

Independent, visionary, international

Research and consultancy at the Oeko-Institut



The Oeko-Institut

The Oeko-Institut is one of Europe's leading independent research and consultancy organisations working for a sustainable future. Since its establishment on 5 November 1977, it has been laying the groundwork and devising strategies to realise the vision of sustainable development. The Oeko-Institut is autonomous, visionary and international.

We use our ideas, understanding and knowledge to persuade stakeholders and policy-makers of the need for change, and of the appropriate frameworks for this purpose, and help them to move in that direction. A transition to sustainability is essential for a liveable future. This applies equally to our individual lifestyles, to corporate business practices and to the national, European and international level. We develop robust strategies and practical solutions that facilitate an equitable transition.

We work on a wide range of topics. These include chemicals management, energy and climate policy, emission and ambient pollution control, radiation protection, inter-

national resource conservation, agriculture and biodiversity, and mobility and transport. They extend to sustainable consumption and production patterns, nuclear engineering and facility safety, law, policy and governance, and risk and technology assessment.

In 2011, the Oeko-Institut became a founding member of the Ecological Research Network (Ecor-net), which now comprises eight non-university, non-profit environmental and sustainability research institutes. The Ecor-net institutes' collective aim is to establish the scientific basis and provide support for society's transition to sustainability.

Whether the topic is climate change, environmental pollution or the risks posed by nuclear energy – we develop solutions wherever a new course seems particularly vital and urgent. At the same time, we always look ahead, identify at an early stage how society's actions impact on the environment, and map out alternative visions for the global future. We raise awareness of the ensuing need for action among decision-makers and the public and persuade policy-makers, industry and civil society to embrace the necessary changes. We also facilitate transparent and fair processes with stakeholder

participation and share our research findings with the public as much as possible.

We conduct our research, analysis and consultancy in an open and self-critical manner and present our ideas and insights independently of the positions held by political and civil society organisations. In our pursuit of excellence, we build on the outstanding qualifications and commitment of our staff. Continuous learning enables us to develop our methodologies and expand our knowledge on an ongoing basis.

We support a participatory and discursive approach, inclusive debate and open and respectful dialogue. We believe that open access to knowledge is a valuable asset, so we ensure that our scientific methods are transparent and make our findings publicly available as much as possible in order to facilitate critical debate.



Our work for a sustainable future

In the Institute's five divisions – Energy & Climate, Nuclear Engineering & Facility Safety, Sustainable Products & Material Flows, Resources & Transport, and Environmental Law & Governance – we are committed to enabling the sustainable transformation of our society. Our work involves scientific analysis, substantiated strategies and application-oriented solutions; equally important

is the advice and information we offer to decision-makers and the awareness-raising we do among the general public. We make our scientific findings available in a practice-oriented way. We work nationally and internationally, and on both an interdisciplinary and a transdisciplinary basis. Here we profile six projects as examples of what we do.

"The aim of our work is to contribute to the preservation of the environment and of natural resources, and to ensure the foundation on which all human life depends, for present and future generations."

From the Oeko-Institut's mission statement

Advising Making the energy transition come true

Under the Paris Climate Agreement, the temperature rise as a result of climate change is to be kept to well below two degrees centigrade. According to the Intergovernmental Panel on Climate Change (IPCC), global carbon dioxide emissions must be limited to 890 billion tonnes from 2015 onwards if that goal is to be achieved.

In the study entitled 'Stromsystem 2035+' (Power System 2035+), the Oeko-Institut and Prognos AG have calculated that if emissions are distributed fairly between countries, Germany's CO₂ emissions budget from 2015 on-

wards is ten billion tonnes at most. The country's electricity sector would be permitted to release only four billion tonnes CO₂. The study commissioned by WWF Germany also shows how emissions can be kept within these limits. The key factor is an accelerated phase-out of coal-fired power generation by 2035, which for acceptable adaptation must be accompanied by investment in structural change and a significantly speeded up expansion of renewable capacity.

www.oeko.de/stromsystem2035

Researching Shaping the raw material transition

All over the world, the demand for raw materials continues to rise – with harmful consequences for people and the environment. Unless decisive action is taken, the situation will only get worse. Furthermore, for many technology metals and construction materials, there are no high-quality recycling schemes. The Oeko-Institut's self-financed project 'Germany 2049: Transition to a sustainable use of raw materials' outlines how sustainable resource management can be achieved. Specifically tailored strategies are needed to address the problems associated with the ex-

traction, use and disposal of the various materials. The project team therefore analysed 75 raw materials – including bulk raw materials such as gravel and steel and technology metals such as rare earths – and grouped them into twelve clusters of substances with similar characteristics or common risks. Material-specific targets and measures were then identified for each cluster and the raw materials in it, with the aim of addressing the enormous environmental, economic and social challenges.

www.oeko.de/rohstoffwende2049-en

Assessing Appraising the risks of Europe's nuclear power plants

When the last nuclear power plant in Germany shuts down in 2022, that is by no means the end of the story of nuclear energy for us: we must also consider reactors in other countries, some of them immediately adjacent to Germany.

In many places in Europe there are aging nuclear power plants that no longer meet current and necessary scientific and technical standards. They include the plant at Fessenheim in France and the world's oldest nuclear

power plant at Beznau in Switzerland. In Belgium, too, the Doel 3 and Tihange 2 reactors are giving cause for concern as a result of the condition of their reactor pressure vessels. The Oeko-Institut has assessed the safety status of such plant in various projects in the past. We shall continue to focus on this issue and to campaign for old reactors to be shut down.

www.oeko.de/fessenheim-beznau-en



Mediating

Minimising (aircraft) noise

In urban agglomerations people are exposed to high levels of noise. It emanates from the roads and railways, but also from the air. Protection against noise in Germany is not yet adequately regulated in law.

A report for the German Environment Agency could help to improve protection against aviation noise. Working with the GeräuscheRechner consultancy, the Oeko-Institut has analysed the law on protection against aviation noise. It considered enforcement issues and the question of whether the rules and regulations are adequate. The findings are being incorporated

into the German government's evaluation of the legislation.

In connection with the specific issue of noise protection in the vicinity of Frankfurt Airport the Oeko-Institut works with the Airport and Regional Forum (FFR); it acts for the Forum in an advisory and coordinating capacity and in particular examines and assesses noise protection proposals. A package of measures put together by the FFR and other active noise protection measures that have been implemented have already reduced people's exposure to noise. www.oeko.de/noiseprotection

Shaping

Fostering social transformation

We use too much energy and are wasteful with resources. Our society must behave more sustainably; production and consumption habits must change. But how is this transition to sustainability to be achieved? How can it be initiated, promoted and shaped?

The Trafo 3.0 research project is exploring these issues and producing a handbook containing practical recommendations. With funding from the German Federal Ministry of Education and Research, the Oeko-Institut and its partners are looking

at applications in three very different fields: paperless publishing and reading, the use of electric bicycles in urban and regional transport and the sustainable production and consumption of meat. The researchers are analysing conditions, drivers and obstacles in connection with the transition to sustainability in these three areas and drawing generally applicable conclusions about the transformation process and how it can be influenced.

www.trafo-3-0.de



Supporting

Promoting sustainable transport

At present the transport sector contributes nothing to Germany's climate targets. Yet without it, the country's commitments under the Paris Climate Agreement cannot be achieved. A radical change is urgently needed – but is it possible?

In the Renewbility III project, the Oeko-Institut and its project partners, working on behalf of the Federal Environment Ministry, show that the transport sector could be completely decarbonised by 2050. A key requirement is the direct use of renewable electricity. Because electric vehicles use energy particularly effi-

ciently, they must be actively promoted – for example by steadily reducing the CO₂ emission limits for cars. In an analysis of the macro-economic costs of a radical change in the transport sector, the project team also show that there could be positive effects in the long term. This would be achieved partly through a reduction in external costs, for example in the health sector.

www.renewbility.de

The vision is continued

We are working to ensure that the vision of sustainable development can be realised globally, nationally and locally – today and in the future. Our analyses and studies often look forwards: our very first energy transition study in 1980 showed that it is possible to phase out nuclear energy immediately and

to dispense with oil by 2030 without jeopardising economic growth and affluence. The Oeko-Institut will always be distinguished by its forward-looking approach – regardless of whether the subject is a sustainable energy system, the resource transition or ideas for a viable transport system of the future.



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Oeko-Institut e.V.

We finance our work mainly through third-party funding for projects commissioned by clients including ministries at the federal and Land level, businesses, NGOs and the European Union. The Oeko-Institut is a non-profit association. The donations and subscriptions of our members lay the foundation for independent research and influential studies.

Would you like to join us?

All the information you need is at <https://mitglieder.oeko.de/>
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