

## ZUM GELEIT

Die erste Anlaufphase unseres neugegründeten Institutes hat unsere Erwartungen bestätigt. Wir haben viel Zustimmung bekommen und darüber hinaus eine beträchtliche Anzahl von Anmeldungen für Mitgliedschaften. Allen, die uns geholfen haben, den ersten Schritt zu tun, sei an dieser Stelle herzlich gedankt. Wir dürfen darüber nicht vergessen, daß es weitergehen muß. Ohne eine breite Mitgliederbasis wird die Unabhängigkeit des Institutes nicht zu gewährleisten sein. Erst nach Ablauf dieses Jahres wird sich zeigen, ob das Experiment, an dem Sie alle beteiligt sind, gelingt.

Beeindruckend ist aber auch, mit welcher Intensität das Institut - trotz bescheidenster Kapazitäten - seine

Arbeit aufgenommen hat. Es wird nicht leicht sein, die verschiedenen Projekte, die sich noch in Vorprüfung befinden, durchzuführen und abzuschließen.

Angewandte Ökologie ist keine wertneutrale Grundlagenforschung, sondern wertbezogene Wissenschaft. In der Gründungserklärung unseres Institutes haben wir deshalb mit Nachdruck unterstrichen, daß den Zerstörungstendenzen der technischen Zivilisation zugunsten einer menschenwürdigen Zukunft unter Berücksichtigung ökologischer Rahmenbedingungen entgegengearbeitet werden muß. Die damit notwendig verbundenen Konflikte werden wir in der Bereitschaft zu engagierter Auseinandersetzung und in Solidarität mit den Betroffenen durchstehen müssen. Den undurchsichtigen Interessen industriewirtschaftlicher Planungen setzen wir bewußt das Prinzip der öffentlichen Kontroverse und ökologischen Bewertung entgegen.

Günter Altner

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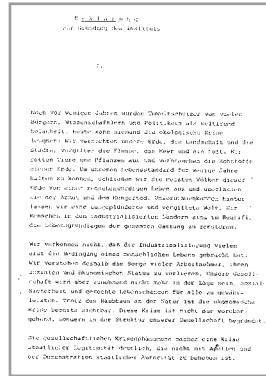
**40** Jahre  
**Öko-Institut e.V.**  
Wir wünschen uns was!

Special issue to mark  
our 40<sup>th</sup> anniversary

# Looking back

In 2017 the Oeko-Institut celebrates its 40th anniversary. On the following pages we look back at those forty years, commenting on pioneering studies undertaken by the institute, important milestones in our history and key changes in our structures, but also not forgetting what has happened in Germany and in the wider world during those four decades and what decisions and events – and sadly also disasters – have shaped and influenced our work. We also hear the voices of a number of supporters who note pivotal studies and projects and remind us how the institute has developed in the course of its ever-changing history.

The Oeko-Institut has achieved a great deal over the past 40 years: once a scientific rebel, it is now a recognised institution and an important advisor to policy-makers, industry and society. But the story doesn't end there. Read about what the future holds, starting on page 11.



## 5 November 1977

### Founding of the Oeko-Institut

As events associated with the proposed Wyhl nuclear power plant make clear, the environmental movement desperately needs independent scientific advice and sound expert opinions. The founding declaration states: 'We know that today's research helps to shape future living conditions. We can no longer leave this research to industry and the state. We therefore want to research alternatives for the future ourselves.' The 27 founding members include lawyers working for the anti-nuclear campaign, members of various environmental movements, economists and representatives of the Protestant church.

» But of course the Oeko-Institut stands out, simply because of its name. It is fantastic to be able to say 'Oeko-Institut' and not something complicated. You know straight away what it's about. «

Joachim Wille, journalist

## The 1960s and 1970s: leading up to the institute's founding



### 1960

#### The first nuclear power plant in Germany

The Kahl experimental nuclear power plant at Grosswelzheim in Lower Franconia is commissioned.

### 1968

#### First anti-nuclear protests in Germany

The target of the protests is the construction of the Würgassen reactor at Oberweser in the state of Hesse. Court proceedings result in 1972 in the 'Würgassen judgement' and thus in a U-turn in the case law on nuclear power.

### 1969

#### Founding of Friends of the Earth

The first international environmental organisation is an important partner in the early years of the Oeko-Institut.

### 1969

#### National Environmental Policy Act (NEPA)

A milestone in environmental legislation and a model for other countries: a National Environmental Policy Act (NEPA) is enacted in the USA.

### 22 APRIL 1970

#### First Earth Day

Around 20 million people demonstrate in the USA in support of greater protection of the environment.



### 1970

#### Protests against the planned Wyhl nuclear power plant begin

The ultimately successful non-violent protest against the nuclear power plant at Wyhl, near Freiburg in South Baden, marks the birth of the anti-nuclear movement in Germany. The protests also spark the founding of the Oeko-Institut.



### 1970

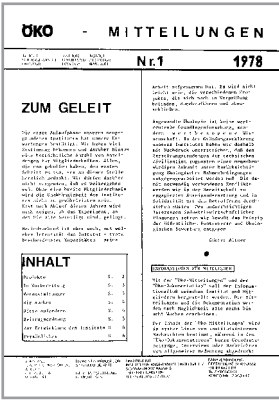
#### The first European Nature Conservation Year

The Council of Europe organises the first Europe-wide environmental campaign in its member states. The environmental discourse at European level begins.

### 1970

#### Bavaria creates a Ministry of the Environment

It is the first such ministry in Europe.



**1978**

**First issue of 'Öko-Mitteilungen'**

In the early years the Oeko-Institut is funded largely by its members. The first issue of the members' newsletter has a print run of 2,000 copies. It appears quarterly and profiles project activities.

**1978**

**Prof. Dr. Günter Altner on the German parliament's Enquete Commission**

At the initiative of the Social Democratic Party of Germany (SPD), the co-founder of the Oeko-Institut is appointed to the German parliament's Enquete Commission 'Future nuclear energy policy' from 1979 until 1982.



» The arguments over the Wyhl nuclear power plant were the trigger for the founding of the Oeko-Institut, because the campaigners believed that the experts on whom the state administration was relying were biased and pretending to proclaim an objective truth while in reality they had a point of view that was not in accordance with the facts of the situation. «

Prof. Dr. Eckhard Reh binder, emeritus professor of environmental and economic law



**1979**

**'The Gorleben Report' published**

**1979**

**Membership increases**

By the middle of 1979 the Oeko-Institut has 1,500 members.

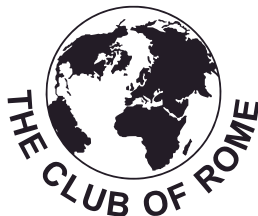
**1971**

**New environmental legislation in Germany**

The Aviation Noise Act (1971) is the first in a series of new environmental laws for Germany. It is followed by the Waste Disposal Act (1972), the DDT Act, the Leaded Petrol Act and the Federal Emission Control Act (all 1974).

**1972**

**First UN environmental conference (Stockholm)**



**1972**

**'The Limits to Growth'**

The Club of Rome publishes the environmental study produced by Dennis Meadows and others which highlights the finite nature of natural resources. It is considered a milestone in modern environmental awareness.

**28 March 1979**

**Nuclear accident in Harrisburg, USA**

The serious accident at the Three Mile Island nuclear power plant, with partial meltdown of the core, takes the USA to the brink of a nuclear disaster.



**1973-74**

**Oil crisis**

The world economy is severely shaken by OPEC's oil embargo and the resulting sharp rise in oil prices.

» The energy turnaround study laid the foundations for everything that subsequently had to be battled for step by step. «

Erika Romberg,  
politician and former member  
of the Oeko-Institut's Committee



» I would never have thought that books such as the Öko-Knigge could have such an impact, doing more than imparting information and actually shaping many people's fundamental decisions. «

Prof. Rainer Grießhammer,  
member of the Oeko-Institut's  
executive board

### 1980

#### 'Energiewende' study

The Oeko-Institut's groundbreaking 'Energy Turnaround' study shows how nuclear power can be phased out immediately and the use of oil can be halted by 2030 without jeopardising affluence and economic growth.

### 1980

#### Reactor safety study

On behalf of the Federal Ministry of Education and Research, the Oeko-Institut investigates the 'residual risk' of light-water reactors.

### 1980

#### Establishment of the Oeko-Institut's Darmstadt office

### 1981

#### Studies of contamination levels

Experts at the Oeko-Institut conduct a study of drinking water which shows that clean drinking water is becoming a scarce commodity in Germany. In a study of breast milk they report on the contamination of breast milk by toxics in the environment.

### 1982

#### Membership of the Oeko-Institut increases to more than 4,000

### 1984

#### The 'Öko-Knigge' is published

Rainer Grießhammer's manual of environmentally aware behaviour remains in the SPIEGEL bestseller list for over a year and sells more than 250,000 copies.

### 1984

#### Launch of the Chemistry & Environment Information Service (ICU)

Until 1997 the ICU is published monthly by the Oeko-Institut, the environmental and nature conservation organisation BUND and the national association of citizens' environmental protection initiatives BBU; it reports on the risks of using chemicals and on policy-based solutions.

## The 1980s: a scientific rebel establishes its position

### 1980

#### Global 2000 (USA)

This report on future trends highlights the global impacts of environmental degradation, resource scarcity and population growth.

### 1981

#### The discovery of forest dieback

Use of the headline 'The forest is dying' in Der Spiegel magazine triggers widespread public debate in Germany of the issue of forest dieback.



### 1983

#### The Greens obtain their first seats in the Bundestag



### 1984

#### Toxic gas disaster in Bhopal

A disastrous chemical accident in Bhopal, India, causes the death of up to 25,000 people.



» After the Chernobyl disaster, our phone at the Oeko-Institut was constantly ringing late into the night. We had to set up emergency services in an attempt to channel the calls. We wanted to give people information, but these were difficult times. «

Stephan Kohler,  
until the end of 2014  
CEO of the German Energy Agency (dena)

**1985**

#### Second 'Energiewende' study

The study shows how the transition to sustainable energy can be effected and calls for the remunicipalisation of the energy sector.

**1985**

#### The Oeko-Institut decides to base its internal organisation on a divisional structure



**1986**

#### Creation of the Genetic Engineering Division at the Oeko-Institut

**1986**

#### The call for energy turnaround committees

After Chernobyl the Oeko-Institut calls for the founding of local energy turnaround committees – a success story: around 400 such committees are formed, carry on working for decades and help to drive the energy transition.

**1987**

#### Study of genetic engineering and biological control of insect pests

The study focuses on the risks of genetic engineering in agriculture.

**1987**

#### Development of comprehensive product system assessment

This method enables a product's environmental, social and economic impacts to be analysed throughout its life cycle – a milestone five years before the Earth Summit in Rio de Janeiro, which in its final declaration calls for unsustainable production methods to be phased out.

**1985**

#### Existence of an ozone hole over the Antarctic is proved



**26 APRIL 1986**

#### Chernobyl nuclear disaster

The nuclear power plant at Chernobyl in Ukraine goes into meltdown; large quantities of radioactive material are released across Europe.

**17. Dezember 1987**

#### Serious incident at Biblis nuclear power plant

An open valve and mistakes by the operating team almost result in meltdown of the Biblis A reactor.

**1987**

#### Brundtland Report published

How can environmentally sustainable development be combined with ensuring that the basic needs of people everywhere are met? This question is addressed by the United Nations World Commission on Environment and Development (WCED).

**1986**

#### Creation of the German Federal Ministry of the Environment



**24 March 1989**

#### The Exxon Valdez oil disaster

An oil tanker that runs aground off the coast of Alaska causes what is then the largest oil spill in history.

**1990****Greifswald nuclear power plant: Round Table study leads to closure**

The Oeko-Institut is involved in the examination of the safety of Greifswald nuclear power plant by the Commission of East Germany's Central Round Table. Subsequently all nuclear power plants in the former German Democratic Republic are closed and all construction projects involving such plants are halted.

**1990**

The Oeko-Institut now has more than 5,000 members

*» I have sometimes thought that I should move on. But there simply aren't many jobs where the work is more interesting and where the ambience – the working conditions and the friendliness – is so good.«*

Dr. Felix Chr. Matthes,  
Coordinator of Energy & Climate Policy  
Research at the Oeko-Institut, responsible  
for founding the Berlin Office

**1991**

**Opening of the Oeko-Institut's Berlin office**

**1992**

**Prof. Rainer Griebhammer becomes a member of the German parliament's Enquete Commission 'Protection of Humanity and the Environment'.**

**1995****First attendance at a world climate conference**

Since then the Oeko-Institut regularly advises the European Commission and the German Federal Environment Ministry in various negotiating areas.

**1995 onwards****Negotiations on the Biosafety Protocol**

Between 1995 and 2000 Dr. Beatrix Tappeser, head of the Oeko-Institut's genetic engineering division, is involved in the UN negotiations on the international control of genetic engineering. The Oeko-Institut rejects agricultural genetic engineering for scientific reasons.

## The 1990s: from conflict to cooperation

**1990****Launch of the Green Dot and the Dual System in Germany**

Manufacturers participating in this recycling system use the Green Dot logo to show that their packaging can be placed in yellow sacks or containers for collection and recycling. The system quickly attracts criticism. Ever since its introduction the Oeko-Institut has been producing critical studies of the Green Dot and making suggestions for changes and improvements.

**1991****The German government approves measures to promote renewable energy**

The Electricity Feed-in Act enters into force. Its provisions include the guaranteed purchase of renewable electricity and a fixed feed-in tariff. The '1000 roofs' programme promotes the installation of photovoltaic systems.

**1990****First report of the Intergovernmental Panel on Climate Change (IPCC)**

The UN's scientific study team officially confirms climate change.

**1994****Biosafety-Protocol**

Start of the UN negotiations on international controls on genetically modified organisms. However, the Biosafety Protocol is not adopted until early 2000.

**1992****UN Conference on Environment and Development in Rio de Janeiro**

Participants sign the UN Framework Convention on Climate Change and adopt the groundbreaking Rio Declaration on Environment and Development



## From late 1996 onwards

**The CASTOR controversy**  
Michael Sailer, head of the Oeko-Institut's Reactor Safety Division, publicly criticises the blockades of the CASTOR transports as counter-productive. The subsequent quarrel with the anti-nuclear movement reaches deep into the institute and results in members leaving.



## 1997 Publication of the study of sustainability at Hoechst

1995 sees the start of collaboration with the chemical company Hoechst, which has been the subject of controversy within and outside the Oeko-Institut: the institute develops a management tool for a sustainable corporate strategy.

## 1997 Publication of the product system assessment of washing and detergents on behalf of the German Environment Agency.

## 1998 onwards Scientific support for the mediation process in connection with expansion of Frankfurt airport

## 1998 The Oeko-Institut's first website goes online

## 1999 Study 'Globalisation in the Pantry'

## 1999 Study of the nuclear transport scandal

The Oeko-Institut and the nuclear safety organisation GRS show that transport personnel and the general population could be at risk from the transport of contaminated nuclear waste.

## 1999 Establishment of the Legacy for the Future Foundation

## 1999 Michael Sailer and Lothar Hahn are appointed to the German Government's Reactor Safety Commission (RSK)

## 1999 Christian Küppers joins the German Commission on Radiological Protection (SSK)

## 1995 First UN Climate Conference in Berlin

Germany announces that it will cut its CO<sub>2</sub> emissions by 25 per cent (from a 1990 baseline) by 2005.



## 1997 World Climate Summit adopts the Kyoto Protocol

The community of states, meeting in Japan, agrees the first ever limit on greenhouse gas emissions. However, the Kyoto Protocol does not enter into force until 2005, after it has eventually been ratified by Russia.

## 1998 Liberalisation of the electricity market

The numbers of suppliers and consumers of green electricity increase as a result.



» Basically there has been a certain paradigm shift: one could say that previously environmental policy was an afterthought. Then things moved on so that it is now about forethought. Of course it's not as straightforward as that, but you could sum it up in those terms. And a paradigm shift of that sort – that takes time. «

Christiane Friedrich,  
former member of the Oeko-Institut's Executive Board

**2000****The 'Energiewende 2020' study**

The Oeko-Institut and the Heinrich Böll Foundation show how the nuclear phase-out can succeed.

**2002**

**Michael Sailer becomes chair of the Reactor Safety Commission (RSK)**

**2001****Study of the environment and tourism**

The Oeko-Institut's first study of the world's fast-growing tourism sector.

**2005****Launch of the EcoTopTen consumer platform**

The platform profiles those mass-produced products that are particularly energy efficient and environmentally sound.

**2005****Study of the German waste management sector's pioneering role in climate change mitigation****2005****Conclusion of the project on transforming food systems**

The Oeko-Institut shows how a sustainable food system could be achieved.

**2003****Study of green genetic engineering and organic farming**

In this study the Oeko-Institut shows that the use of genetically modified organisms in agriculture jeopardises organic production.

## The 2000s: the Oeko-Institut goes international

**2000****Nuclear phase-out**

The Red-Green government coalition initiates the phase-out, which is enshrined in the Atomic Energy Act in 2002.

**2000****Adoption of the Renewable Energy Act****2000 onwards****Consultations on greenhouse gas emissions trading**

The Oeko-Institut advises the German government and the EU on preparations for emissions trading and later also on the details of the scheme.

**2001****EU directive on the promotion of renewable energy**

The aim is for 14 per cent of the European Union's electricity to come from renewable sources by 2010.

» We were involved in drafting the nuclear phase-out act, particularly where there were lots of detailed rules that had to be formulated clearly and correctly. «

Michael Sailer,  
member of the Oeko-Institut's executive board



**2006****The first issue of eco@work is published**

The new members' magazine replaces the previous 'Öko-Mitteilungen' and is also produced as an e-paper in German and English.

**2006****Study of the social impacts of notebook production**

The study shows that in China notebooks are produced under worrying social and environmental conditions – and that fair notebooks are not necessarily much more expensive. The paper has a strong influence on the discussion of socially acceptable production.

**2009****Germany's 'Blue Angel' ecolabel scheme is expanded to include climate issues**

The Oeko-Institut draws up criteria for awarding the label in 100 climate-relevant product groups.

*» It's good that we are looking far into the future, calculating scenarios from behind and looking at what needs to happen if we want to get there. And that we at the institute have developed new instruments that are helpful. «*

Dorothea Michaelsen-Friedlieb,  
member of the Oeko-Institut's  
Committee since 1996

**2008****Michael Sailer becomes chair of the German Nuclear Waste Management Commission (ESK)****2008****Pilot project on carbon footprint calculation, joint memorandum with the German Environment Ministry and Federal Environment Agency****2009****Launch of the 'Renewability' series of studies**

The project focuses on climate change mitigation strategies for the transport sector; stakeholders are involved.

**2005****EU Ecodesign Directive enters into force**

The aim is to make products more environmentally friendly and reduce their climate impact.

**2005****Start of the EU Emission Trading Scheme****2007****EU REACH Regulation on chemicals**

The Regulation is designed to increase transparency and safety in the production and use of chemicals. The Oeko-Institut provides detailed input into the sustainability assessment of chemicals.

*» I believe that once again we need to think on a larger scale. We need concepts for dealing with transport issues, concepts for how cities can and should develop, concepts for how we are going to manage our consumption. «*

Prof. Dr. Gerd Michelsen,  
co-founder of the Oeko-Institut



**2010**  
**Environmental Award of the German Federal Environmental Foundation (DBU)**  
 Prof. Rainer Grießhammer receives the most valuable European environmental award.

**2010**  
**Oeko-Institut goes social media**



**2011**  
**Founding of Ecornet**  
 The Ecological Research Network is a network of eight independent, non-profit institutes for environmental and sustainability research in Germany.



**2013**  
**Results of the IMPACT research project**  
 The project analyses the potentials of corporate social responsibility (CSR) in companies.

**2015**  
**'Models of Change'**  
 The study shows how transformation and system innovations designed to increase sustainability can work.



**Half-time in the energy transition**  
 The Oeko-Institut asks where we've got to with the energy turnaround – 35 years after publication of the first 'Energiewende' study and 35 years before 2050, the deadline for achievement of climate action targets.

**2016**  
**Obsolescence study by the Oeko-Institut**  
 The study focuses on the shortened life of electrical and electronic equipment.



**Germany 2049: Transition to a sustainable use of raw materials**  
 This self-funded project charts a roadmap for sustainable resource use.

## The 2010s to the present: the future has begun

**2010**  
**Merkel's cabinet drops the nuclear phase-out**  
 It is decided that the lifespan of Germany's nuclear power plants will be extended.



**11 MARCH 2011**  
**Nuclear disaster at Fukushima**  
 Three reactor blocks go into meltdown after an earthquake and a tsunami. The Oeko-Institut provides comprehensive information about risks and hazards and the background to the reactor accident.

**2011**  
**U-turn: the German government decides on nuclear phase-out and an energy turnaround**  
 German nuclear power plants are to be shut down by 2022.

**2015**  
**UN Climate Summit in Paris**  
 The member states agree on a new global climate treaty.

**2015**  
**UN member states adopt the Sustainable Development Goals (SDGs)**  
 The goals are to be implemented by 2030.

**2016**  
**Final report of Germany's Nuclear Repository Commission**  
 Michael Sailer was appointed to the Commission in 2014.



*» Now I would say that the Oeko-Institut has become a recognised scientific institution. I find that good. Chapeau!«*

Siegfried de Witt, co-founder of the Oeko-Institut

2017

40 Jahre  
Öko-Institut e.V.

40<sup>th</sup> anniversary of the Oeko-Institut



*» So the problems are so huge that our work isn't enough. New questions crop up all the time, or questions that you had all along need adjusting and re-assessing. «*

Udo Simonis,  
emeritus professor of environmental policy

# Our future

## Looking forward

A long history lies behind us. Four exciting decades. Countless memorable events. Several thousand fascinating projects. Numerous inspiring encounters. We are proud of our history, of what we have achieved, of the things that we have done to set sustainable development on track.

But we would not be the Oeko-Institut if at this point we were only to look back. We have always stood out because we look forward. We did this in the first energy turnaround study, when devising a corporate sustainability strategy for Hoechst and when drawing up recommendations for making major events more environmentally sound. Looking forward is integral to our work, whether we are formulating scenarios for the development of the transport sector, considering the need

for a sufficiency policy or dealing with the difficult search for a nuclear waste repository and the associated decisions that are due to be taken by 2031.

So on the next few pages we want to cast a look at the future – at the key events of the coming decades and the developments that will be relevant to our work. A discussion with Michael Sailer, CEO of the Oeko-Institut, and Dr. Wiebke Zimmer, Deputy Head of the Resources & Transport Division, reveals more about how the Oeko-Institut works – and the challenges involved. Under the heading 'If we could make a wish...'; other members of staff describe their wishes and ideas for a sustainable future.

# The next decades

2020

By **2017**  
the EU should be spending three per cent of GDP on research and development.

From **2020**  
the International Energy Agency (IEA) predicts that oil prices will rise sharply.

By **2021**  
the European Commission will review the directive on the restriction of the use of certain hazardous substances in electrical and electronic equipment (the RoHS directive).

2030

By **2022**  
the last nuclear power plant in Germany is due to be shut down.

2040

By **2030**  
the 17 Sustainable Development Goals (SDGs) should be achieved, including the goals on abolishing poverty and hunger, establishing gender equality and providing affordable clean energy.

2050

From **2030**  
the German Länder are calling for a ban on combustion engines.

2060

By **2031**  
a decision on a nuclear repository should have been reached.

2070

By **2049**  
the resource transition in Germany can be achieved, according to a recent Oeko-Institut study.

2080

By **2050**  
two-thirds of the world's population will live and work in cities – according to a prediction by the Organisation for Economic Cooperation and Development (OECD).

2090

By **2050**  
the Ellen MacArthur Foundation predicts that there will be more plastic waste in the world's oceans than fish.

2100

By **2050**  
Germany plans to reduce its greenhouse gas emissions by 80 to 95 per cent (from the 1990 baseline).

By **2050**  
the share of renewable energy in Germany's energy supply should be at least 80 per cent.

By **2100**  
the United Nations estimates that the world's population will be 11.2 billion.

## Key trajectories

The world is going to change over the coming years, decades and centuries. Some developments we can already foresee, some will surprise us, and

some expected events may not occur or may occur in ways that differ from those we had anticipated.

Three examples illustrate how everyday life may change in future.



Digitisation

Digitisation has already turned our world upside-down. Not so long ago hardly any household had digital technology: now we can barely imagine life without a computer and smartphone. We use them to store our holiday photos, communicate with our friends or pay for a metro ticket. But this trend has some undesirable consequences for humans and the environment – for example, there is the mining of the necessary resources and the problem of inadequate recycling. To limit these impacts, electronic equipment must be used for longer. Other questions that arise from digitisation relate to data security and social issues: will people become increasingly alienated from each other or will digital media link us together more strongly, locally and internationally? And how can digitisation help to conserve energy and resources and protect the environment?

*Digitisation and the environment – an important issue for the Oeko-Institut and an area in which strategies for a sustainable policy on information and communication technology (ICT) are being developed.*



Autonomous driving

Although ridiculed by many as an impractical fantasy, autonomous driving is well on the way to becoming a realistic prospect. It opens up all sorts of opportunities for sustainable and convenient living, with potential to increase the use of carsharing, reduce the need for parking facilities in cities, improve links with rural areas and boost transport efficiency. But autonomous driving could also result in increased traffic and increased emissions. In a few years or decades, will we really no longer drive ourselves about? What regulatory framework is needed to ensure that the potential of autonomous driving to improve sustainability is harnessed?

*The Oeko-Institut's Resources & Transport Division is studying the impacts of autonomous driving on the future of transport.*



Renewable energy

We can't get enough of them: solar and wind, or in short, renewable energies. We would like to see an energy supply based entirely on renewables. How will that work? In what ways does the expansion of solar, wind, etc. pose challenges for the organisation of the energy market and the actions of those involved in it? How will energy use and storage be coordinated? These questions and others need to be answered – not just for Germany, but against the backdrop of a European electricity market.

*The Oeko-Institut is working on a variety of renewable energy projects. Unleashing their full potential is a key interest of researchers in all the institute's divisions.*

# If we could make a wish...

Oeko-Institut  
staff look into  
the future



In my projects I often notice that I only make things happen if I take the time to talk to the people who are affected by developments and want to change things. Having more time to make contact with them is very important to me.

*Daniel Bleher,  
Senior Researcher  
(Resources & Transport)*



I picture how wonderful it would be if before long all the cars on our roads were electric ones. What would we begin to hear again, how would our attention change if the constant traffic noise disappeared?

*Kathrin Graulich,  
Deputy Head of the Sustainable Products  
& Material Flows Division*



It is not necessary for every country to make the same mistakes. Legislation, systemic solutions, good examples. We can learn from each other. That is indeed optimistic, but it's possible.

*Dr. Izabela Kosińska,  
Researcher  
(Resources & Transport)*



I wish that even more companies would not just treat sustainability as a communication task but instead see sustainable business activity as a far-reaching management task.

*Carl-Otto Gensch,  
Head of the Sustainable Products &  
Material Flows Division*



I wish that Germany could serve as a model for other countries, that other industrialised nations would abandon nuclear energy and that nuclear power plants close to the border would be shut down. And the repository issue must be resolved. These are still hot issues.

*Christian Küppers,  
Deputy Head of the Nuclear Engineering  
& Facility Safety Division*



Personally I am also curious about how the process of choosing a repository site will work out in practice and just how the participatory processes will be organised. It is important that the issue remains at the top of the political agenda and concerted action is taken to address it, because the current temporary storage of waste is not secure in the long term.

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



If in 20 years' time we are supposed to stop burning coal and in 30 years' time there are no longer supposed to be any petrol- or diesel-engined cars on our roads, then we need to be working on the transition now. Avoiding the issue or postponing it for another day is no solution.

*Dirk Arne Heyen,  
Senior Researcher  
(Environmental Law & Governance)*



I am convinced that in the long term the energy turnaround can only work as a European project. If the wind isn't blowing in Germany, it is highly likely that the sun is shining in Spain or that wind energy is being fed into the system in Finland. Now, in particular, we need a positive vision for Europe.

*Hauke Hermann,  
Senior Researcher  
(Energy & Climate)*



On paper at least, objectives are easy to define: cut emissions, monitor supply chains better, improve air quality in cities, etc. When it comes to methods, though, the devil is in the detail. What are the best instruments for achieving these objectives – and how do we implement them? This is the line that I am interested in pursuing.

*Verena Graichen,  
Senior Researcher  
(Energie & Klimaschutz)*



Creating knowledge is one thing. Passing it on is another. Yet the two are inseparable. Ultimately I can only preserve something if I understand and value it. And I can only change something if I realise why I should change it.

*Alexa Hännicke,  
Assistant  
(Public Relations & Communications)*



For me mutual understanding and appreciation is as much a part of sustainability as the scientific work. Being friendly and considerate, communicating promptly, discussing problems openly with each other – we are very good at these things.

*Marianne Burchard-Huber,  
Secretariat  
(Freiburg Office)*

We promote sustainability. We identify workable and scientifically sound solutions.

# That's what is needed. And it can be done.

## A conversation with Michael Sailer and Dr. Wiebke Zimmer



The Oeko-Institut has been looking into the future for the past 40 years – whether in connection with a sustainable energy supply or the search for a secure nuclear waste repository. But in what concrete ways are its researchers working for a sustainable future? What challenges do they need to overcome? We discussed these questions with Michael Sailer, CEO of the Oeko-Institut, and Dr. Wiebke Zimmer, Deputy Head of the Resources & Transport Division.

**Michael Sailer, how certain are you when you make predictions?**

Michael Sailer: That depends on whether we are talking about the basic outline or the details. In connection with the basic outline I am often certain, because we have a lot of experience

there. But I don't know how things will work out in future. Take Fukushima as an example: it was completely clear that sometime there would be another accident in a nuclear reactor and that it would happen in an industrialised country, because that is where the majority of reactors are.

**What is the best way of dealing with an accident situation of that sort?**

Sailer: We don't want to stand there and say 'We knew it would happen'. In addition, you have to have an eye on your own credibility. It was quickly clear to me that the clean-up work would take decades. But if I had said that a week after the accident, no one would have believed me. Sometimes I think, too, that we fail to emphasise facts or find-

ings sufficiently so that politicians and the general public actually take them on board.

**For example?**

Sailer: We should have talked a lot earlier about the major economic challenges associated with the transition to renewable energy. In connection with the emissions trading scheme, we should have stated more clearly that CO<sub>2</sub> certificates only make sense if they are expensive.

**Wiebke Zimmer, what's it like in the area in which you specialise, the transport sector? Do you have the feeling that you don't point things out clearly enough?**



Wiebke Zimmer: Not really. For example, we have been pointing out for a very long time that simply not enough is happening in this area. We keep emphasising that we shall miss just about all our sustainability targets if we carry on with business as usual.

**When you draw up very ambitious scenarios, do you think it is realistic that they will actually occur?**

Zimmer: I certainly think it's realistic that transport will become more sustainable. But for that to happen, there must be a fundamental change in people's behaviour and unfortunately it's hard to predict whether people will change their attitude to the car. We must get away from a car-centred system. But politicians shy away from laying down strict rules for cars or making car use more expensive, because they fear it will lose them votes. Meanwhile things are moving to some extent in the industry because other countries are taking the lead, but the comprehensive structural change that is needed repeatedly meets with resistance.



**How can things then be changed?**

Zimmer: I am encouraged in particular by moves at local level that come from civil society – such as the Berlin bicycle referendum which has really got things going in Berlin on the cycling front and has shown politicians that reducing the privileged position of the car doesn't have to mean that you lose lots of voters.

Sailer: And ultimately the energy turnaround, too, only succeeded to the extent that it did because there had for decades been popular movements pressing for things like that.

Zimmer: Within the Division we often ask ourselves where one can actually start. Two years ago I would still have said that you have to be part of a big project. Now I think that if you want visible acceptance by the general public, you need to make the vision of a liveable city tangible. You need to show people that their quality of life really is improved if there are fewer cars parked or on the roads and if there is more space for other things as a result. Then politicians may perhaps also have the confidence to introduce changes.

**What can the Oeko-Institut do to make this vision come true?**

Zimmer: The exciting thing is that wherever something is really happening, wherever great model projects are under way already, there is always someone on the administrative side who of their own accord is motivated to try to make this vision reality. For example in Bremen, where carsharing has received an enormous boost as a result.

Sailer: Our role is to stabilise movements like these. Often we are not particularly aware of it, but we help these people by enabling them to say that everything is scientifically proven. That's what is needed. And it can be done.

Zimmer: It is also important that we have good contacts in many areas – in industry and politics, and also in associations, local government and civil society. This means that we can perform a networking role as well as utilising our scientific expertise.

Sailer: Yes, we bring people from all sorts of quarters together, for example at our annual conference in 2016, which took raw materials as its focal theme. This platform role is one of our key functions. It means that we enable people to talk to each other. And we have been very good at that for 30 or, indeed, 35 years.

**You are committed to sustainability. How do you manage to keep that in the spotlight?**

Zimmer: I think that we need to keep on demonstrating the goals that are linked to sustainability – fewer emissions, less noise, less consumption of resources, for example – and then create the right conditions. It also means closing the gap that is still there between what people consider important – such as action on climate change – and what they are prepared to do in support of it. Fortunately there is already a lot happening in many sectors in relation to climate change. We need more of that, backed up by economic incentives and also prohibitions.



Sailer: However, prohibitions only work in a climate in which they are also politically enforceable. The Oeko-Institut has often contributed to this climate. One must never give way to the pessimism that says that the world is terrible and has always been terrible and I can't do anything about it.

**How can this pessimism be tackled?**

Sailer: You have to make people aware of it, talk about it. And above all emphasise the positive things. Our 40-year anniversary is a good example of that. In our anniversary year we look back on what has been achieved and see that we are a fantastic outfit. I believe that it means a lot to people – including young people – to be part of an institute that has already got so many things moving in pursuit of environmental quality.

# Greeting



On the Oeko-Institut's website there is a paper by the social scientist Jochen Roose marking the 25th anniversary of the Oeko-Institut. I recommend you to read it. From the present perspective, on the 40th anniversary, a particularly interesting part is the last section in which Roose in 2002 looks 'into the glass ball' and draws up scenarios for the future of the Oeko-Institut. Today, thank goodness, we can discard the 'decline' and 'radicalisation' scenarios. What corresponds most closely to reality is the 'normalisation' scenario – and it is not the worst. In fact, the Oeko-Institut now occupies an important position; it makes a valuable contribution to the environmental debate and is an important source of stimulus.

Forty years ago this success could not be foreseen. The Oeko-Institut – like the Federal Environment Ministry – has its roots in the debate on nuclear power. It grew out of the opposition to construction of the Wyhl nuclear power plant in Breisgau. Within the anti-nuclear movement the opposition to Wyhl was something special, not only because it was ultimately successful. It was characterised by a clear strategy of non-violence and an unusually strong rootedness in the local community. Despite initial successes in court, it was apparent at that time that citizens' initiatives had to deal with a closed defensive front of experts from government and industry. The founding declaration of the Oeko-Institut states that the insti-

tute wants to help citizens obtain scientific support for their campaigns by providing expert opinions and making specialists available.

Scientific counter-publicity for greater protection of the environment – that must have seemed starry-eyed to many people at that time. But it turned out to be a successful path, and not just in connection with the nuclear debate.

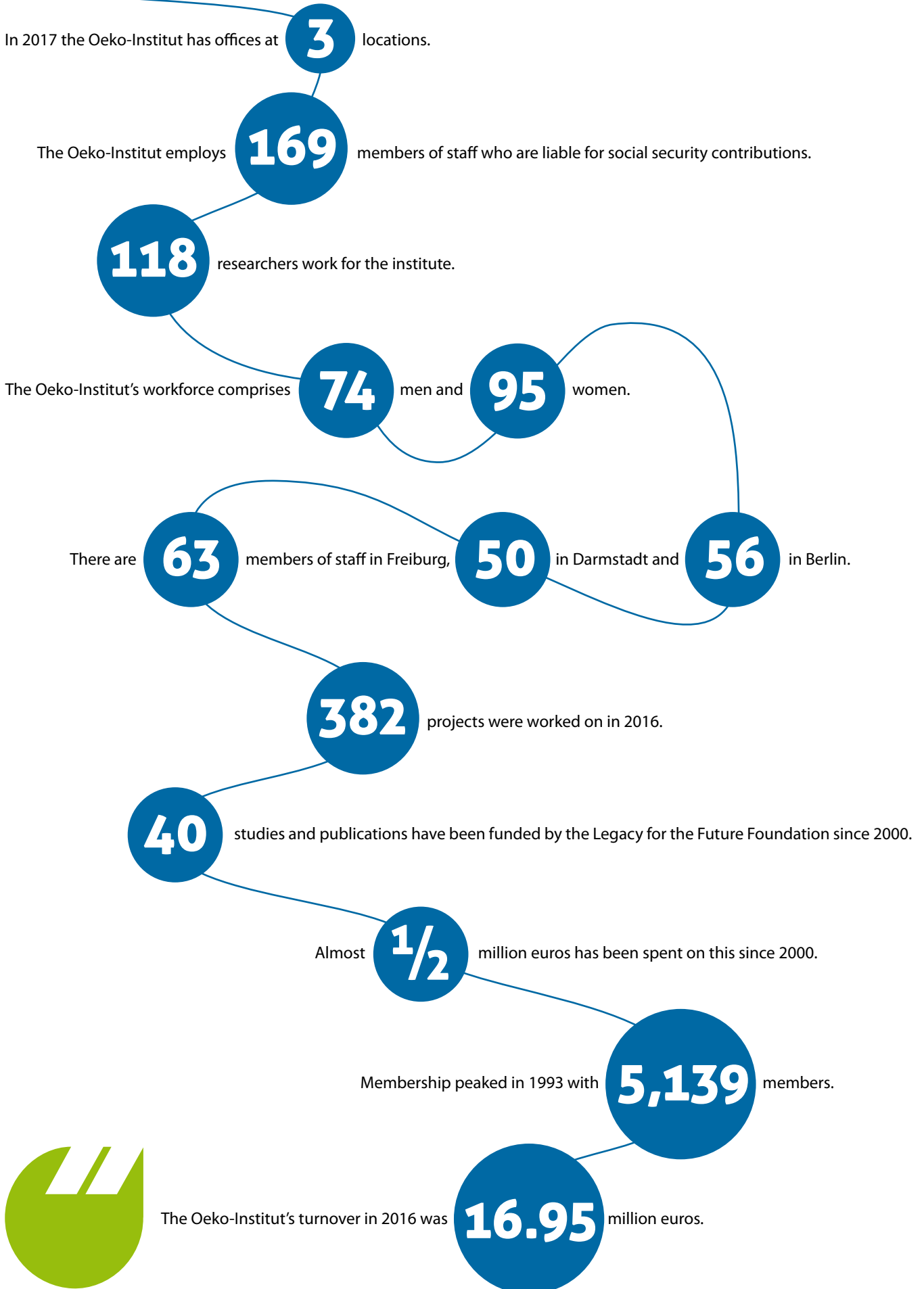
The site of the Wyhl nuclear power plant is now a nature conservation area; the phasing out of nuclear energy has been agreed. In March this year the German government submitted a draft of the revision of the law on selecting a site for the nuclear waste repository. That takes us a big step closer to the goal of ending a major political conflict that has kept our country in suspense for decades.

For us policy-makers, the Oeko-Institut will continue to provide critical support, including in connection with the other environmental issues that are crucial to our future, from climate change mitigation to sustainable consumption.

**Dr. Barbara Hendricks**

*Federal Minister for the Environment, Nature Conservation, Building and Nuclear Safety*

# The Oeko-Institut in figures



# PERSÖNLICHES

Dr. med. Hermann Kater, Hameln

Für seine Verdienste um die deutsche Ärzteschaft und um den Hartmannbund ist Dr. med. H. Kater mit der Hartmann-Thieding-Plakette ausgezeichnet worden. Dr. Kater ist ein sehr engagierter Vertreter in Sachen Kernkraftwerke.

Wir beglückwünschen Dr. Kater, der Gründungsmitglied des Öko-Institutes ist, sehr herzlich zu seiner Auszeichnung.

Dr. Hartmut Bossel, Stutensee/Karlsruhe

Seit dem 1.1.1978 hat Dr. H. Bossel die wissenschaftliche Leitung des Instituts für angewandte Systemforschung und Prognose (ISP) in Hannover übernommen. Dieses Institut wurde von Prof. Dr. Pestel (Club of Rome), dem derzeitigen niedersächsischen Wissenschaftsminister, gegründet. Für seine neue Aufgabe begleiten Herrn Bossel die besten Wünsche.

## WISSENSCHAFTLICHES KURATORIUM

Zur Mitarbeit im wissenschaftlichen Kuratorium haben sich bislang folgende Damen und Herren bereiterklärt:

Dr. Erhard Eppler, Stuttgart;  
 Prof. Dr. P. Fornallaz, Zürich;  
 Prof. Dr. Theo Ginsburg, Zürich;  
 Dr. H. Gruhl, Bonn;  
 Prof. Dr. Robert Jungk, Salzburg;  
 Dipl.-Ing. Karl Werner Kieffer  
 Kaiserslautern;  
 Prof. Donella H. Meadows (Club of Rome)  
 Prof. Denis L. Meadows (Club of Rome), USA;  
 Dr. Frederic Vester, München.

## ZUR ENTWICKLUNG DES INSTITUTS

Seit der Gründung des Instituts stellen sich die Mitgliederzahlen sowie die

finanzielle Entwicklung in einem relativ erfreulichen Bild dar. Schon seit einiger Zeit bewegen wir uns bei den Mitgliederzahlen im dreistelligen Bereich. Wenn man bedenkt, daß eine verstärkte Werbung mit Prospekten erst seit Anfang Dezember durchgeführt werden konnte, stimmt diese Entwicklung sehr optimistisch.

Das bisherige Ergebnis konnten wir bislang u.a. aufgrund des engagierten Einsatzes der Mitglieder erzielen. Dieser Einsatz ist aber auch für die kommenden Monate dringend erforderlich. Sowohl die aktiven als auch die fördernden Mitglieder sollten sich künftig um weitere Interessenten für das Institut bemühen. Wird dies geschehen, kann mit Sicherheit auf der nächsten Mitgliederversammlung am 15. April 1978 eine positive Zwischenbilanz gezogen werden.

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