence.

#### *EWEA target*

In March, at the European Wind Energy Conference 2009 (EWEC 2009), the European Wind Energy Association (EWEA) increased its 2020 target to 230 GW wind power capacity, including 40 GW offshore wind. Reaching 40 GW of offshore wind power capacity in the EU by 2020 is a challenging but manageable task. An entire new offshore wind power industry and a new supply chain must be developed on a scale that will match that of the North Sea oil and gas endeavour. However, the wind energy sector has a proven track record onshore with which to boost its confidence, and will be significantly longer lived than the oil and gas sector.

To reach 40 GW of offshore wind capacity in the EU by 2020 would require an average growth in annual installations of 28% - from 366 MW in 2008 to 6,900 MW in 2020. In the 12 year period from 1992-2004, the market for onshore wind capacity in the EU grew by an average 32% annually: from 215 MW to 5,749 MW. There is nothing to suggest that this historic onshore wind development cannot be repeated at sea.

#### *Unlimited potential*

By 2020, most of the EU's renewable electricity will be produced by onshore wind farms. Europe must, however, use the coming decade to prepare for the large-scale exploitation of its largest indigenous energy resource, offshore wind power. That the wind resource over Europe's seas is enormous was confirmed in June by the European Environment Agency's (EEA) 'Europe's onshore and offshore wind energy potential'. The study states that offshore wind power's economically competitive potential in 2020 is 2,600 TWh, equal to between 60% and 70% of projected electricity demand, rising to 3,400 TWh in 2030, equal to 80% of the projected EU electricity demand. The EEA estimates the tech-

nical potential of offshore wind in 2020 at 25,000 TWh, between six and seven times greater than projected electricity demand, rising to 30,000 TWh in 2030, seven times greater than projected electricity demand. The EEA has clearly recognised that offshore wind power will be key to Europe's energy future.

Over 100 GW already proposed It is little wonder therefore that over 100 GW of offshore wind energy projects have already been proposed or are already being developed by Europe's pioneering offshore wind developers. This shows the enormous interest among Europe's industrial entrepreneurs, developers and investors. It also shows that EWEA's targets of 40 GW by 2020 and 150 GW by 2030 are eminently realistic and achievable. The 100 or more GW is spread across 15 EU Member States, as well as three other European countries. The rewards for Europe exploiting its huge offshore wind potential are enormous - this 100 GW will produce 373 TWh of electricity each year, meeting between 8.7% and 11% of the EU's electricity demand, whilst avoiding 202 million tonnes of CO<sub>2</sub> in a single year.

In order to ensure that the 100 GW of projects can move forward, and reach 150 GW of operating offshore wind power by 2030, coordinated action is required from the European Commission, EU governments, regulators, the transmission system operators (TSOs) and the wind industry. Working in partnership on developing the offshore industry's supply chain, putting in place maritime spatial planning, building an offshore electricity grid based on EWEA's 20 Year Offshore Network Development Master Plan, and ensuring continued technological development for the offshore industry, are key issues. By 2020, the initial stages of an offshore pan-European grid should be constructed and operating with an agreed plan developed for its expansion to accommodate the 2030 and 2050 ambitions.

#### *Grids*

The future transnational offshore grid will have many functions, each benefitting Europe in different ways. It will provide grid access to offshore wind farms, smooth the variability of their output on the markets and improve the ability to trade electricity within Europe, thereby contributing dramatically to Europe's energy security. We must stop thinking of electrical grids as national infrastructure and start developing them – onshore and offshore – to become European corridors for electricity trade. And we must start developing them now. The faster they are developed, the faster we will have a domestic substitute if future fuel import supplies are disrupted or the cost of fuel becomes prohibitively expensive, as the world experienced during 2008.

The future European offshore grid will contribute to building a well-functioning single European electricity market that will benefit all consumers, with the North Sea, the Baltic Sea and the Mediterranean Sea leading the way. Preliminary assessments of the economic value of the offshore grid indicate that it will bring significant economic benefits to all society.

Europe's offshore grid should be built to integrate the expected 40 GW of offshore wind power by 2020, and the expected 150 GW of offshore wind power by 2030. It is for this reason that EWEA has proposed its 20 Year Offshore Network Development Master Plan. This European vision must now be taken forward and implemented by the European Commission and the European Network of Transmission System Operators (ENTSO-E), together with a new business model for investing in offshore power grids and interconnectors which should be rapidly introduced based on a regulated rate of return for new investments.

*2010 will be a key year for grid development planning*

The European Commission will publish a 'Blueprint for a North Sea Grid' making offshore wind power the key energy source of the future. ENTSO-E will publish its first 10

Year Network Development Plan, which should, if suitably visionary, integrate the first half of EWEA's 20 Year Offshore Network Development Master Plan.

The European Commission will also publish its EU Energy Security and Infrastructure Instrument which must play a key role in putting in place the necessary financing for a pan-European onshore and offshore grid, and enable the European Commission, if necessary, to take the lead in planning such a grid.

#### *Supply chain*

The offshore wind sector is an emerging industrial giant. But it will only grow as fast as the tightest supply chain bottleneck. It is therefore vitally important that these bottlenecks are identified and addressed so as not to constrain the industrial development. Turbine installation vessels, substructure installation vessels, cable laying vessels, turbines, substructures, towers, wind turbine components, ports and harbours must be financed and available in sufficient quantities for the developers to take forward their 100 GW of offshore wind projects in a timely manner.

Through dramatically increased R&D and economies of scale, the cost of offshore wind energy will follow the same path as onshore wind energy in the past. The technical challenges are greater offshore but no greater than when the North Sea oil and gas industry took existing onshore extraction technology and adapted it to the more hostile environment at sea. An entire new offshore wind power industry and a new supply chain must be developed on a scale that will match that of the North Sea oil and gas endeavour, but one that will have a much longer life.

#### *Technology*

Offshore wind energy has been identified by the European Union as a key power generation technology for the renewable energy future, and where Europe should lead the world technologically. The support of the EU is necessary to maintain Europe's technological

lead in offshore wind energy by improving turbine design, developing the next generation of offshore wind turbines, substructures, infrastructure, and investing in people to ensure they can fill the thousands of new jobs being created every year by the offshore wind sector.

To accelerate development of the technology and in order to attract investors to this grand European project, a European offshore wind energy payment mechanism could be introduced. It should be a voluntary action by the relevant Member States (coordinated by the European Commission) according to Article 11 of the 2009 Renewable Energy Directive. It is important that such a mechanism does not interfere with the national frameworks that are being developed in accordance with that same directive.

#### *Spatial planning*

The decision by countries to perform maritime spatial planning (MSP) and dedicate areas for offshore wind developments and electricity interconnectors sends clear positive signals to the industry. Provided the right policies and incentives are in place, MSP gives the industry long-term visibility of its market, and enables synergies with other maritime sectors. Consolidated at European level, such approaches would enable investments to be planned out. This would enable the whole value chain to seek investment in key elements of the supply chain (e.g. turbine components, cables, vessels, people) while potentially lowering risks and capital costs.

#### *2008 and 2009: steady as she goes*

2008 saw 366 MW of offshore wind capacity installed in the EU (compared to 8,111 MW onshore) in seven separate offshore wind farms, taking the total installed capacity to 1,471 MW in eight Member States. The UK installed more than any other country during 2008 and became the nation with the largest installed offshore capacity, overtaking Denmark. Activity in 2008 was dominated by ongoing work at Lynn and Inner Dowsing wind

farms in the UK and by Princess Amalia in the Netherlands.

In addition to these large projects, Phase 1 of Thornton Bank in Belgium was developed together with two nearshore projects, one in Finland and one in Germany. In addition, an 80 kW turbine (not connected to the grid) was piloted on a floating platform in a water depth of 108 m in Italy. Subsequently decommissioned, this turbine was the first to take the offshore wind industry into the Mediterranean Sea, which, together with developments in the Baltic Sea, North Sea and Irish Sea, highlights the pan-European nature of today's offshore wind industry.

2009 has seen strong market development with a much larger number of projects beginning construction, under construction, expected to be completed, or completed during the course of the year. EWEA anticipates an annual market in 2009 of approximately 420 MW, including the first large-scale floating prototype off the coast of Norway.

By the end of 2009 EWEA expects a total installed offshore capacity of just under 2,000 MW in Europe. 2010: annual market passes 1 GW Assuming the financial crisis does not blow the offshore wind industry off course, 2010 will be a defining year for the offshore wind power market in Europe. Over 1,000 MW (1 GW) is expected to be installed. Depending on the amount of wind power installed onshore, it looks as if Europe's 2010 offshore market could make up approximately 10% of Europe's total annual wind market, making the offshore industry a significant mainstream energy player in its own right.

[www.offshorewind2009.info/index.php](http://www.offshorewind2009.info/index.php),

[http://www.evwind.es/noticias.php?id\\_not=1270](http://www.evwind.es/noticias.php?id_not=1270)

### ***Europe Wind Power Body Sees Big Offshore Potential***

*[Reuters, September 14, 2009 by John Acher and Anthony Barker]* Offshore wind turbines could meet 13-17 percent of Europe's electricity need in 2030 if wind power projects get

sufficient support, an industry lobby organization said on Monday.

Offshore wind installations currently account for about 0.2 percent of Europe's electricity demand, the European Wind Energy Association (EWEA) said in a report. "Offshore wind power is vital for Europe's future," the EWEA said in the report published in conjunction with a wind industry conference in Stockholm.

It said offshore wind projects with 100 gigawatts of capacity have been proposed or are being developed in Europe.

"If realized, these projects (of 100 GW) would produce 10 percent of the EU's electricity whilst avoiding 200 million tons of CO<sub>2</sub> emissions each year," the association said.

The EWEA's targets are for Europe's offshore installed wind power capacity to grow to 40 gigawatts by 2020 from 1.9 GW in 2009, and to 150 GW by 2030.

The 2020 target implies annual average market growth of 28 percent over the coming 12 years, it said.

"The EU market for onshore wind grew by an average 32 percent per year in the 12-year period from 1992-2004 – what the wind energy industry has achieved on land can be repeated at sea," it said.

To reach 150 GW of operating offshore wind power by 2030 will require coordinated action from the European Commission, European Union governments, regulators, grid operators and the wind industry, the association said.

The European Commission estimates total EU electricity demand at between 4,279 TWh and 4,408 TWh in 2030, according to the EWEA.

The association said wind resources would never be a limiting factor.

"There is enough energy over the seas of Europe to meet total European electricity demand several times over," it said.

It would require eight areas of 10,000 square km to meet all of the EU's electricity demand,

or less than 2 percent of Europe's sea area not including the Atlantic, the EWEA said.

<http://www.reuters.com/article/GCA-GreenBusiness/idUSTRE58D30J20090914>

### ***British Wind industry wants feed-in tariff changes – Current proposals discourage smaller scale generation***

*[Cath Everett, BusinessGreen, 15 Oct 2009]*

The British Wind Energy Association (BWEA) is calling for changes to the feed-in tariff system proposed by the UK government as part of a consultation exercise on financial incentives to boost renewable energy generation in the country.

Feed-in tariffs (FITs) are considered an important mechanism to stimulate the growth of renewable energy production and to help the UK to meet its 2020 goals in this area. They work by requiring utilities companies to buy electricity from microgeneration facilities producing up to 5MW at fixed rates, which are set at a higher level than standard wholesale prices.

Provision was made for their introduction in the 2008 Energy Act and the consultation on how the FITs scheme will work, including proposed tariff levels, closes today. The aim is to implement it by April 2010.

But the organisation is unhappy with current proposals. It claims that they only encourage the development of sites subject to the highest of mean wind speeds, and not small-scale generators.

Alex Murley, head of small systems at the BWEA, said: "The FIT needs to grasp a rare opportunity to stimulate grass root interest in self-generation of green energy, while simultaneously delivering economic and industrial value for money."

If installations with mean wind speeds of 5.0 and above were provided with financial incentives instead, however, it would stimulate the creation of a high-volume consumer and business market for the use of small wind turbines generating less than 15kW.

Wind Band 3 tariff levels should also be changed from a proposed 15-50kW to 15-100kW to more accurately reflect the current nature of the small wind market, the BWEA said. It believes that a reasonable tariff for the expanded band would be the currently suggested 20.5p/kWh.

Moreover, the organisation contests that an initial two to three year freeze on small-scale wind tariffs should be introduced before degression – or an annual reduction of those tariffs – is applied.

The aim here would be to give UK manufacturers sufficient time to up capacity in order to cope with the increased demand generated by the creation of a high-volume market.

And such demand is likely to be forthcoming, the BWEA believes. The UK already accounts for between 20-25 per cent of global demand for small wind turbines and is the second largest market in the world behind the US.

UK manufacturers, of which there are currently 18, control an 82 per cent share of the domestic market in revenue terms and employ 2,000 staff in the country.

The UK also became the world's largest exporter of small wind systems in 2008, when overseas revenue doubled. Export to about 100 different countries accounted for about half of UK manufacturers' product sales last year.

<http://www.businessgreen.com/business-green/news/2251330/wind-industry-wants-feed-tariff>

## 6. LINKS AND PUBLICATIONS

### *Climate Change and Public Finance*

[Ecologic, Berlin, October 2009] Climate change will alter the basis of economic activity in Germany. It will therefore also affect public finances. On behalf of the Federal

Ministry of Finance, the Ecologic Institute and Infrast explored the extent to which the economic impacts of climate change might threaten the sustainability of public budgets in Germany. The Final Report is now available on the Ecologic website: <http://ecologic.eu/2599>. The study is written in German but includes an English summary.

#### *Key results:*

In 2100, climate change could result in 27 to 120 billion Euros of additional costs and revenue losses for the public budget in Germany, equal to a GDP loss of 0.6 to 2.5%.

The results for 2050 show a more ambivalent picture: Depending on the prevailing impact, climate change could either result in a fiscal burden of up to 0.25% of GDP, or, with a smaller probability, in a net benefit.

Regarding the sector-specific impacts, changes in international trade and tourism demand were found to incur the most important changes. Due to a drop in demand for German export goods in the world regions most affected by climate change, export industries are expected to suffer from income losses. By contrast, positive effects are likely to dominate in the tourism sector.

For sustainability of public finances, climate change represents a risk that is comparable in magnitude to the burden caused by the ageing population. However, while the costs caused by demographic change will peak around 2050, costs of climate change will only increase substantially in the second half of the century.

### *Biofuels – New Report Brings Greater Clarity to Burning Issue*

[UNEP, Nairobi, October, 16, 2009] International Panel Says Some Crop-Based Fuels Show Positive Climate Benefits: Others Environmentally Questionable – a far more sophisticated approach needs to be taken when developing biofuels as an environmentally-friendly energy option a new report concludes.

Governments should fit biofuels into an overall energy, climate, land-use, water and agricultural strategy if their deployment is to benefit society, the economy and the environment as a whole.

The report, the first by the United Nations Environment Programme's (UNEP) International Panel for Sustainable Resource Management, says some first generation biofuels such as ethanol from sugar cane can have positive impacts in terms of greenhouse gas emissions.

As currently practiced in a country such as Brazil, it can lead to emissions reductions of between 70 percent and well over 100 percent when substituted for petrol.

However, the way in which biofuels are produced matters in determining whether they are leading to more or less greenhouse gas emissions. Conditions under which production of biofuels does lead to higher emissions have been identified in the report.

The production and use of biodiesel from palm oil on deforested peatlands in the tropics is cited. It can lead to significant increases in greenhouse gas emissions--up to 2,000 percent or more when compared with fossil fuels.

This is mainly as a result of carbon releases from the soils and land. However, a positive contribution to greenhouse gas emissions can arise if the palm oil or soya beans are instead grown on abandoned or degraded land.

The report *Towards Sustainable Production and Use of Resources: Assessing Biofuels* is based on a detailed review of published research up to mid-2009 as well as the input of independent experts world-wide.

It has been written to assist governments and industry in making sustainable choices in an area that over the past few years has become deeply divided while triggering sharply polarized views.

Home

<http://www.unep.fr/scp/rpanel/biofuels.htm>

Page:

Press

[http://www.unep.fr/scp/rpanel/pdf/Assessing\\_Biofuels\\_Press\\_Release.pdf](http://www.unep.fr/scp/rpanel/pdf/Assessing_Biofuels_Press_Release.pdf)

Release:

Full

[http://www.unep.fr/scp/rpanel/pdf/Assessing\\_Biofuels\\_Full\\_Report.pdf](http://www.unep.fr/scp/rpanel/pdf/Assessing_Biofuels_Full_Report.pdf)

Report:

### ***Socially Sustainable Economic Degrowth***

*[Club of Rome, Vienna 2009, Editors: Leida Rijnhout, Thomas Schauer]* The global economy has been growing for decades with a high speed, largely ignoring the warnings of "The Limits to Growth", the first report to the Club of Rome by Donella Meadows, Dennis Meadows and Jorgen Randers in 1972. But in a limited system, unlimited growth is impossible. It has to come to an end, the question is just when and how.

Instead of a planned and managed degrowth of material consumption in the developed countries, there is now a deep crisis, a chaotic period of the global economy. Social imbalance might further increase. Could we have done it better and can we do it better in the future? Is there a possibility of socially sustainable economic degrowth?

In April 2009 a conference on the topic took place for the first time in the European Parliament. It was organized by Vlaams Overleg Duurzame Ontwikkeling, the European Support Centre / Brussels-EU Chapter of the Club of Rome, Research and Degrowth Network and SERI in cooperation with Bart Staes MEP and ULB. The proceedings of the event show that we are still at the very beginning of the discussions about a design for degrowth in the developed countries.

Book-Order:

[http://www.clubofrome.at/archive/degrowth\\_brussels.html](http://www.clubofrome.at/archive/degrowth_brussels.html)

Pdf-Version:

[http://www.clubofrome.at/archive/degrowth\\_brussels.pdf](http://www.clubofrome.at/archive/degrowth_brussels.pdf)

### ***Sustainable Growth and Resource Productivity: Economic and Global Policy Issues***

[September 2009] Sustainable management of natural resources is a crucial element for a sustainable development, but also a precondition for economic growth. The book analyses raw materials supply and resource use in a global context. The contributions present state-of-the-art results and perspectives on the availability of resources. They discuss factors such as demand from emerging and other countries as well as critical shortage of some materials together with the resulting consequences for economies. It also gives new views and perspectives on the sustainable growth in emerging economies and examines the possibilities and experiences concerning the decoupling of resource use from economic growth. Moreover, it offers cross-country comparisons with emphasis on emerging countries. A key focus is placed on China regarding its domestic energy, climate and resource policy but also its developing foreign policy in Africa.

Raimund Bleischwitz, Paul J. J. Welfens, Zhong Xiang Zhang (Editors): Sustainable Growth and Resource Productivity. Economic and Global Policy Issues, Greenleaf Publishing, Sheffield, 2009, 360 pp. ISBN 978-1-906093-28-0

#### ***Economists' declaration: The unprofitability of coal***

In a joint declaration, more than sixty economists caution against the financial and climatic risks of new coal-fired power plants in Germany. Among the subscribers are renowned experts from several different research institutes, as well as numerous professors. According to them, the construction plans of twenty-nine new coal-fired power plants does not only jeopardise the achievement of necessary emissions reduction targets for the year 2050, but also risks turning out to be a poor economic investment. The uncertainty of future fuel and carbon prices espe-

cially lead to the unreliability of economic calculations. A further reason against the building of new plants can be seen in their long life-spans of more than forty years. If future power generation is primarily based on renewables, this is incompatible with an expansion of base load power stations such as coal-fired power plants: They lack the flexibility of being switched on and off as a supplement to renewables' fluctuating feeding volume, and times of low operation levels endanger their economic profitability. Thus, today's newly-built power plants run the risk of becoming bad investments if expenses do not cover the operation and amortisation costs.

According to utility companies, the frequently discussed technology of "carbon capture and storage" could lead to a climate-friendly electrification of coal in the future. But the declaration's subscribers doubt the feasibility of CCS in light of environmental risks, uncertainty of storage capacity, and high costs. Furthermore, CCS will not become commercially available until 2020 or 2030 and thus comes too late to benefit today's power plant projects. Although the retrofitting of CCS is generally conceivable, its higher costs imply economic unprofitability. Based on these arguments, the economists call for the abandonment of new coal-fired power plants until CCS's uncertainties and risks can be clarified.

The declaration, the list of subscribing economists, and further background information is available at [www.wiwis-kohle.de](http://www.wiwis-kohle.de).

#### ***PIK-Study backs up concerns about coal's future unprofitability***

A recently published study by the Potsdam Institute for Climate Impact (PIK) and WestLB Bank investigates investments into large fossil-fuel-fired power plants and reveals that they "don't pay off for numerous reasons." This also holds without taking emissions trading into consideration or assuming low CO<sub>2</sub> prices. The four big German electricity and utility companies (EnBW, E.ON,

RWE, Vattenfall) are stuck in an investment dilemma.

New hard coal-fired and gas-fired power plants hardly prove to be profitable alternatives. Single lignite-fired power plants are the most likely to be economically viable, yet they may conflict with climate policy since lignite-fired plants have the highest CO<sub>2</sub> output of all energy sources. The German government's mitigation targets for 2050 correspond, proportional to the German energy sector, to emissions of about five big lignite-fired power plants of 2000 MW each.

In addition to climate policies, price dynamics on the commodity markets bear substantial risks for investors. Considering the official support and the lower risks, renewable energies appear to be a promising option. For that reason the progressive investments of the large electricity and utility companies in renewable energies have been evaluated as an economically appropriate step. "The SuperSmar Grid is a big opportunity for electricity and utility companies to escape from their investment dilemma. It combines two approaches that complement each other: On the one hand, large-scale, wide-area electricity supply from renewable sources and on the other hand, intelligent grids for decentralised renewable energies, demand control, and virtual power plants," says Armin Haas from PIK, and co-author of the study.

The study and further information are available at <http://www.climate-mainstreaming.net/co2elec.htm>.

### ***Incentives to sustain forest ecosystem services: A review and lessons for REDD***

*[Natural Resource Issues No. 16]*

Paying people to protect forests can be an effective way to tackle deforestation and climate change but only if there is good governance of natural resources, claims this study funded by Norway's Government. This report explores existing efforts to pay people in developing nations to protect ecosystems in return for the services they provide. It aimed to

see if such payments could be used to help tackle climate change. A review of 13 schemes in Africa, South-East Asia and Latin America concluded that they can be part of REDD but only if important preconditions are met.

Ivan Bond, Maryanne Grieg-Gran, Sheila Wertz-Kanounnikoff, Peter Hazlewood, Sven WUnder, Arild Angelsen: *Natural Resource Issues No 16*, 2009, 60pp. ISBN 978-1-84369-742-8.

### ***Fairer flying: an air travel levy for adaptation***

*[IIED Briefing, Muyeye Chambwera, with Benito Muller, 2008]*

For the world's poorest countries and communities, adaptation to climate change is urgently needed, but costly: estimates run into tens of billions of dollars a year. Given the shortfall in current international adaptation funding, how can resources for the developing world be raised? An adaptation levy on international air travel could help fill the gap. A small per-trip payment by passengers could contribute US\$8 billion to US\$10 billion a year towards adaptation. Similar schemes in France and elsewhere show that this kind of ethical solidarity and 'polluter pays' approach would be simple to implement in practical and institutional terms.

2008, Download only.  
<http://www.iied.org/pubs/display.php?o=17045IIED>

## **7. EVENTS**

### ***The Copenhagen Climate Exchange 2009, Copenhagen, Denmark, 3<sup>rd</sup> – 6<sup>th</sup> December 2009***

The Copenhagen Climate Exchange 2009 offers you an opportunity to share your visions and experiences on how to fight climate change with an international audience. NGOs,

cities and innovative enterprises from across the World gather in Copenhagen to exchange ideas. Thousands of visitors and international media exposure will be expected. The Copenhagen Climate Exchange 2009 is a four-day event leading up to COP15, the official UN climate summit in Copenhagen, December 2009.

Further details:

<http://www.cphco2009.dk>

### ***From the Financial Crisis to the Green Economy***

***Bern, CH, November 17<sup>th</sup> 2009***

This event is dealing with the economic crisis, EFR and the concept of a Green New Deal, organised by PUSCH and ÖBU, with GBE as patronate, in Bern. Kai Schlegelmilch will give a presentation on stimulus packages: <http://www.umweltschutz.ch/index.php?pid=109&id=56>

### ***What taxation for a low carbon economy? Brussels, 30<sup>th</sup> November 2009***

The European Commission (Directorate General for Taxation and Customs Union) is organising a one-day conference in Brussels on 'What taxation for a low carbon economy?' The conference will take place November, 30, 2009.

The threat to the climate is one of the greatest challenges our world is facing today. Substantial mitigation efforts are needed and it is crucial to use cost-effective instruments for this purpose. The EU opted for the EU emission trading system (ETS) to be its main instrument in this context. However, the question remains what is the role that taxation could or should play with respect to emissions in the non-ETS sector.

The conference will focus on possibilities to address global warming through targeted taxation instruments, in theory and in practice and taking into account broader economic and social considerations.

The conference will bring together policy makers, experts, stakeholders and the general

public from all over Europe, and beyond, to discuss this important and highly relevant subject in a very timely moment of the run up to the international climate change conference in Copenhagen.

[http://ec.europa.eu/taxation\\_customs/taxation/gen\\_info/tax\\_conferences/low\\_carbon/index\\_en.htm](http://ec.europa.eu/taxation_customs/taxation/gen_info/tax_conferences/low_carbon/index_en.htm)

### ***The 11<sup>th</sup> Global Conference on Environmental Taxation***

***Bangkok, THAILAND, 3 - 5 November 2010***

The 11<sup>th</sup> GCET provides an international, interdisciplinary forum to explore issues involved in designing and implementing environmental taxes. The conference is not intended to advance any particular environmental agenda on an advocacy basis but rather to advance knowledge, understanding, and debate.

More Information is available here:

<http://www.acc.msu.ac.th/gcet2010/index.php>

### ***EnvEuro MSc programme in Environmental Science - application deadline 1 January 2010***

Are you interested in environmental issues and looking for a career in environmental science or environmental management? Would you like to study at some of the leading universities in Europe together with students from all over the world? Do you have a Bachelor degree or higher in Natural sciences? Then the EnvEuro MSc programme in Environmental Science is just what you are looking for!

The EnvEuro MSc programme is a two-year EnvEuro Master programme in Environmental Science featuring six different specialisations: Water Resources, Soil Resources and Land Use, Ecosystems and Biodiversity, Environmental Impacts, Environmental Management and a brand new specialisation in Climate Change.

The EnvEuro MSc programme focuses on European and global environmental problems and solutions, and gives you the best of Environmental Science from four leading European universities: University of Copenhagen in Denmark, University of Hohenheim in Germany, Swedish University of Agricultural Sciences in Sweden, and University of Natural Resources and Applied Life Sciences in Vienna, Austria.

The programme will start on Monday 23 August 2010 with a one week introduction course in Copenhagen.

If you are from a non-European country or would like to study at the Swedish University of Agricultural Sciences in Sweden you must submit your application by 1 January 2010 (as per postmark).

For more information about the EnvEuro MSc programme and how to apply visit our homepage at [www.eneuro.eu](http://www.eneuro.eu).

Check out this YouTube video from the Intro Course 2008:

<http://www.youtube.com/watch?v=rgf18B14q2Y>

Join the EnvEuro group on Facebook at: <http://www.facebook.com/group.php?gid=29096017590>

If you have any questions you are very welcome to contact the EnvEuro Secretariat via e-mail: [eneuro@life.ku.dk](mailto:eneuro@life.ku.dk).

You may also contact the EnvEuro Secretariat if you do not want to receive further information and updates about the EnvEuro programme.

## 8. IMPRINT

**Best wishes from the founders and the editors!**

### *Green Budget Germany's Team of Editors*

You can contact the Green Budget News editors at the following addresses:

Forum Ökologisch-Soziale Marktwirtschaft  
Green Budget Germany  
Seestraße 113 – D – 13353 Berlin  
Tel.: +49 30 510 530 -80, Fax: - 79  
[foes@foes.de](mailto:foes@foes.de)  
[www.foes.de](http://www.foes.de)  
[www.eco-tax.info](http://www.eco-tax.info)  
Levego Munkacsoport  
Clean Air Action Group  
H-1465 Budapest, Pf. 1676, Hungary  
Phone: +36-1 4110509/-10  
Fax: +36-1 2660150  
[levego@levego.hu](mailto:levego@levego.hu)  
[www.levego.hu](http://www.levego.hu)  
ÖGUT – Österreichische Gesellschaft  
für Umwelt und Technik  
Austrian Society for Environment and  
Technology  
Hollandstraße 10/46  
A – 1020 Vienna  
Tel.: +43 1 315 63 93 – 13, Fax: - 22  
[office@oegut.at](mailto:office@oegut.at)  
[www.oegut.at](http://www.oegut.at)



European Environmental Bureau  
Boulevard de Waterloo 34,  
B-1000 Brussels  
Tel: +32 2 2891090  
Fax: +32 2 2891099  
[secretariat@eeb.org](mailto:secretariat@eeb.org)  
[www.eeb.org](http://www.eeb.org)  
The Ecological Council  
Blegdamsvej 4B  
DK - 2200 Copenhagen N  
Phone: +45 33 15 09 77  
Fax: +45 33 15 09 71  
[info@ecocouncil.dk](mailto:info@ecocouncil.dk)  
[www.ecocouncil.dk](http://www.ecocouncil.dk)

