

# Independent, visionary, international Research and consultancy at the Oeko-Institut

Annual Report 2010



## Visions and reality 2010

# Visions and reality 2010: Perspectives on the Oeko-Institut

"Not only do you, as chemical engineers, research material flows, conduct life-cycle assessments and work to boost efficiency and close material cycles, but you also make your findings known to a wide audience – the general public, industry and, in particular, to policy- and decision-makers. You have inspired many people to think again about what we take for granted: what we produce, what we eat, how we move from one place to another, how unthinking we often are in our consumption choices. As Federal President, I can only ask that you remain untiring in your efforts to show us how to do things better."

An excerpt from the speech by German President Christian Wulff when presenting the German Environmental Award to Dr. Rainer Griesshammer, Executive Board member of the Oeko-Institut.

"The development of the Oeko-Institut over the last 30 years and more is a success story! The wide-ranging experience gained in cooperation between civil society, policy formulation and business development trends have given the institute an extraordinarily wide experience base and extensive consultancy expertise. The foundation is thus laid for this institute to continue to be of enormous importance in an open, democratic society, now and in the future."

Statement for the Oeko-Institut's profile flyer from Professor Klaus Töpfer, Executive Director of the Institute for Advanced Sustainability Studies in Potsdam, former German Environment Minister, and former Executive Director of the United Nations Environment Programme.

"Objective assessments and practical solutions combined with courageous ideas – these are the Oeko-Institut's visions for the future. The scientists at this value-oriented research and consultancy body are working with partners and clients to develop a set of basic principles and strategies aimed at shaping and implementing the vision of sustainable development at local, national and global level. Many of the projects carried out by the institute in 2010 have shown that this is possible."

Helmfried Meinel, first Chair of the Committee of the Oeko-Institut e.V. and management team member of the Consumer Advocacy Centre of North Rhine-Westphalia.

"The future does not depend on fate; it can be shaped by human action. This is the cause espoused by the Oeko-Institut. It is exactly what the scientists of the Institute for Applied Ecology in Darmstadt, Berlin and Freiburg have been trying to achieve for decades."

From a broadcast by Hessischer Rundfunk (Hesse Broadcasting Corporation) to mark the 30th anniversary of the Darmstadt site in 2010 and the 20th anniversary of the Berlin office in January 2011.

## Contents

"Visions must be grounded in reality!" Looking back at 2010	4
Independent, visionary, international Research and consultancy at the Oeko-Institut	6
The Oeko-Institut Facts and figures	7
Visionary ideas, practical implementation Selected projects in 2010 Is "nano" the future? An angel for the climate Smart infrastructure Greenwashing or genuinely effective? A wind turbine in the tank? Reviews required Treasure in the trash Climate-friendly football Bio-global Safety of interim nuclear storage	8 9 10 11 12 13 14 15 16 17 18
Making visions a reality The Oeko-Institut's clients	19
Visionaries at work Organisation and contacts	20
Creating a shared future Service and communication	22
Visions need backers Membership of the Oeko-Institut	23

# **Editorial information**

© **Oeko-Institut e.V.** Institute for Applied Ecology Status: April 2011

Edited by: Mandy Schossig

**Translation:** Christopher Hay

### **Oeko-Institut**, Berlin office

Schickler Strasse 5-7 10179 Berlin redaktion@oeko.de www.oeko.de Design and layout: Bertram Sturm www.bertramsturm.de

### Printed by:

LokayDruck www.lokay.de Printed on 100% recycled paper

### Photographs and graphics:

Cover: © iLexx, istockphoto.com Page 2: © doram, istockphoto.com



### Galileo Galilei



Italian philosopher, mathematician, physicist and astronomer "Curiosity always comes first with a problem that needs to be solved."

# "Visions must be grounded in reality!"



#### Dear readers,

2010 was characterised by detours and diversions – at least as far as environmental quality, climate change mitigation and resource conservation were concerned. After the disappointment at Copenhagen, where 100 heads of state or government failed to agree on a binding climate treaty, the negotiations in Cancun sparked renewed hope. For the first time there is an international commitment to keep global warming below two degrees Celsius. This does not guarantee a successful outcome to future international climate negotiations, but the experts – including those at the Oeko-Institut – are now looking ahead with a little more optimism.

We look back on the environmental policy disputes which have been raging in Germany with rather less confidence. Despite intense and highly visible protests by numerous civil society actors in autumn, the German Bundestag voted to extend the lifetimes of Germany's nuclear power plants. Events at Japan's Fukushima power plant in March have since shown that serious accidents can occur even in industrialised nations with high safety standards. In many studies and opinions published throughout 2010, the Oeko-Institut has consistently demonstrated that extending the lifetimes of nuclear power plants would have a detrimental impact on the climate, the expansion of renewable energies and Germany's transition to a low-carbon economy. Furthermore, we are not convinced that the risks of continued operation of nuclear facilities have been adequately investigated - a fact which Fukushima has unfortunately shown all too clearly. On a positive note, in its Energy Concept, the German Government has for the first time ever agreed long-term targets for the reduction of greenhouse gas emissions - an objective which the Oeko-Institut has promoted repeatedly, and for which it has provided solid justification in many scientific papers.

### 2010

K.Ø.?!

2°C



2010 was also the year of new forms of political interaction with citizens. In Atdorf, Stuttgart, Gorleben, Berlin and many other places, people took to the streets to express their concerns over major infrastructure development projects and decisions related to energy policy. At the Oeko-Institut, we regard their concerns as entirely justified, as are their questions and demands for independent information and an exchange with policy-makers at eye level. However, the work done by our scientists also shows that the expectations of a sustainable future cannot be fulfilled without the implementation of essential projects, such as those aimed at developing energy storage and transfer technologies. There are no easy solutions to the challenges we face, for it is not just about saying "no" to certain projects. We must therefore continue to engage in intensive debate about the expansion and adaptation of our infrastructure for a sustainable future.

To establish the scientific bases for these and other political decisions, to carry out independent research and provide informed advice, to focus firmly on the future and to work in the here and now – this is the task we have set for ourselves, as visionaries and pathfinders, challengers and mediators. We are therefore particularly gratified when the principles guiding our work gain wider recognition. The presentation of the German Environmental Award to Dr. Rainer Griesshammer for his research and commitment to sustainable ways of life and patterns of production is also, we believe, confirmation of the institute's principles.

There is still, in 2011, a strong desire for social change and more sustainability. However, expectations have changed, and we are adapting our work accordingly. Many policy decisions are made at EU level or in an international context. Global economic structures require international solutions for climate change mitigation and resource conservation. Therefore in 2010 the Oeko-Institut has been analysing and identifying why and in particular how the interaction between policy and economics should be changed. Whether we are investigating electromobility, climate protection measures, resource efficiency or sustainable biomass – our research is not only about gathering knowledge, but also about convincing policy-makers, motivating industry to look at what's new, involving all stakeholders and taking their concerns and opinions seriously.

This annual report will give you an overview of the key areas of the Oeko-Institut's work during 2010. We hope you find it interesting reading. We look forward to your questions and feedback.

hul A

Michael Sailer Chief Executive Officer of the Oeko-Institut

Ħ

# 2011

#### Grace Hopper



US computer scientist and computer pioneer "The most dangerous phrase in any language is: We've always done it this way."

# Independent, visionary, international Research and consultancy at the Oeko-Institut

The Oeko-Institut is a leading, independent European research and consultancy institute working for a sustainable future.

We are convinced that we can create a world that adheres to the principles of sustainability and still allows people's full potential to unfold.

We develop proposals that demonstrate how the vision of sustainable development can be implemented globally, nationally and locally. We aim to use our ideas, understanding and knowledge to persuade relevant stakeholders of the changes that must be made and help them to move in the appropriate direction.

Scientifically based analyses and findings, newly developed methodologies, and solutions geared towards implementation are key elements and outcomes of our work. Building on high levels of expertise and interdisciplinary cooperation, we advise our clients on constructive development pathways that lead towards a sustainable future. And we translate knowledge into practice: We mediate between disparate positions and support decision-making with the aim of encouraging eco-friendly lifestyles.

### Our work is:



### Independent

Our research is conducted at the interface between technology, policy-making and society, with the aim of developing strategies and principles for preserving the environment and hence the resources on which our lives depend. We are value-oriented researchers and advisors, independent of any vested interests, who devise strategies for a future that is sustainable and liveable.

#### Visionary

Our clients are active in policy-making, business and civil society; for them we develop novel solutions, especially in areas in which changing course seems particularly urgent. Whether the subject is the transition to sustainable energy systems or the Blueprint Germany project, our studies show what the future could look like. We mediate in situations where opposing interests obstruct progress. We develop special research methods in order to uncover new ways of arriving at sustainable, practical solutions.

#### International

We shed light on the questions and challenges posed by aspects of sustainability such as climate protection and resource conservation, taking account of both European and international points of view. Our interdisciplinary project teams combine the expertise of natural scientists, economists, social scientists, engineers, lawyers and communications specialists. In addition, the Oeko-Institut cooperates with other research institutions and plays an active part in national and international networks, bodies and commissions.

# The Oeko-Institut: Facts and figures

### Staff

The Oeko-Institut employs more than 130 staff at its three sites in Freiburg, Darmstadt and Berlin – more than 85 of whom are researchers.

Family-friendly policies are important to us. We offer our staff members flexible working hours and part-time employment: the proportion of part-time jobs increased to 57 per cent in 2010. The Oeko-Institut is a member of the Freiburg Family-Friendly Business Network.

For us, gender parity in our workforce, as well as in membership of bodies such as the Committee and the Advisory Board, is a given. In 2010 women accounted for 60 per cent of our workforce and 49 per cent of our researchers.



### Turnover

Financial resources come mainly from third-party, project-based funding as well as from member subscriptions and donations.



#### **Charles Darwin**



British visionary, naturalist and discoverer "All that is against nature cannot last in the long run."

# Visionary ideas, practical implementation

Selected projects in 2010

The discovery of an active substance is worthless unless it is processed into a medicinal product. The same applies to a "green" fuel without an engine to run on it. As these examples show, there are two essential aspects to science: a high level of theoretical expertise, and practical application. Science is not just about innovation; it must also have practical relevance in today's world. Scientific visions should not be an end in themselves; they need to offer lasting benefits to the general public. That is what the Oeko-Institut stands for.

Our projects bear witness to this approach. Our expertise in the field of environmental law, for example, is useful in mediating in the conflict of interests over the expansion of Frankfurt Airport. The expertise available in our Sustainable Products & Material Flows and Infrastructure & Enterprises Divisions comes into its own in the calculation of CO<sub>2</sub> footprints and thus helps to reduce climate-damaging emissions. In regions of relevance to the final storage of nuclear waste, researchers in our Nuclear Engineering & Facility Safety Division are looking at ways of involving local stakeholders in decision-making processes. The pathway towards a sustainable future is always a key focus of our work - from the provision of advice and support to the German Government in the international climate process to the preparation of electricity market analyses by experts in our Energy & Climate Division.

In 2010, more than 85 researchers at the Oeko-Institut handled around 350 projects in total. The following pages offer you an insight into ten of them. Is bioenergy naturally sustainable? Is nuclear energy genuinely safe? Is there a realistic future for electric cars? These are just some of the issues explored by the Oeko-Institut. As for the answers: the "Bio-global" project identifies the criteria for sustainable biomass use; the Nuclear Engineering & Facility Safety Division analysed a list of defects at Biblis B nuclear power plant and worked on the issue of safety reviews for the interim storage of nuclear waste; and several pilot projects investigated the environmental compatibility, market readiness and sustainability of electromobility. Other issues in focus include the "Sustainability Check" and register of nanoproducts, the options for smart energy grids, concepts for joint recycling projects involving European countries and Africa, and the effectiveness of Corporate Social Responsibility (CSR) strategies.

You are quite likely to come across one or more of our projects in your daily life at some point, especially if you live in Germany. It might be the "Climate Angel", which will soon be a quality label for climate-friendly products. Or it might be a ticket to a football match which also allows you to use local public transport – part of our comprehensive environmental strategy for the Women's World Cup. These are just some of the ideas that inspire us – and we hope they will do the same for you.

# Is "nano" the future?

Sustainability with nanoproducts: opportunities and risks

Efficient solar cells, optimised filter systems for drinking water, better insulation of buildings: nanotechnologies offer the promise of "green" progress in many areas of relevance to sustainability. At the annual conference to mark the 30th anniversary of the Oeko-Institut's Darmstadt site in 2010, representatives from science, politics, business and society discussed the opportunities and risks of nanoproducts, also in light of the promising new approaches being developed by the Oeko-Institut.

Which specific benefits does nanotechnology offer in the realms of climate change, resource conservation and human health? Nanoproducts are thought to offer great potential in the fight against climate change, e.g. in renewable energies. But will nanotechnology genuinely deliver on its promise of susta-inability, and if so, how? This was the subject of lively debate at the 2010 conference.

The first workshop considered the specific contribution that nanotechnologies can make to finding solutions to social problems, and also looked at ways of quantifying the improvements achieved as a result of nanoproduct use. The second workshop focused on an integrated risk and opportunity assessment for nanoproducts and presented some of the tools that already exist or are currently being developed. The Oeko-Institut's "Sustainability Check for nanoproducts" project also featured in the discussion. This tool, developed especially for nanoproducts, enables an integrated sustainability assessment to be carried out using specific key indicators, opening the way for strategic optimisation of the analysed products by the companies concerned.

"The question which must be asked in relation to all nanoproducts is which specific benefits they bring for the environment, climate and resource conservation. With the Sustainability Check and the product register, we are helping to find answers. The companies currently operating in the nanotechnology sector will only become permanently and successfully established in the market place in future if the positive contributions made by nanotechnology to the attainment of sustainability goals are clearly apparent."

Martin Möller is a qualified environmental engineer. He has worked in the Sustainable Products & Material Flows Division of the Oeko-Institut since 2002, where he is a group leader. His research focuses particularly on sustainability checks for technologies, processes and products.

### Sustainability Check for Nanoproducts

Legal feasibility study on the introduction of a nanoproduct register

Martin Möller (m.moeller@oeko.de), Andreas Hermann, LL.M. (a.hermann@oeko.de)
Dr. Christoph Pistner (c.pistner@oeko.de)
Sustainable Products & Material Flows, Environmental Law & Governance, Nuclear Engineering & Facility Safety
Federal Environment Agency (Sustainability Check), Federal Ministry for the Environment,
Nature Conservation and Nuclear Safety (BMU) (Product Register)
April 2009 - May 2011 (Sustainability Check), August 2009 – February 2010 (Product Register)
http://www.bmu.de/gesundheit_und_umwelt/downloads/doc/46240.php

The third workshop turned its attention to legal matters and, in particular, the regulatory framework that must be in place if the sustainability potential of nanoproducts is to be fully tapped. Within this framework, the Oeko-Institut's regulatory concepts were discussed. As no legally binding definition of nanomaterials currently exists and there is no requirement for the use or presence of nanomaterials in consumer products to be explicitly disclosed or for information to be provided, there is no reliable way of identifying these products and their potential risks. A nanoproduct register could provide the solution here. The Oeko-Institut's regulatory proposal makes it possible to clearly identify nanoproducts and the materials that they contain, resulting in better assessment of potential risks to the environment and human health.



#### **Thomas Edison**



American inventor and businessman "There's a way to do it better - find it."

# An angel for the climate

A new label for sustainable consumption

Nowadays, choosing energy-efficient appliances such as a new freezer is quite straightforward: the EU Energy Label provides guidance for consumers with its set of energy efficiency classes. But what about other climate-relevant factors – such as whether a product can be recycled? And where can consumers turn who want to be sure that a product such as a new shower head is sustainable? Enter "Top 100: Eco-label for particularly climate-relevant products and services". Funded by the German Environment Ministry, it establishes the basis for labelling climate-friendly products.

Private households cause a quarter of greenhouse gases in Germany and therefore still harbour major potential for reduction in a variety of areas – from heating to travel and even coffee-making. So in future, Germany's best-known eco-label, the "Blue



Angel", will help consumers to identify top products for climate protection. In 2009, the "Blue Angel" eco-label acquired the additional tagline "Protects the climate". Now, as the "Climate Angel", it aims to help consumers opt for products that are sustainable and climate-friendly.

The "Top 100" project, carried out in conjunction with the Institute for Energy and Environmental Research (IFEU) and the Institute for Environmental Strategies (Ökopol), lays the foundations: in successive stages, the top 100 product groups in private energy consumption are being identified. Then as the next step, the Oeko-Institut is developing award criteria to mark products and appliances that are especially sustainable and climate-friendly.

During the first phase of the project, the Oeko-Institut puts the first ten product groups under the microscope; these included washing machines, DVD players, and cooling and refrigeration devices. They were evaluated using the Oeko-Institut's own PROSA (Product Sustainability Assessment) method for analysing and developing sustainable products and product portfolios. PROSA takes account of all relevant environmental and health aspects (greenhouse gas emissions, resource consumption, noise etc.) but also includes a life cycle cost calculation and cost-benefit analysis, and considers social aspects as well.

The way forward towards sustainable consumption is clear. The Oeko-Institut, working closely with the Federal Environment Agency (UBA) and RAL gGmbH – the organisation responsible for awarding the "Blue Angel" – has already defined award criteria for 40 product groups. The number will increase to 100 product groups by 2012. It's now up to the producers to make consumers aware that their products conform with the criteria and display the label.

"The Blue Angel has been the symbol of environmentally conscious consumption for more than 30 years. Which quality mark could be more suitable as an identifier of genuinely sustainable consumer products? It is not meant to compete with the European Ecodesign Directive, whose purpose is to remove highly inefficient products from the market. I wish the Climate Angel every success, and I hope that it will be accepted by producers and consumers alike – for it has the potential to become the key label for climate-conscious consumption."

Sustainable production and consumption are the main focus of Dr. Dietlinde Quack's work. A graduate in biology, with additional qualifications in environmental management, she joined the Oeko-Institut in 1999 and has been the deputy head of the Consumption Group in the Sustainable Products & Material Flows Division since 2009.

Top 100: Eco-label for particularly climate-relevant products and services

Contacts: Institute Division: Sponsor: Cooperation partner: Timescale: Further information: Dr. Dietlinde Quack (d.quack@oeko.de), Jens Gröger (j.groeger@oeko.de) Sustainable Products & Material Flows Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (BMU) Institute for Energy and Environmental Research (IFEU), Institute for Environmental Strategies (Ökopol) July 2009 - September 2012 www.blauer-engel.de

## Smart infrastructure

The eTelligence project: the electricity market of the future

Rush to unplug the battery chargers in the morning when electricity is expensive, and do the laundry in the afternoon when the price is right and the wind is blowing – this is flexible electricity usage. And with the eTelligence project launched by the Federal Ministry of Economics and Technology (BMWi), it is no longer just a vision for the future. As part of the Ministry's "E-Energy" technology funding initiative, six partners in a consortium led by EWE are developing an intelligent network of decentralised electricity production, distribution and consumers using modern information and communication technology (ICT) in smart grids. As part of the project, the Oeko-Institut is exploring to what extent there is potential to cut  $CO_2$  emissions and reduce costs through the use of smart grids across the board. The legal and regulatory frameworks are also being analysed.

Smart grids mean flexibility. They are a response to the challenge of balancing out the fluctuations and uncertainties that will result from a growing share of wind and photovoltaic electricity feeding in the power grids. They also allow the consumer to gear their electricity usage to price – for example, through real-time pricing information displayed in the home. Network operators can also benefit from this flexibility by connecting more decentralised and renewable production facilities to the grid at lower cost.

A market place for electricity products is the centrepiece of the eTelligence project. Here, decentralised power producers and consumers can sell and purchase electricity on a flexible basis with the assistance of a modern ICT infrastructure consisting of smart meters and a virtual power plant. The concept is now undergoing practical trials in the model region Cuxhaven, where

"Smart grids offer advantages for everyone: for consumers, by cutting their electricity costs; for producers, who benefit from increased efficiency, and not least the climate, which benefits from an increased share of wind and solar power in our electricity consumption. We need our electricity infrastructure to be modernised, and we need to make use of the opportunities afforded by a decentralised energy supply. The eTelligence project partners are establishing the bases for this process."

Transformation of the energy sector is a key focus of the work of Dierk Bauknecht, who graduated in political science and holds a Master's degree in Science and Technology Policy. He joined the Oeko-Institut in 2001, where his research includes the analysis of network regulation and integration of distributed generation. an innovative infrastructure has existed since 2008. Field testing with decentralised producers and cold storage facilities began in summer 2009.

Due to their flexibility, integration of consumers and decentralised generation, smart grids can cut costs and  $CO_2$  emissions while maintaining security of supply. There is also great potential to make savings in conventional power plants – for example by avoiding inefficient part-load operation. In the medium term, smart grids can help, above all, to feed more renewable energies into the grid. These effects are being investigated by the Oeko-Institut with the aid of the PowerFlex energy system model.



### eTelligence

Contacts: Institute Division: Client: Cooperation partner: Timescale: Further information: Dierk Bauknecht (d.bauknecht@oeko.de), Dr. Matthias Koch (m.koch@oeko.de) Energy & Climate Protection Federal Ministry of Economics and Technology (BMWi) EWE AG, BTC, Energy & Meteo Systems, Fraunhofer Energy Alliance, Offis November 2008 - October 2012 www.etelligence.de, www.e-energy.de Sokrates



Greek philosopher "He who believes to be, has ceased to become."

# Greenwashing or genuinely effective?

An EU research project on the impact of Corporate Social Responsibility

A Corporate Social Responsibility (CSR) strategy is a corporate commitment which always has positive resonance – for it centres on sustainable development, with a focus on the environment and climate but also on workers and wider society. But how much impact do the business community's sustainability programmes have in reality? Which prerequisites must they fulfil to generate real benefits beyond improving the company's image? These are just some of the questions being explored by the Oeko-Institut together with 16 European partners within the framework of the "IMPACT – Impact Measurement and Performance Analysis of CSR" project.

What is the value-added generated by CSR, and how can it be measured? The partners will address this question within the framework of the project, which runs until 2013. IMPACT makes a systematic attempt to measure the contribution of CSR to the policy goals of the European Union in the fields of environment and climate protection, growth and competitiveness, quality of jobs and working conditions. With the Oeko-Institut as the lead agency, CSR impact is assessed and analysed at multiple levels – from the company to the European level.

Sectors to be analysed in particular depth are: Retail, ICT, Automotive, Construction & Real Estate, and Textiles. IMPACT will develop and apply methodologies for CSR impact assessment in a macro-social context for the first time, combining various empirical methods – econometric analysis, in-depth case studies, network analysis and Delphi study.

There is no doubt that corporate sustainability strategies can make a contribution to the social, economic and environmental goals of the European Union. The project now aims to measure this contribution by showing how CSR increases sustainability and reduces negative impacts. Policy-makers and civil society are thus equipped with an evaluation tool determining which political and social conditions must be in place for CSR to generate value-added for the environment and society, and where intervention by the state continues to be required. The project is benefiting the corporate sector as well: IMPACT provides a framework in which to classify and evaluate CSR measures and implement effective approaches within companies.

Katharina Schmitt

"In which areas do corporate sustainability strategies have a positive impact on the environment and society? And where is it simply "greenwashing" that produces little by way of genuine change? The IMPACT project helps us understand and evaluate CSR strategies, and also defines the limits to CSR. Policy-makers benefit, but so do the companies themselves: by helping them to develop a CSR strategy that assists them to achieve their desired goals."

What is the role of business in working towards sustainable development? This question is the focus of Katharina Schmitt's research at the Oeko-Institut. Since completing her studies in European Business Management in 2004, she has analysed the impacts of corporate sustainability strategies and their scope and interaction with politics and society.

IMPACT - Impact Measurement and Performance Analysis of CSR

Contact: Institute Division: Client: Cooperation partner: Timescale: Further information: Katharina Schmitt (k.schmitt@oeko.de) Environmental Law & Governance European Commission 16 European cooperation partners 2010 - 2013 http://www.csr-impact.eu

# A wind turbine in the tank?

Electromobility research projects

Hybrid technology, it seems, is now a status symbol for the climate-conscious motorist. But where does that leave "real" e-mobility – in other words, mobility powered entirely by electricity? Does it have similar potential to win over consumers with its environmental credentials? The contribution made by electric vehicles to reducing  $CO_2$  emissions will depend to a large extent on whether there is sufficient additional renewablesgenerated electricity available – beyond current expansion targets. The Oeko-Institut is therefore engaged in various research projects which explore key issues for the future of electromobility.

Part of the research looks at possible applications for electromobility by undertaking scientific analyses of mobility patterns and carrying out socio-empirical studies to determine actual user acceptance. Due to the long battery charging times and reduced range of electric vehicles, promoting electric mobility therefore requires innovative concepts of vehicle utilisation showing how smart integration of these vehicles with other modes of transport is possible. Besides vehicle technology and the interaction between the transport and the energy sectors, the Oeko-Institut also explores alternative concepts of mobility.

In order to determine the environmental impacts and emissions of electric vehicles, vehicle usage and electricity generation issues must be considered in tandem. In this context, the OPTUM project (Environmental Relief through Electric Mobility) looks at one of the core issues of sustainable electromobility: how electric vehicles can make the highest possible contribution to reducing greenhouse gas emissions. Various scenarios for the possible development of

"Market potential, user acceptance, vehicle technology, resource demand and environmental impacts: electromobility has many different and exciting dimensions and raises many issues which are still unresolved. The Oeko-Institut's research projects are multifaceted and mirror this diversity. We will not know which contribution electromobility can make to cutting  $CO_2$  emissions until we have answers to these unresolved questions."

Florian Hacker holds a degree in geoecology and has worked in the Oeko-Institut's Infrastructure & Enterprises Division since 2007. His main area of research is sustainable mobility, with a particular focus on alternative propulsion technologies and fuels and the development of strategies for CO<sub>2</sub> reduction in the transport sector. electromobility, taking account of vehicle technology, user acceptance and power generation, as well as the political and legal frameworks, enable potential impacts to be identified.

The focus of the accompanying research on "e-mobility" is the analysis of usage patterns and future market potential for small electric private and commercial vehicles. The potential of electric vehicles in company fleets is investigated by the "Future Fleet" project.

Resource consumption and recycling are the focus of the "LiBRi" and "OPTUM Resources" projects. Batteries and electric motors require some very rare resources – posing a challenge for production and recycling. The efficient and environmentally compatible recycling of lithium ion batteries (LiBRi) and global resource availability and recycling options (OPTUM Resources) are therefore important areas of research.



#### FutureFleet, LiBRi, Optum, Optum Resources, E-Mobility

Contacts:	Florian Hacker (f.hacker@oeko.de), Dr. Wiebke Zimmer (w.zimmer@oeko.de)
Institute Division:	Infrastructure & Enterprises
Client:	Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (BMU),
	Federal Ministry of Transport, Building and Urban Development (BMVBS)
Cooperation partner:	Institute for Social-Ecological Research (ISOE), Daimler AG, Technical University of Clausthal,
	Umicore, Hochschule Mannheim – University of Applied Sciences, MVV, SAP
Timescale:	October 2009 - October 2011
Further information:	http://www.oeko.de/aktuelles/dok/993.php

#### Aristoteles



Greek philosopher "It will contribute towards one's object, who wishes to acquire a facility in the gaining of knowledge, to doubt judiciously."

### **Reviews required**

Safety deficits at Germany's old nuclear power plants

Almost 30 years of age? For nuclear power plants, that's still the young generation. Only three of the 17 German nuclear power plants currently in operation fall into this category: the other 14 have already passed the 30-year-mark, some of them by a considerable margin. As a result, the older nuclear power plants in particular no longer comply with the latest technical standards. This makes them more prone to security risks and accidents. This is convincingly demonstrated by an analysis of 210 potential safety deficits at nuclear power plant Biblis B.

The catalyst for the analysis was a list of deficits produced by the German section of International Physicians for the Prevention of Nuclear War (IPPNW), which was submitted as part of a legal action before an administrative court with the aim of closing down Biblis B. In response, the Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (BMU) commissioned the Oeko-Institut to review the identified deficits in terms of their technical safety relevance.

Although the review did not confirm the relevance of all the safety deficits identified by IPPNW, it showed that for around 80 of the points listed, there are indeed genuine safety-relevant deviations from current scientific and technical standards. They include deficiencies in the materials and manufacturing of components, inadequate physical separation of safety-relevant subsystems, an inadequate number of such subsystems, and a failure to achieve adequate levels of automatisation. The deficits show that safety and technical standards at nuclear power plants require constant monitoring and upgrading, with a particular focus on potential risks. It is impossible to bring the older plants up to current technical standards in all respects – for example, their fundamental design features generally cannot be changed. However, this does not preclude the option of retrofitting, especially as new technical knowledge and options mean that a higher safety standard can, and must, be realised nowadays.

Based on the available documentation, the Oeko-Institut was not able to determine conclusively, in every case, to what extent individual deficits have already been rectified. Additional documentation would be required for a conclusive review. However, the findings to date make it clear that measures to improve safety are required as a matter of urgency.

"Older nuclear power plants are the reality in Germany. You don't need to be an expert to know that technical standards and options change during the long lifetimes of the plants. What we need now are binding regulations on retrofitting, even if the older plants cannot be brought up to the standards achieved at new facilities. This is particularly important in view of the recent extension of nuclear power plant lifetimes and the renewed debate about this issue."

Simone Mohr holds degrees in engineering and has worked for the Oeko-Institut since 1995. Her research focuses primarily on safety reviews and evaluations of nuclear facilities and the development of nuclear guidelines and standards. She was also a member of the Facility Radiation Protection Committee of the Federal Environment Ministry's Commission on Radiological Protection (SSK).

Review of the possible safety deficits at Biblis nuclear power plant identified by IPPNW Relevance check of 210 "serious safety deficits" identified at Biblis B (Annex A of the Statement justifying the legal action)

Contact: Institute Division: Client: Timescale: Further information:

Simone Mohr

Simone Mohr (s.mohr@oeko.de) Nuclear Engineering & Facility Safety Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (BMU) November 2009 - June 2010 http://oeko.de/aktuelles/dok/1060.php

# Treasure in the trash

E-waste recycling in Ghana

One person's trash is another person's treasure. A broken TV, for example – like other waste electrical and electronic devices, also known as e-waste – contains valuable metals such as aluminium, steel and copper. Nowadays, the disposal and recycling of e-waste provide a livelihood for many people in West Africa. However, inappropriate handling of harmful substances such as lead or cadmium can hurt health and the environment. So on behalf of the Dutch Environment Ministry and the Dutch recycling industry association, the Oeko-Institut carried out a study to determine which environmental and social standards are required for the recycling of e-waste in Ghana – and proposed a cooperative solution to current problems.

In Ghana, the e-waste recycling market provides work for 20,000 people, generates between 100 and 250 million US dollars per year and sustains up to 200,000 people in the country. As this snapshot shows, this market is extremely important for very large numbers of people. However, it also has numerous negative impacts on people and the environment. Not only are the working conditions extremely poor; it also poses a severe threat to human health and the environment. In particular, the improper processing of e-waste can result in the release of toxic substances. This can occur, for example, if PVC coated cables are burned to recover copper. At the same time, many valuable substances such as gold or palladium that are present in the e-waste are lost.

A two-step model of cooperation between Ghana and industrialised countries could provide the remedy. Ghana can provide a comparatively low-cost workforce and an effective collection and sorting system, while industrialised

"What people are achieving in terms of e-waste recycling in Ghana is impressive. At the same time, however, their health and the environment give us real cause for concern. This is evident simply from the fact that the life expectancy of workers at Agbogbloshie metal scrap yard is well below the local average. Part of the solution lies in more intensive cooperation: if we pool our expertise and structures, we can achieve a great deal."

Since joining the Oeko-Institut in 2005, Andreas Manhart's research has examined how social and environmental standards can be ensured even in highly ramified and globalised production chains. A geography graduate, his main interest is sustainable production, consumption and resource efficiency, with a focus on the electrical and electronic sectors. countries possess modern recycling technologies. After the first recycling step in Ghana, the e-waste can then be transferred to highly efficient refineries in the industrialised countries, which can recover up to 17 precious metals and dispose of harmful substances in clean processes. The income acquired by Ghana from the partnership could be used to improve working conditions and invest in environmental protection in Ghana.

For this model of environmental protection and social responsibility to become reality, however, effective measures to combat the illegal trade in e-scrap are essential. UNEP's "e-Waste Africa" project – with the involvement of the Oeko-Institut- is providing solutions. It therefore analyses trade statistics and researches the export data of major ports such as Rotterdam.



Socio-economic assessment and feasibility study on sustainable e-waste management in Ghana

Contact: Institute Division: Client:

Cooperation partner: Timescale: Further information: Andreas Manhart (a.manhart@oeko.de) Sustainable Products & Material Flows Ministry of Housing, Spatial Planning and the Environment of the Netherlands (VROM-Inspectorate) and the Dutch Association for the Disposal of Metal and Electrical Products (NVMP) Green Advocacy Ghana September 2009 - July 2010 http://www.oeko.de/oekodoc/1057/2010-105-en.pdf

### Albert Einstein



German physicist "It is more difficult to overcome a prejudice than to split the atom."

# **Climate-friendly football**

Green Goal 2011: the environmental initiative for the FIFA Women's World Cup

During Germany's "summer fairy tale" back in 2006, fairness was writ large in German football stadiums – especially where climate and environmental performance were concerned. Now it's the turn of the FIFA Women's World Cup, which will be held in Germany in 2011 – and again, the aim is to minimise its climate and environmental footprint. The Organising Committee (OC) is working with the Oeko-Institut to develop a scheme known as Green Goal 2011. With support from the German Environment Foundation (DBU), a programme of measures is being implemented for the venues, along with public awareness-raising and emissions offsetting.

Transport is vital to a successful football championship, as players, support staff, journalists and fans

Daniel Bleher

flock to the stadiums. Then there is the energy and water consumption at the venues themselves – for the showers, media technology, and on-site catering for players and fans, for example. In short, major sporting events always come at a cost to the environment and the climate. The Oeko-Institut has calculated that the Women's World Cup will produce up to 50,000 tonnes of additional greenhouse gas emissions. To mitigate its impacts, the Oeko-Institut is developing a comprehensive environmental programme and is working to establish the event as a model of best practice for other major events as well as in sports for all.

Green Goal 2011 centres around five areas: water, waste, catering, energy and mobility. As part of the mobility strategy, for example, the entry ticket for the World Cup doubles up as a ticket for public transport. Unavoidable greenhouse gas emissions will be offset with investments in environmental and climate projects.

The stadiums themselves will be a key focus of attention: for the first time at a World Cup, all nine stadiums participating will adopt an environmental management system. Certification to "ÖKOPROFIT" standards will boost environmental awareness among stadium operators – and will give a sustained boost to their economic position as well.

Implementing Green Goal 2011 will cost around 800,000 euros – but this does not deter the German Football Association, which is organising the championship. Like its forerunner in 2006, Green Goal 2011 will be a model of best practice for major sporting events in the future. Back in 2006, the environmental programme for the World Cup encouraged FIFA to incorporate environmental criteria into its application process for the first time, with effect from 2018.

"The aim of Green Goal 2011 is to minimise the championship's negative impact on the climate and the environment and thus make environmental and climate protection one of the winners. Green Goal will have an even greater benefit if it becomes a model of best practice for other organisers of events in elite and popular sport – especially if it wins fans over to protecting the environment."

Sport and the environment are a main area of research for Daniel Bleher. A graduate in geography, he has worked for the Oeko-Institut since 2007 and develops environmental strategies for major sporting and other events.

#### Green Goal 2011

Contacts: Institute Division: Client: Sponsor: With support from Daniel Bleher (d.bleher@oeko.de), Martin Schmied (m.schmied@oeko.de) Infrastructure & Enterprises Organising Committee of the FIFA Women's World Cup Germany 2011 German Environment Foundation (DBU) FIFA Women's World Cup Environmental Advisory Board: Claudia Roth, Dr. Norbert Röttgen, Professor Klaus Töpfer, Dr. Fritz Brickwedde, Dr. Michael Vesper, Eberhard Brandes, Rolf Hocke and Hannelore Ratzeburg, with input from Steffi Jones und Dr. Theo Zwanziger. 2010 - 2011 http://greengoal.fifa.com/

Timescale: Further information:

# **Bio-global**

### Biomass for international trade: strategies and standards

Wood for heating, biofuels in the petrol tank, electricity generated from cereals: biogenic feedstocks are already an integral part of our energy supply. But just how sustainable are they? This issue was investigated by the Oeko-Institut on behalf of the Federal Environment Agency (UBA). The "Bio-global: Development of strategies and sustainability standards for the certification of biomass for international trade" project, carried out in conjunction with the Institute for Energy and Environmental Research (IFEU), has designed solutions for sustainable biomass production.

On the face of it, a mandatory biofuel quota would appear to be a good idea in view of biofuels' anticipated contribution to climate protection. However, the expansion of bioenergy could impinge on sustainability goals if ecologically valuable forests and wetlands are converted into arable land for feedstock production, or if food crops are displaced by energy crops. So how can biomass be produced sustainably? How can we protect species diversity and the climate and also safeguard food security?

The "Bio-global" project developed two key approaches here: it investigated how and where degraded or abandoned land could be used to cultivate biomass, the aim being to avoid indirect land use change if food and feed production is displaced to other areas. Three case studies in Brazil, China and South Africa identified areas which, if used correctly, could generate ecological and social benefits – albeit to a lesser extent than previously assumed. The concept of the use cascade is the second core element of the study: renewable resources should mainly be used to produce food and materials, with energy being generated from waste and residues. This reduces the risks to the climate and environment, increases resource efficiency and rules out the possibility of competition or conflict over resource use. The prerequisite, however, is to develop efficient recycling logistics systems and encourage technological advances in the use of waste and biomass residues.

Bioenergy can protect the climate – provided that the above criteria are met. Evidence of sustainability is therefore essential if bioenergy is to be used in a meaningful way.



"Biomass does not automatically bring benefits for the environment and the climate, so the EU's definition of sustainability criteria as well as targets is very welcome. The requirement for evidence of sustainability, introduced at the start of 2011, is a step in the right direction. However, if our aim is genuinely to base 15 per cent of global energy production on renewable resources – which is theoretically possible – there are many more steps ahead of us."

Physicist Uwe R. Fritsche has worked for the Oeko-Institut since 1984. His research includes modelling the lifecycles of energy and material systems, especially biomass. He heads national and international research groups on sustainable energy scenarios and climate protection.

"Bio-global: Development of strategies and sustainability standards for the certification of biomass for international trade"

Contact: Institute Division: Client: Cooperation partner: Timescale: Further information: Uwe R. Fritsche (u.fritsche@oeko.de) Energy & Climate Protection Federal Environment Agency (UBA) Institute for Energy and Environmental Research (IFEU) 2007 - 2010 http://www.umweltbundesamt.de/uba-info-medien/3960.html

### Marie Curie



Polish physicist "One never notices what has been done; one can only see what remains to be done."

# Safety of interim nuclear storage

Guidelines for periodic safety reviews

Radioactive materials and waste pose very significant risks. In order to protect human health and the environment, safety and security are therefore one of the highest priorities in all areas of nuclear waste disposal, including the interim storage of high-level radioactive waste. In Germany, there is likely to be a continued need for interim storage of irradiated fuel elements and other heat-generating radioactive waste for several decades to come. From a safety perspective, this poses a major challenge, requiring the development of strategies and guidelines for periodic safety reviews.

Safety in interim storage facilities over a prolonged time period places a great many demands on the people involved and on the materials used. Issues of relevance in this context are the progressive ageing of materials and equipment, changes in conditions within the storage containers, and ensuring a reliable supply of replacement components. Furthermore, "non-technical" ageing also plays a key role in this context: as part of the task of ensuring safe storage over many decades, it is essential to consider challenges such as human resource planning, maintenance, and the exchange and documentation of knowledge and information.

The approach increasingly being adopted at international level involves carrying out periodic safety reviews (PSRs) in the interim storage facilities every ten years or so. This includes a comprehensive assessment of safety status and consideration of changed requirements over time – both at the facility itself and when measured against scientific and technological progress. For example, interim storage site operators must be able to demonstrate that the facility continues to comply with current safety standards and that any defects identified are rectified.

In Germany, the practical process for carrying out periodic safety reviews for facilities storing high-level radioactive waste is still being developed. The Oeko-Institut is one of the partners working on its development. Strategies and recommendations for periodic safety reviews provide the basis for this process. The Nuclear Waste Management Commission (ESK) set up by the Federal Environment Ministry, whose members include experts from the Oeko-Institut, have developed proposals for a set of guidelines which will be trialled in the coming years.

"A high level of safety must be guaranteed in the interim storage of radioactive waste. Over time periods of 40 years or more, we need appropriate consideration of long-term safety-relevant aspects. The international community is a step ahead of us here, but the introduction of periodic safety reviews in Germany is now narrowing the gap considerably."

Angelika Spieth-Achtnich is a technical biologist and has worked for the Oeko-Institut since 2007. The disposal and final storage of radioactive waste are the main focus of her research, which also includes environmental impact evaluations for nuclear facilities.

Safety in the long-term storage of irradiated fuel elements and heat-generating radioactive waste

Contact: Institute Division: Client: Cooperation partner: Timescale: Further information:

Angelika Spieth-Achtnich

Angelika Spieth-Achtnich (a.spieth-achtnich@oeko.de) Nuclear Engineering & Facility Safety Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (BMU) Gesellschaft für Anlagen- und Reaktorsicherheit mbH (GRS) Already under way for several years via various BMU projects. Opinions of the Nuclear Waste Management Commission (ESK) can be accessed at http://www.entsorgungskommission.de

# Making visions a reality: The Oeko-Institut's clients

Set out below is a cross-section of more than 90 political and public institutions throughout Germany and Europe as well as businesses and civil society stakeholders with which we collaborated during 2010:

### Politics

- Association of Issuing Bodies (AIB)
- Baden-Württemberg Ministry of the Environment, Nature Conservation and Transport
- Deutsche Gesellschaft f
  ür technische Zusammenarbeit (German Technical Cooperation – GTZ)
- European Environmental Citizens Organisation for Standardisation (ECOS)
- European Commission: Directorates-General for Energy, Research, Environment, Enterprise and Industry; Eurostat; Eaci; Intelligent Energy Europe
- European Environment Agency (EEA)
- Federal Agency for Nature Conservation (BfN)
- Federal Environment Agency, Berlin (UBA)
- Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (BMU)
- Federal Ministry of Economics and Technology (BMWi)
- Federal Ministry of Education and Research (BMBF)
- Federal Ministry of Finance (BMF)
- Federal Ministry of Transport, Building and Urban Development (BMVBS)
- Federal Statistical Office
- Freiburg city environment department
- German Federal Environmental Foundation (DBU)
- Hamburg city authority
- KfW development bank
- La Direction Régionale de l`Environnement, de l`Aménagement et du Logement d`Alsace
- Land (regional state government) of Lower Saxony
- Lower Saxony Ministry of the Environment and Climate Change Mitigation
- Netherlands Ministry of Housing, Spatial Planning and the Environment
- North Rhine-Westphalian Ministry of

Economics, Energy, Building, Housing and Transport

- North Rhine-Westphalian State Agency for Nature Conservation, Environmental Affairs and Consumer Protection
- Projektträger Jülich
- Schleswig-Holstein Ministry of Agriculture, Environment and Rural Affairs
- Schleswig-Holstein Ministry of Social Affairs, Health, Family, Youth and Senior Citizen Affairs
- State of Washington
- The Greens / EFA Group in the European Parliament
- United Nations Environment Programme

### Industry

- ARGE Qatar 2022 AS&P/ProProjekt
- Azura-DISMA International
- BASF
- Bio-Wärme Gräfelfing
- Deutsche BP
- Deutsche Telekom
- Energiecontracting Heidelberg
- ENTEGA
- Erdgas Mobil
- Eurima
- Eurometaux
- Griesson
- Kraftwerke Mainz-Wiesbaden
- Krombacher Brauerei
- Merck
- Metro
- QS quality assurance for food
- REWE Group
- SAP
- Schenker Essen
- Schluchseewerk
- Solvay Foods
- Telekom
- Vaillant

### **Civil society**

- AEA Association of European Airlines
- BEUC (The European Consumers'

### Organisation)

- Bewerbungsgesellschaft München
  2018 GmbH
- Climate Strategies Cambridge
- Deutscher Olympischer Sportbund
- Deutsches Tiefkühlinstitut (dti)
- EnergieVision e.V.
- Federation of German Industries (BDI)
- German Chemical Industry Association
   (VCI)
- German Football Association (DFB)
- German Fruit Juice Industry Association (VdF)
- German Heat Pump Association (BWP) and Technical Group for Efficient Energy Applications (HEA)
- German Institute for Standardization
   (DIN)
- Gesamtverband der Aluminiumindustrie (GDA)
- Gesellschaft für Anlagen- und Reaktorsicherheit (GRS)
- Greenpeace Europe
- GSB Sonderabfallentsorgung Bayern
   GmbH
- IVE Consulting Company for Traffic and Railway Engineering Ltd.
- IZT Institute for Futures Studies and Technology Assessment
  - Landschaftsverband Reinland
- Legacy for the Future Foundation
- Lower Saxony Consumer Advice Centre
- Qatar Football Association
- Research Institute of Organic Agriculture (FiBL)
- RWTH Aachen University
- THEMA 1 GmbH
- Verbraucher-Initiative federation of consumer initiatives
- Wuppertal Institute
- WWF Germany

A full list of references can be found on the Internet at www.oeko.de/referenzen2010



# Visionaries at work: Organisation and contacts

#### **Executive Board**



Michael Sailer Chief Executive Officer m.sailer@oeko.de Phone: +49 30 405085-120

### **Advisory Board**

Prof. Dr. Armin Bechmann Prof. Dr. Nina Buchmann Dr. Susanne Dröge Dr. Erhard Eppler Prof. Dr. Martin Führ



Dr. Rainer Grießhammer

r.griesshammer@oeko.de Phone: +49 761 45295-49

Dr. Christian Hey Prof. Dr. Regine Kollek Claudia Langer Prof. Dr. Heinrich Freiherr von Lersner Prof. Dr. Ellen Matthies

Dr. Kerstin Mölter

k.moelter@oeko.de Phone: +49 761 45295-14

Prof. Dr. Peter C. Mayer-Tasch Prof. Dr. Eckard Rehbinder Prof. Dr. Lucia Reisch Dr. Christian Schütze Prof. Dr. Dr. h.c. Udo E. Simonis

### External, honorary Committee members

#### **Helmfried Meinel**

First Chair of the Committee; Member of the management team at the Consumer Advocacy Centre of North Rhine-Westphalia

Dorothea Michaelsen-Friedlieb Second Chair of the Committee; Business consultant for non-governmental organisations

Nicola Moczek German Geothermal Association Director

### Dr. Barbara Praetorius

Head of the Strategy & Energy Sector Policy Division of the German Association of Local Utilities (VKU)

#### Nadia vom Scheidt

Head of the International Affairs Division at the German Federal Office of Civil Protection and Disaster Assistance

#### **Kathleen Spilok**

Freelance science journalist and project coordinator at the Baden-Württemberg Chamber of Crafts

#### Franz Untersteller

Member of the Baden-Württemberg Landtag (state parliament) (activity on hold since 28 March 2011)

### Internal Committee members

Michael Sailer Chief Executive Officer of the Oeko-Institut

Christof Timpe Management team representative

Staff representatives: Stefan Alt (Darmstadt office) Ralph Harthan (Berlin office) Rita Kappeler-Keller (Freiburg office)

### Organisational units at the institute



Christof Timpe Head of Energy & Climate Division (FR)

c.timpe@oeko.de Phone: +49 761 45295-33



Dr. Bettina Brohmann Head of Energy & Climate Division (DA)

b.brohmann@oeko.de Phone: +49 6151 8191-40



Dr. Martin Cames Head of Energy & Climate Division (B)

m.cames@oeko.de Phone: +49 30 405085-383



Dr. Matthias Buchert Head of Infrastructure & Enterprises Division

m.buchert@oeko.de Phone: +49 6151 8191-47



c.gensch@oeko.de Phone: +49 761 45295-41



**Beate Kallenbach-Herbert** Head of Nuclear Engineering & Facility Safety Division

b.kallenbach@oeko.de Phone: +49 6151 8191-22



Regine Barth Head of Environmental Law & Governance Division

r.barth@oeko.de Phone: +49 6151 8191-30



Boris Hüttmann Head of IT

b.huettmann@oeko.de Phone: +49 6151 8191-26



Thomas Manz Head of Finance

t.manz@oeko.de Phone: +49 761 45295-34



Mandy Schoßig Head of Public Relations & Communications

m.schossig@oeko.de Phone: +49 30 405085-334

#### Alexander von Humboldt



Germany's foremost natural scientist "We should all have the courage of our own convictions."

# Creating a shared future: Service and communication

We are convinced that both social change and a sustainable future are possible. In our opinion, the basis for this is twofold – knowledge, and free access to that knowledge. The Oeko-Institut has therefore pledged to make its research findings available with as much transparency as possible. We share our methods and results of our work with both our fellow professionals and the general public in a language which everyone can understand. In this way we hope to help establish a sound basis for action by policy-makers, industry and civil society.

Our publications – including research brochures, e-paper "eco@work" and articles on our website – provide information on the Oeko-Institut itself as well as current issues from our fields of work. Press materials are produced to coincide with events such as scientific conferences and also provide regular updates on ongoing study projects.

#### The following will keep you informed about our work:

#### eco@work

Project reports, interviews with scientists. Each issue has a specific focus. Four times a year the institute's e-paper updates its readers on the progress of the environmental research being undertaken at its three sites in Freiburg, Berlin and Darmstadt. www.oeko.de/epaper

#### www.oeko.de

Our website keeps readers informed about the latest study findings, publications, articles on specific topics and the Institute's points of view. All the results of our work can be downloaded free of charge.

### **Conferences and events**

The Oeko-Institut organises scientific conferences focused on specific topics (the 2010 topic was nanotechnology), arranges workshops on specialist subjects and participates in scientific dialogue, with Oeko-Institut staff appearing as guest speakers at external events.

### **Technical periodicals**

ELNI Law Review: Professional journal for European and international environmental law. It is published in English twice a year. www.elni.org, Heike Unruh, E-Mail: h.unruh@oeko.de

KGV Rundbrief: Quarterly bulletin of the Koordinationsstelle Genehmigungsverfahren, the German coordinating office for approval procedures. Provides information on all aspects of industrial approval procedures. www.oeko.de/kgv, Peter Küppers, E-Mail: KGV@oeko.de

#### Press contact:

Mandy Schoßig Head of Public Relations and Communications E-Mail: m.schossig@oeko.de



# Visions need backers: Membership of the Oeko-Institut

More than 2,500 members keep our Institute firmly rooted in society. Although our work is mainly financed by public and private clients, membership fees and donations are vital if we are to continue taking an independent stance on controversial issues. Having the resources to fund our own projects means that our researchers can work on visionary or contentious topics. They are thus in a position to provide crucial, unbiased information and arguments for environmental policy.

For instance, in the framework of a project funded by donations, they calculated the additional profits that the German electricity industry would make if the lifetimes of German nuclear power plants were extended. This brief study attracted massive interest – evident from some 3,000 press reports – and had a major impact on the public debate.

We have more than 300 life members, who are very important to the Oeko-Institut. We began offering life membership ten years ago and the idea has proved to be enormously popular. Life members save money and have less paperwork over the long term, and at the same time administration costs can be reduced. In addition, we have a very special relationship with our life members.

### Please support us by becoming a member or making a donation!

### Our membership fees:

- annual membership: 80 euros
- concession for trainees, students and seniors: 35 euros
- life membership: 1,000 euros

### Your benefits as a member include:

- free subscription to our quarterly journal, eco@work,
- information about our various events and reduced admission fees,
- regular updates on current topics and studies on our website,
- a guided tour of the "Solar Ship",
- our PlusEnergy office building in Freiburg,
- tax-deductible membership fees.

### Would you like to support our work and become a member?

An application form and further information can be found at: www.oeko.de/members

### Bank details for donations:

Sparkasse Freiburg Sort code: 68050101 Account No. 2063447

### **Contact for members:**

Andrea Droste Phone: +49 761 45295-49 E-Mail: a.droste@oeko.de



### Freiburg office

Postcode 1771 D-79017 Freiburg Merzhauser Strasse 173 D-79100 Freiburg Phone: +49 761 45295-0 Fax: +49 761 45295-88

### Darmstadt office

Rheinstrasse 95 D-64295 Darmstadt Phone: +49 6151 8191-0 Fax: +49 6151 8191-33

### **Berlin office**

Schicklerstrasse 5-7 D-10179 Berlin Phone: +49 30 405085-0 Fax: +49 30 405085-388

info@oeko.de www.oeko.de