

July 2006

 **Öko-Institut e.V.**
Institut für angewandte Ökologie
Institute for Applied Ecology

eco@work

Sustainable reading from the Öko-Institut

Trailblazers

Competition for
sustainability

New concepts
Industry takes
responsibility

New ideas
Portraits of
visionaries

New energies
Biomass in
Europe

Magic potion

Why is a drink turning trendsetters green?

Picture the scene:

a fashionable urban crowd in Berlin or Munich, or perhaps at a lido in Freiburg. The smart, creative types are all sipping a single drink: Bionade. This is the first natural lemonade – organically produced and successful beyond belief.

Bionade is the new cult drink for people in the know. This soda is already being exported to neighbouring countries, and may soon even be available in Japan. Sixty million bottles are sold annually over counters and bars, and sales are on the increase. This is a development which even brewer and Bionade inventor Dieter Leipold of Ostheim in Franken, Bavaria could not have predicted eleven years ago.

At that time, the Peter brewery was just another crisis-hit small business. Then master brewer Dieter Leipold came across the idea of producing an organic, alcohol-free drink. In 1995, Bionade was born, and it has since made the brewery one of Ger-

many's fastest-growing drinks manufacturers. It's healthy, and it's also the world's first purely organic, alcohol-free fermented drink. The media up and down the country saw this as something to celebrate, giving the beverage great publicity. Word of mouth helped ensure the product was a hit with trendy PR people and designers.

This is just one of many indications that environmentally friendly and successful can be synonymous. And it's proof that clever, innovative inventions can compete with even the biggest corporations.

Bionade is a non-alcoholic drink without synthetic additives, produced in a similar way to beer. Water and malt are fermented to make it. This produces gluconic acid, which is sweet, like glucose or honey. This then reacts with minerals in the water to produce calcium and magnesium salts. Certified organic juice and natural flavouring is then added to the mix. *cr*

info: www.oeko.de/061/smallmiracles

Dear reader,

A warm welcome to this, the first edition of eco@work.

Instead of the electronic newsletter of the past, you will now be receiving a completely new product from us: an electronic newspaper. This means you'll get an even better service, in an attractive E-Paper package.

What is staying the same? We'll be sending you news by e-mail. Links will take you to our website, and from there you'll be able to access and read the articles. You can also keep up to date with the results of the Öko-Institut's research and with our positions on the latest issues in environmental policy.

So what's new, exactly? Well, you can download the full, formatted version or individual articles in pdf format free of charge. Or you can simply browse through the E-Paper online at your leisure.

The design of the electronic newspaper is also new. It's in colour, in a modern typeface, with large images. You may notice that the editorial content has changed, too. In addition to the focus of each issue, you will also find new columns, profiles, comment from a guest writer and a regular column on a particular idea.

In this issue's 'top topic', we look at whether competition and sustainability can coexist. Are the two ideas mutually exclusive, or inextricably linked?

Why not have a look inside, or download this issue? We'd love to hear what you think, so do let us know if you have any comments or suggestions.

Yours



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The editorial team
conducting interviews



Christiane Rathmann, head of public relations at the Öko-Institut, talks to Christian Hochfeld, its Deputy Director.



Katja Kukatz, journalist in the public relations department, talking to Dr. Dirk Bunke, expert for chemicals policy.

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Christian Hochfeld, Dr. Simon Zadek and
Michael Müller



Source: wind-energie.de, © Unternehmensgruppe Dezentrale Energie

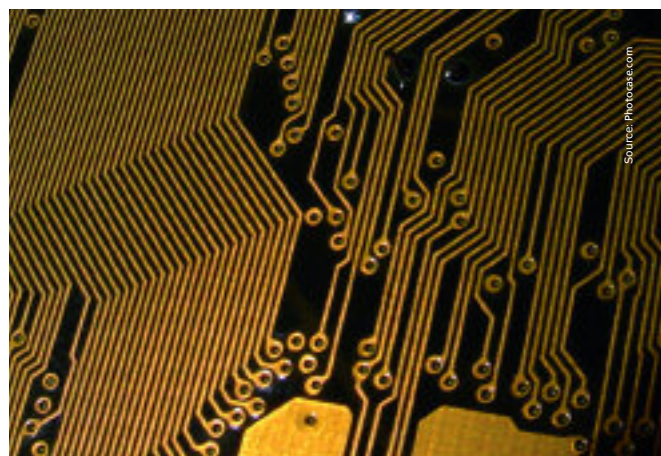


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Source: ps, © Boris Suttgairt

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Competition and environmental protection: friends or sparring partners? There's no clear-cut answer, according to Dr. Klaus Rennings, an expert on environmental economics.



Source: photodisc.com

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Are economic success and good environmental policy mutually exclusive? The Öko-Institut thinks not. Germany is a world leader when it comes to exporting environmental technology. Environmental performance drives innovation and underpins competitiveness.

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We've now seen the end of certain hazardous substances in electrical and electronic equipment. As of 1 July, the new EU RoHS Directive prohibits them. The Öko-Institut is advising the European Commission on possible exemptions from the Directive.

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Telecommunications with added value



It can include electronic patient records, prescriptions or doctors' letters, tele-education for doctors or telemedical facilities for patients, a healthcare data network or complete hospital information systems – the possible uses of e-health, modern telecommunication services for the healthcare sector, are almost limitless. Almost as big are the expectations being attached to the system, including hopes of its contribution to sustainable development. But how sustainable is e-health in concrete terms and how can its services be used most efficiently? The Öko-Institut is currently carrying out a systematic analysis as it explores this issue for Deutsche Telekom. The experts are asking what added value could be provided by e-health in comparison with conventional systems. Their analysis will take into account the outcome of structured interviews with healthcare practitioners and telecommunications specialists. The results will be available in early 2007 and are due to be widely distributed. *kk*

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Source: Deutsche Telekom

The environment wins out

These days, we can organize almost everything over the internet. And it's no longer a surprise when the phone bill comes by e-mail. Billing over the internet is both practical and cost-effective. But how environmentally friendly is it?

In order to answer this question, Deutsche Telekom's broadband/fixed-line business area T-Com commissioned a study from the Öko-Institut. The study showed that sending bills by e-mail places around five times less strain on the environment than the traditional postal method. That's the conclusion the Öko-Institut's experts reached, having analysed the production chain traditionally involved, from papermaking to posting, and comparing the energy used with the e-mail alternative.

Unfortunately, old habits die hard, and paper billing is still widely used. There are many reasons for this, including the force of habit and a wariness of the internet. Some users receive their bill by e-mail, then proceed to print it out. This reduces the environmental benefit of the e-mail delivery method.

That's why our recommendation is to avoid paper-based bills and to choose e-mail bills instead, which can be stored on your computer instead of printing them out. This will benefit the environment, and save money which can then be invested in environmental protection. *ib*

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Well prepared

They are an almost everyday occurrence in the cinema and on television, but fortunately not in reality – terrorist attacks with radioactive materials or nuclear weapons. But if it comes to the worst, what is the best means of communication with the public? And what steps can be taken now to prepare for such an eventuality? The Öko-Institut and Kiel University's disaster research department have been commissioned by the German Federal Office for Radiation Protection to look at these questions. The threat of nuclear attacks planned by terrorist groups has only recently become a subject for discussion and so large-scale emergency plans have not previously been in place. Scientists are therefore defining possible attack scenarios and working out means of keeping the public quickly and comprehensively informed. *hw*

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Climate neutral take-off

It is a dilemma. The Öko-Institut supports global action to prevent climate change, yet for travel to international conferences or business meetings there is often no alternative to the aeroplane. In 2005 this caused the equivalent of 130 tonnes of carbon dioxide (CO₂) to be released into the atmosphere. However, environmental damage can be mitigated – by CO₂ compensation. In cooperation with 3C Climate Change Consulting, which specializes in managing compensation measures of this type, the Institute has since 2005 been supporting two projects in South Africa. On a citrus farm in the north of the country a changeover



is being implemented which will see steam generation being fuelled by waste wood and wood shavings rather than by coal, and in Sebokeng township near Johannesburg methane released by a sewage treatment facility is being used to generate electricity.

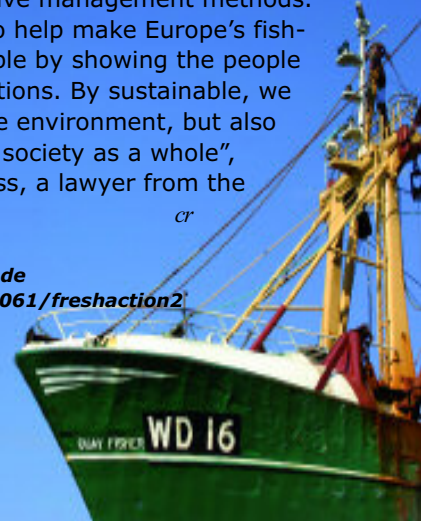
Both projects meet the strict criteria of the Gold Standard: that is, it has been verified that they reduce CO₂ emissions and strengthen the local economy on a long-term basis. *mc*

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Sustainable fisheries

Much of the European fisheries industry is in a permanent state of crisis. Many fish stocks have hit historic lows, and some are close to collapse. Criticism of the European Union's Common Fisheries Policy (CFP) is coming thick and fast from all sides of the debate, from the fisheries industry to the conservation lobby. That's why 13 European research institutes, including the Öko-Institut, joined forces in 2005 for a three-year project in support of both fisheries managers and EU politicians. The CEVIS project, short for 'Comparative Evaluations of Innovative Solutions in European Fisheries Management', was designed to promote new ways of thinking and acting, and to show fisheries managers some alternative management methods. "We expect CEVIS to help make Europe's fisheries more sustainable by showing the people in charge some solutions. By sustainable, we mean in terms of the environment, but also of the economy and society as a whole", explains Miriam Dross, a lawyer from the Öko-Institut. *cr*

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Carefree enjoyment

The site earmarked for Germany's national garden festival – the Bundesgartenschau – in 2007 is a disused opencast uranium mine. Isn't that dangerous? No, it isn't, according to the results of a study carried out by the Öko-Institut for the former operator of the mine. Since the clean-up of the site near the town of Gera the level of radiation from the former mining operations is very low; it is no higher than the levels found in many parts of Germany as a result of the natural uranium content of the Earth's crust. Radiation at this level is completely safe, even for children or pregnant women. The dose received by the million or more expected visitors will be less than one-hundredth of the permitted level. Someone staying on-site for the entire year would still not be put at risk. The Öko-Institut's data analysis was based on measurements made by Wismut GmbH and by the Thuringia state authorities. The results of the study are available as a flyer. *hw*

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Competition for sustainability

Are competition
and sustainability
mutually exclusive?
Or are economic
success and modern
environmental policy
two sides of the
same coin?

Effective regulation can help encourage companies to engage voluntarily in environmentally-friendly action, and it can also enhance their competitiveness.

We need to focus more on the benefits.

The latest idea has an English name, but is being implemented in Japan: Top Runner. Behind this idea is an innovative, stimulating form of regulation which harnesses market forces and competition. Japan is setting target standard values for the most energy-efficient appliances in a product group – for example computers – for a particular year. Any appliance not meeting these targets will initially receive a public warning, and manufacturers will subsequently be obliged to remove the offending product from the market. The Japanese government is expecting this to bring significant energy savings. For computers, the projected figure is 83 per cent. This is just one example of how the competitive focus on innovation can force the pace of change for the benefit of the environment.

But this seemingly simple, attractive idea is already being hotly



Source: wind-energie.de, © Vestas Central Europe

Germany is a world leader when it comes to exporting environmental technology. Environmental performance drives innovation, and underpins competitiveness.

debated by the experts. The debate even extends to the term "competitiveness" itself. It means different things to different companies, sectors and countries. It is not clear how, in an interdependent global economy, we can assess the competitiveness of transnational companies in specific, regionally defined economic areas. If indeed any attention is paid to the consequences of environmental regulation, then this tends to be in the scientific literature, which strongly emphasises the cost aspects. A question which is rarely raised is: how can environ-

mental regulation deliver resource savings at company level, or generate technological innovations at that level which in turn bring wider structural change? Furthermore, the direct economic benefits that environmental regulation brings rarely come into the equation. One such benefit would be reduced production costs due to clean water.

On closer inspection, there is indeed some degree of public debate on these issues. For example, some representatives of the industrial lobby question the value of the environmental legislative process at a time of deregulation and weak growth, and bemoan the attendant costs. On the other hand, many companies,

The Lisbon Strategy saw European Heads of State and Government come together in March 2000 to set a target of making the EU the most competitive, dynamic economic area in the world by 2010.

The Öko-Institut's Annual Conference

The Institute's Annual Conference will be held in Berlin on Friday 22 and Saturday 23 September 2006, and is entitled "**Competition for sustainability**". The aim of this conference is to explore the tension between effective, challenging sustainability policy and the



competitiveness of the European Economic Area. At the heart of these concerns is the importance of systemic and technological innovations, both for sustainable development and for competitiveness. In other words, we will be exploring the links between the European Union's Lisbon and Gothenburg Strategy goals.

In the run-up to the German presidency of the EU and the G8 summit in the first half of 2007, we aim to use concrete EU policy areas to illustrate exactly how and where a challenging sustainability policy and corporate and economic competitiveness can complement and contradict one another. The conference will also investigate the opportunities and limitations which the Lisbon Strategy brings to sustainable development, against the backdrop of global value chains and the challenge of achieving social equity.

When? 22, 23 September 2006

Where? Ernst-Reuter-Haus,
Straße des 17. Juni 110-114, 10623 Berlin

What does it cost? 100/50 euro

For further information (in German), please visit:
www.oeko.de/jahrestagung

To register, please contact: Öko-Institut e.V., Romy Klupsch, tel. +49 (0)761 452 950, fax +49 (0)761 452 9588 or email event@oeko.de

researchers and environmental organizations emphasize not only the concrete environmental benefits this process brings, but also the positive economic impacts such as innovation, job creation and structural change.

"Good, ambitious environmental and sustainability policy can strengthen a country's economy in the long term", states Christian Hochfeld, Deputy Director at the Öko-Institut's Berlin Office and an experienced expert on sustainable production and consumption. "Even now, environmental protection is an important driving force behind innovations which ensure Germany's competitiveness on world markets", added Astrid Klug, Parliamentary State Secretary at the Federal Environment Ministry, at a public session of the German Council for Sustainable Development at the end of March. Just look at the fact that Germany is a world leader in environmental technology exports, with a 19 per cent market share.

The key to positive interaction between economy and environment is timing. "If you start early enough, you may well be able to gain a competitive advantage", noted Dr. Günther Bachmann,

head of the German Council for Sustainable Development, at an event in 2004.

"There are currently some blind spots in the debate on sustainability and competitiveness. They begin with the economic benefit of sustainable policy, lead on to issues of global equity, and finish with the question of whether certain sustainability goals are fungible at all", explains Franziska Wolff, a researcher at the Öko-Institut. The new Öko-Institut project entitled "Competitive, Innovative, Sustainable Europe" (CIS) sees the economist Wolff investigating precisely these blind spots, among other areas. The aim of CIS is to provide a critical insight into the interplay between environmental policy and competitiveness. The researchers will also develop criteria for conducting processes to evaluate the impact of policy, in order to avoid any imbalance in the process of weighing sustainability against competitiveness.

In the Öko-Institut's view, the key question is not whether a lot or a little regulation promotes sustainability and competitiveness. It's a question of whether the regulation itself is good or bad. What's

also clear is that, up to a point, sustainability and competitiveness go hand in hand. And yet there is also a parting of the ways: "Particularly in light of the EU's Lisbon Strategy, we must increase the public's awareness of areas in which one side's struggle for competitive advantage will bring negative consequences for global equity and sustainability". This is how Christian Hochfeld describes one of the Öko-Institut's objectives in this context.

Competition has limits

Taking a look beyond events in Europe is also increasingly important, given that the value chain has long had links throughout the world. Outside Europe in particular, environmental and social standards are being suppressed – apparently for reasons of cost pressure and competition. This is an area in which the drive towards competitiveness is in clear conflict with global sustainability. That is why in-depth discussion is needed in order to achieve responsible competition for greater sustainability. And this discussion must take place sooner rather than later.

Christiane Rathmann

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Economics with ethics

Why is CSR not part of all companies' strategies?

Some economists see sustainability and social commitment as a romantic irrelevance. They love to quote Nobel prize winner Milton Friedman's statement that "The business of business is business". Now this motto may have survived since the 1970s, but many new developments in the 21st century indicate that even economists now have to think differently. It is also emerging that social and environmental concerns have actually played a key role in companies' success for some time.

Corporate Social Responsibility (CSR) means companies adapting their behaviour to consider not only financial criteria but also environmental and social concerns. Amongst other things, this in-

volves the promotion of environmental and social standards and work towards fair trading relationships and sustainable products.

Just how effective is the promotion of CSR as a policy tool? Isn't it often just a PR trick to improve the company's image? "In Germany, there are very few examples of CSR being considered as a strategic issue", says Christian Hochfeld, Deputy Director at the Öko-Institut's Berlin Office. And the German Council for Sustainable Development asked in its February position paper: "If CSR is part of being competitive, and the whole market wants to be competitive, then why don't all companies employ CSR measures?"

Where the rhetoric ends and the facts begin is just one aspect being analysed in a joint research project the Öko-Institut is coordinating, entitled "Rhetoric and Realities – Analysing Corporate Social Responsibility in Europe" (RARE). A research team from seven partner institutions is analysing the actual impact of and the factors for the success of voluntary activity undertaken by companies in various different sectors: the oil, banking and fisheries industries.

Researchers on the project are trying to establish the extent of the direct contribution companies' CSR activity can make towards achieving the EU's sustainability objectives. The aim is to draw up

Traditional company, new energy: no contradiction, but sound sense. Companies that uses resources sparingly will boost their profitability.



Source: ©Solar-Fabrik AG, Freiburg

Two price tags: One for the environment, one for consumers

Many consumers would like sustainable products.

policy recommendations for both the EU and national governments, and document case studies as examples of best practice. "The RARE project, with its probing and practical approach, will produce valuable findings for both policy and business", says project participant Franziska Wolff of the Öko-Institut.

There are already a few options to choose from. The United Nations' Global Compact lists ten rules for globally operating companies to follow. The European Commission has also published a Green Paper setting out options for action.

But how does making an effort towards CSR benefit a company? Well, we all know that bad press can do lasting damage to a com-

pany's reputation. You only need to reflect on some of the recent scandals in the chemicals and oil industries. If, for example, a corporation was accused of profiting from child labour, this would have immediate financial consequences, especially if the company was listed on the stock exchange. For that reason alone,

the economic movers and shakers actually benefit from abiding by certain rules. For example, the Karstadt-Quelle retail chain promoted FSC-certified wood products and documented this in its 2005 sustainability report. It has brought the group benefits. "For a majority of European consumers a company's commitment to social responsibility is important when buying a product or service" notes the European Commission's Green Paper.

Of course, for them to make an informed choice, consumers need reliable information from independent sources, such as the Stiftung Warentest organization in Germany. Since last year, this organization has added its

own investigations into producers' social and environmental conduct to its standard range of product tests. According to a survey conducted for the German Federal Ministry of Food, Agriculture and Consumer Protection among subscribers to Stiftung Warentest's maga-

zine "Test", depending on the product between 50 and 70 per cent of those surveyed intend to use such information when shopping. So responsible corporate behaviour can influence customers' purchasing. For example, in the case of frozen salmon, a quarter of all the subscribers surveyed had consid-

ered this information when making their decision.

Other arguments in favour of CSR include:

- *Some companies recognize the relationship between environmental performance and workplace quality. The use of clean technologies is also associated with creating jobs that have challenging technical requirements and provide job satisfaction.*
- *The economical use of resources increases companies' profitability and therefore has a positive effect on competitiveness.*

However, Thomas Voigt, Vice President of Corporate Communications at the Otto Group, was rather cautious in his interview with "Profile" magazine. He said his company's efforts, which include insisting on fair minimum wages in textiles factories and on clothing free from harmful substances, did not necessarily reap rewards in terms of consumer behaviour. Price remained the most important factor in the decision to buy a piece of clothing. This is a view which Kathrin Graulich, coordinator of the Öko-Institut's EcoTopTen consumer information campaign, can endorse with regard to other product groups. Her recommendation is that both factors, the environment and the price, be included in product rankings.

Christiane Rathmann

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In the Gothenburg Strategy, the European Council of June 2001 agreed a sustainability plan for the EU. This is intended, among other things, to bring about changes in corporate and consumer behaviour.

pany's reputation. You only need to reflect on some of the recent scandals in the chemicals and oil industries. If, for example, a corporation was accused of profiting from child labour, this would have immediate financial consequences, especially if the company was listed on the stock exchange. For that reason alone,

This is the view of Dr. Klaus Rennings:

Environmental protection and competition –

a partnership with a future



Dr. Klaus Rennings

The debate is couched pretty much in black-and-white terms. Protection of the environment is much too expensive for companies, puts them at a disadvantage in international competition and in extreme cases causes them to move abroad. That's what some people say. Efficient management of environmental resources increases economic efficiency and thus in the long term makes businesses more competitive. That is the other point of view. Who is right? Ever since the 1970s studies have been attempting to provide an answer and to explore the relationship between ecological performance and business competitiveness. As is so often the case, the reality is more complicated than the theory: no one has as yet come up with a straightforward answer, but tendencies can nevertheless be identified.

There is to date no empirical evidence of the "race to the bottom", the supposed emigration of home-grown companies to countries with laxer environmental standards. Experts suppose that, because the money that a company needs to spend on environmental protection is only a small proportion of total costs, emigration is in fact not worthwhile. And while it is sometimes maintained that environmental regulations have a significant impact on the structure of international trade flows, this too has yet to be proven.

**Poor
performance,
crashing
shares**

The present empirical studies tend instead to confirm the thesis that there is a positive connection between economic and ecological performance. But those who suppose that this is a large-scale effect would be just as much in error as the supporters of the race-to-the-bottom theory; the relationship is a weak one which verges on the statistically insignificant.

In terms of methodology most of these empirical investigations are what are known as "event studies". These analyse the connection between the publicizing of particular information about a company and the subsequent reaction of the stock market. The events which are examined are usually ones of a negative nature such as accidents, court cases or publicity about harmful emissions.

The studies have shown that negative environmental headlines have a corresponding negative effect on share prices, while outstandingly positive headlines – describing, for example, the winning of environmental awards – are more or less ignored by the stock market. It therefore seems particularly important for companies to avoid the market and liability risks – for example, environmental scandals – of poor environmental performance.

We might well wish there to be greater recognition of companies' positive commitment to the environment in the market place and in the public eye. These studies do, however, show that – whatever the doubters may think – there is some positive correlation between environmental innovation and business performance. But it is only a slight connection. It is nevertheless clear that companies with poor environmental performance are penalized by the market. Unfortunately the reverse is not true: ecological modernization of industry would not of itself provide a substantial impetus for an increase in competitiveness. Anyone who thinks that it will be bound to be disappointed. The effects are too small – at any rate at present – for that to happen.

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Dr. Klaus Rennings has worked for the Centre for European Economic Research since 1994. The 43-year-old Senior Researcher is involved in environmental and resource economics and environmental management. His research focuses on, among other things, innovation-oriented environmental policies and policy impact assessment.

Out of the box

Christian Hochfeld and his ideas for a sustainable future

Ideology is not a term Christian Hochfeld finds useful. He prefers to look for his ideas and ideals away from well-trodden paths. This was something the pollution control engineer discovered early on in his career. Even while he was studying, he was working for the decidedly different Öko-Institut. He started off here as a researcher in the Infrastructure and Enterprises Division, and since 2004 has been Deputy Director at our Berlin Office.

The 37-year-old has always focused on the dialogue between science, politics and business, because "without support from business, sustainability will soon hit the



buffers". And what excites him about the Öko-Institut is that he can both support and challenge policy and business in their respective roles. This means helping to find solutions which make a practical difference. He believes the work provides him with "fascinating opportunities to influence events". Like everyone at the Öko-Institut, Christian Hochfeld has a dream: "That our sustainable future will soon be a daily reality". *cr*

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Leading the way

Dr. Simon Zadek and his vision of a better world

Poverty, disease, environmental degradation – where others give up, Dr. Simon Zadek sees the fulfilment of his life: To struggle with political and social issues. The 48-year-old doctor of economics puts it simply: "I do what I do because it puts



me in a community of extraordinary people doing amazing things. I'm not looking for material gain." He has succeeded in making his attitude not only a maxim of his life, but also his profession. Zadek found just the right setting at the London Institute of Social and Ethical AccountAbility, which he founded in 1995. Since four years he is the institute's Chief Executive. The non-profit organization helps corporations and governments around the globe to take social and ethical responsibility.

Zadek is convinced that the coming decades will see globally operating institutions being held to account more effectively. His voice is heard: In 2003 the World Economic Forum selected him as one of the "Global Leaders for Tomorrow". "I would like to think that my work does make a difference but how would I know? It's too early to know." *bw/kk*

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Rethinker

Michael Müller and his quest for quality

Michael Müller was aware of environmental protection as an issue even before he entered the Bundestag. As early as 1968, the reinforced concrete construction expert, engineer and business administrator was marching against nuclear power. In the 1970s, he organized major demonstrations and in the 1980s "had a chat with Willy Brandt" about putting sustainability on the United



Nations' agenda. Müller never dreamed he would one day end up as Parliamentary State Secretary at the Federal Environment Ministry. "Of course I didn't", says the 58-year-old, almost annoyed at the question – he's interested in issues, not positions. One issue he's interested in is climate change. "We now know much more about it than we did in the 80s. And yet we still haven't achieved everything we had planned when we knew so much less about it. It's a paradox that really exercises me." So Michael Müller continues with his work, some on the sustainable use of raw materials, "the major issue for this century. If we don't solve this one, deadly wars will be fought over resources. We need to rethink the logic of economic processes and find another route to take." What he wants most of all, though, is "for quality to count instead of quantity." *kk*

info: www.oeko.de/061/corevalues

A replenishing future

Electricity, heat and fuel from biomass are on the up. But what proportion of Europe's energy requirements will bioenergy be able to meet in future? This was the question addressed by a study commissioned by the German Federal Environment Ministry. The Öko-Institut participated in this



Source: Photocase.com

The energy reservoirs of the future: Straw bales, not oil tanks.

study, which saw researchers aiming to outline possible developments by 2020 in the 25 EU member states plus Bulgaria, Romania and Turkey.

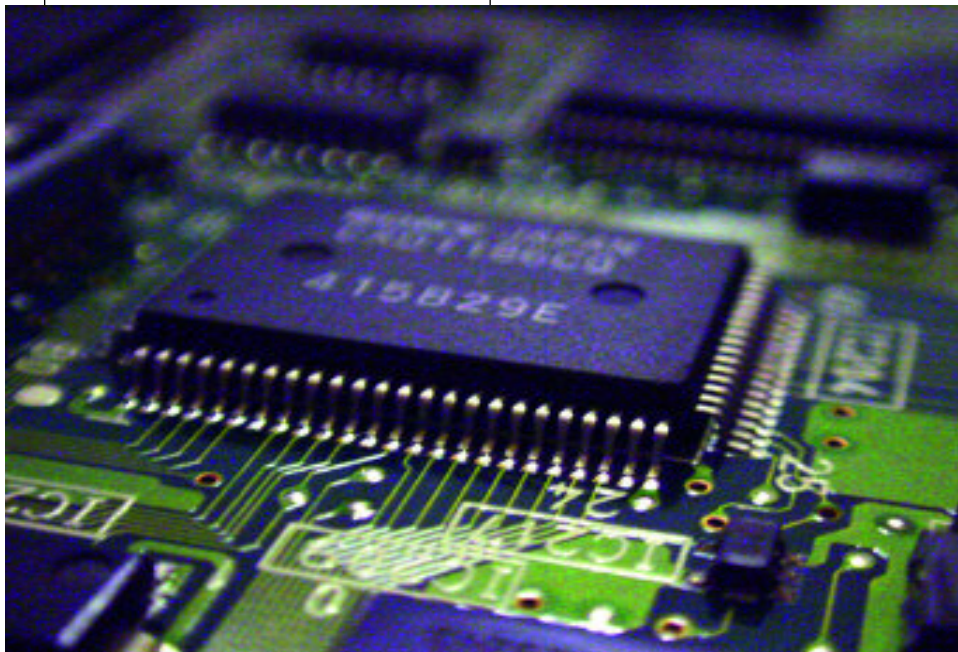
The scenarios incorporated factors such as population and economic growth, and the political backdrop in each country. The outcome of the study showed that 10 to 20 per cent of our energy could come from biomass by 2020. However, the trade in bioenergy within Europe is not expected to grow much: it is not normally worthwhile from either an environmental or an economic perspective. But imports look more promising, meaning cars could run on bioethanol from Brazil in future. *uf*

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www.oeko.de/061/investigating1

Europe bans the "dirty six"

Be it a computer, a washing machine or a torch, as of 1 July 2006, certain hazardous substances are banned from all electrical and electronic equipment in the EU. These are the "dirty six": lead, mercury, cadmium, hexavalent chromium and two brominated flame retardants. The ban was in-

"It's possible that some companies are applying for special dispensations in order to save money, because it saves them the trouble of reorganising their production facilities", suggests Gensch, "but the innovation which the changes require could also prove to be a competitive advantage.



Source: Photocase.com

Lead, cadmium and other contaminants no longer have a place in Europe's electronic appliances.

roduced on the basis of the EU's Restriction of Hazardous Substances Directive, or RoHS for short. But there are some exceptions to the new restrictions. One exception is in cases where adapting a product to the requirements would cause more damage to the environment and/or to human health than the product did beforehand.

The European Commission has asked the Öko-Institut and the Fraunhofer Institute for Reliability and Microintegration to inspect applications for this exemption. "We have received some 90 such applications so far. We have only recommended that the Commission grant an exemption in around a quarter of these cases", is how Carl-Otto Gensch, expert on material flows at the Öko-Institut, explains the work.

New technologies are often not only more environmentally friendly, but also more efficient."

And the EU's RoHS Directive is not the only legislation of its kind. In China and Japan, for example, similar laws are being or have already been implemented. Some of the United States of America have also agreed similar regulations.

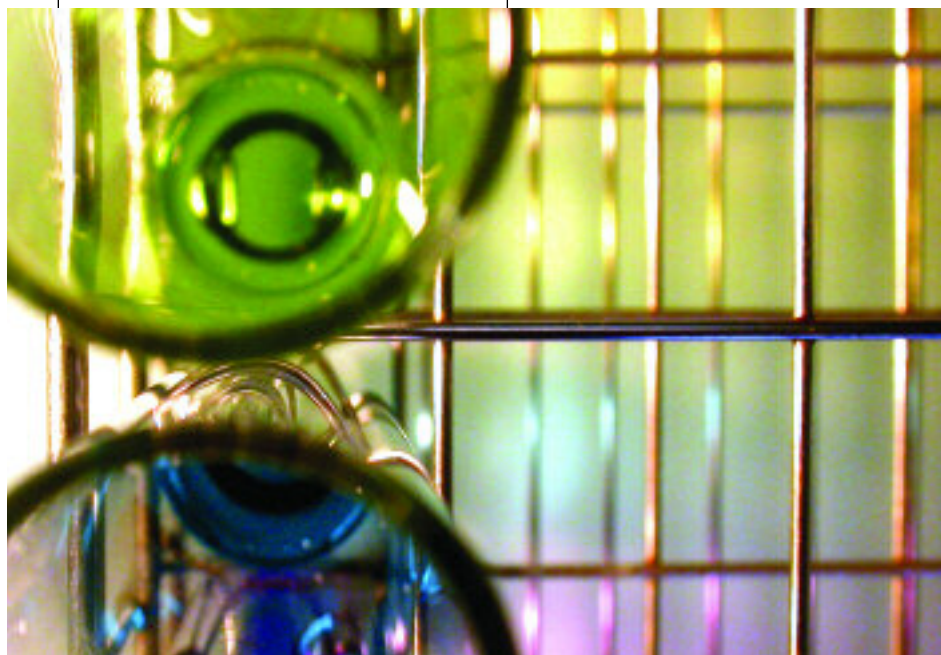
And even if all countries do not follow suit, the effect will be international: "Large companies that operate internationally won't want to pay for two different product ranges. They will choose to eliminate the hazardous substances from all their products instead", predicts Carl-Otto Gensch. *hw*

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REACH: No need to test ad infinitum

The proposed EU REACH Regulation will oblige the manufacturers, importers and users of chemicals to register and notify certain substances. They will have to provide information on the toxic or ecotoxic properties of these substances. Where this data is not currently available, as is very of-

thorities, during which the Öko-Institut joined with other experts to investigate whether it was possible to develop and apply practical assessment criteria. Having investigated this issue in relation to 17 sample chemicals and the related exposure scenarios, the experts decided that it was.



Source: Photocase.com

Testing chemicals' toxicity is a complex and expensive affair. Sometimes the requirement can be waived.

ten the case, it must be gathered. This can involve laborious, expensive testing.

REACH states that not all tests need necessarily be performed – for example, where there is proof that a substance or its application does not give rise to any relevant exposure, i.e. any burden on humans or the environment. The technical term for being exempt from the requirement to conduct a test in these circumstances is 'exposure-based waiving'.

But how is the decision made as to what exposure is 'relevant'? The text of the proposal does not contain any clear criteria for this. A research project was therefore conducted by the German Federal Environment Ministry, VCI (the German Chemical Industry Association) and the assessment au-

"The criteria we developed gave industry and the authorities the opportunity, for the first time, to conduct an initial practical assessment on these particular chemicals so they could decide whether or not a particular test was required", explains Dr. Dirk Bunke of the Öko-Institut. "And it emerged that tests may not be necessary in certain circumstances, and that exemption from conducting them will not be detrimental to occupational or consumer safety or environmental protection." The practical application of the criteria thus developed will be further refined before the REACH Regulation comes into force. In the meantime, you can consult the full study on the internet. *kk*

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Market winners

The demand just keeps on growing, while resources dwindle; experts predict that we are likely to see bitter battles over energy resources in the not far distant future. Who is most likely to emerge unscathed from the contest? According to Dr. Rainer Griesshammer, the initiator of EcoTopTen, it



Source: Photocase.com

Competition for energy resources is becoming ever fiercer.

will be those economies and businesses which have managed to reduce their energy costs. This is accomplished, says Dr. Griesshammer, through "sustainable production and consumption". EcoTopTen, well known as an information campaign promoting sustainable consumption, is also seeking to target companies. The Öko-Institut is addressing businesses with its innovation targets for energy-efficient products which are based on eco-efficiency analysis and intensive consumer research and which are designed with the consumer in mind. These targets will help EcoTopTen companies to open up new sales markets, because "the market winners of the future are high-quality energy-efficient products with moderate total costs." *kk*

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What would life be like if...

the till always rang twice...

and the receipt showed what that little spin in the car really cost?



Dr. Rainer Griebhammer

Let's assume you've just travelled 500 kilometres by car, and need to refuel. Your typical medium-sized car, let's say it's a Golf, consumes 6.8 litres* of four-star per 100 kilometres, so it glugs down 34 litres of petrol. You pay 42 euro*. For starters. Then the till rings again, and you are charged for the depreciation in the value of the car, for your share of the repairs, tax, insurance etc: another 215 euro*. If this actually happened, there would be an outcry, a revolution. Or perhaps you'd simply go out and buy a small car that needs just three litres per 100km, travel by car less often and by train more often, or switch to car sharing. Or you'd be sounding your bicycle bell. The external cost of the environmental degradation incurred by our 500-kilometre journey should really also be added to the till receipt, but since this varies widely according to your point of view and is hotly debated – and since society kindly bears this cost for us anyway – we'll just stick to the market cost.

Just imagine: on a shopping spree, you see a smart new fridge: it's in energy efficiency



Quelle: Photocase.com, Composing: Olo-Institut

Two receipts,
all costs –
mutiny or
revolution?

class A and costs 309 euro. It looks good. Until the till rings twice. The second time, you learn what this fridge will cost in electricity over an average lifetime: 618 euro* at today's prices. You suddenly feel a chill wind, since you know that electricity prices are on a steep upward trend. You're ready to run out of the shop, until you spot another fridge with the same capacity. You didn't go for this one straight away, although it had an environmentally-friendly A++ classification: at 330 euro it cost twenty euro more. You could get a walkman for that, or two t-shirts made in South-East Asia, or a pair of cheap reading glasses from a discount

optician's. But this A++ fridge looks more attractive when you take it to the till: the average cost of electricity over its lifetime (at today's prices) is a mere 352 euro*. In that case, the more costly fridge would turn out to be a real bargain, saving 245 euros overall. Unfortunately, the till still only rings once (or no bell rings at all!). But maybe some day soon it will?!

Dr. Rainer Griebhammer

**Data taken from the ADAC (German Motoring Association) calculations of January 2006 and the EcoTopTen report on fridges and freezers of September 2005.*

Eco@work - the new E-Paper

It's modern, it's informative and it's all available online. We're talking, of course, about the first edition of the Öko-Institut's electronic newspaper, which is out now. This represents a completely new departure for the Öko-Institut's publications. The electronic newsletter and the printed members' periodical, "Öko-Mitteilungen", have been replaced by a single publication: the E-Paper eco@work. Subscribers to the newsletter will continue to receive their news by e-mail. The difference is that they will now have access, via the e-mail, to the full, formatted E-Paper plus individual articles.



Members of the Öko-Institut now benefit from an exclusive service: they also automatically receive a printed version of their newspaper in the post. However, if any members would prefer to receive just the electronic version, they should contact: Markus Werz, Phone +49 (0)761 452 9529, m.werz@oeko.de

If you have any questions on the technology or content, we would be pleased to hear from you. Please contact: Christiane Rathmann, commissioning editor, Phone +49 (0)761 452 9522, redaktion@oeko.de.

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Reading resource

Cycle taxis and internet auctions

Climate change, dwindling resources, poverty and disease are all challenges facing today's economy and society. Competition and innovation will have to be increasingly coloured by sustainability. How can companies successfully win new markets against this backdrop, and which strategies, methods and tools should they use? An anthology entitled 'Nachhaltige Zukunftsmärkte' (Sustainable markets of the future) provides an in-depth, practical response, be it in the form of a cycle taxi, cooling system or internet auction. This book illustrates that sustainability is not just an obstacle, but also an opportunity. *bw*



Klaus Fichter, Niko Paech & Reinhard Pfiem: 'Nachhaltige Zukunftsmärkte. Orientierungen für unternehmerische Innovationsprozesse im 21. Jahrhundert' (Sustainable markets of the future. New directions for business innovation in the 21st century), Metropolis-Verlag, Marburg 2005, 408 pages, 36.80 euro.

We toast

15 years of our Berlin office

In 2006, the Öko-Institut's Berlin office can look back over 15 fruitful years' work. Management and staff alike feel that's certainly a reason to celebrate. Clients, partners and friends of the Institute are therefore warmly invited to join us in Berlin on the evening of Saturday, 23 September, the day after our Annual Conference, to toast the occasion with pop or bubbly. Further details will be available shortly from Sabine Leukert, s.leukert@oeko.de, Tel. +49 (0)30 280 486 61 or from www.oeko.de.

Reading resource

In memoriam Betty Gebers

The present body of environmental law in Europe developed essentially over the past 20 years. Today's environmental policy continues to be cast in the mould forged in that period. Until her untimely death in September 2004, Betty Gebers was one of the people playing a particularly active role in shaping that development process. Hailing from Hamburg, Betty Gebers, an environmental lawyer, was a senior researcher at the Öko-Institut from 1991 to 1998. A commemorative volume now highlights her achievements and traces the course of developments in the areas in which she worked. By combining retrospective analysis with an exploration of current affairs, the book casts a revealing light on the emerging contours of European environmental law and policy in this century. *kk*

Thomas Ormond, Martin Führ & Regine Barth: *Environmental law and policy at the turn to the 21st century. Liber amicorum Betty Gebers*. Lexxion Verlag Berlin, July 2006, 334 pages, 27.80 Euro. ISBN 3-936232-77-6.



Dr. Wolfgang Brühl

New Executive Board member

Dr. Wolfgang Brühl, formerly chief economist at Hoechst AG, is a new member of the Öko-Institut's Executive Board. In addition, Helfried Meinel and Dorothea Michaelsen-Friedlieb were confirmed in office at the General Assembly at the end of May. Dr. Thomas Ormond did not stand for re-election. *kk*

info: www.oeko.de/061/discovering

Knowledge of environmental law is in demand



Regine Barth

The German Federal Environment Ministry has asked Regine Barth of the Öko-Institut to join a new group of experts. This committee is to answer the questions raised in Germany on the Swiss process of selecting a final storage site for radioactive waste. Switzerland has begun a systematic selection process, and has invited Germany to take part because many of the sites under discussion are close to the German border. *kk*

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Sustainable mobility

What can you expect from us this autumn? No less than a comprehensive review of mobility issues, which we will provide when we look at this area in our 'knowledge' focus. We want to investigate mobility because, on the one hand, it is a basic need and a prerequisite for the modern world of work.

On the other hand, the ever-increasing demand for transport will present a huge challenge. This growth in demand includes increasing personal motor vehicle use, longer journeys and the globalizing economy. Transport already contributes 20 per cent of all Germany's CO₂ emissions. How, then, can mobility be made sustainable?

You'll have to read the next eco@work to find out.

Source: Photoast.com

