

IASS NEWSLETTER 1/2018

Institute for Advanced Sustainability Studies | Potsdam, February 2018

Dear readers,

What does the future hold for the lignite-mining industry in Lusatia? The Governor of Brandenburg Dietmar Woidke and several of his cabinet ministers discussed this matter at a high-level meeting with the directors of the IASS and PIK. Whether we're talking about the coal phase-out, the mobility transition or the transformation of agriculture: What's needed are positive visions for the future that take account of the people affected by change. Especially where the energy transition is concerned, more effort should be put into making the implementation socially just. Because, as a recent IASS study shows, many Germans believe that this is not currently the case. The Social Sustainability Barometer of the German Energiewende 2017 also reveals that two thirds of the population are in favour of a coal phaseout. It's important that people's concerns are taken on board in this structural transformation and that they have a say in how it unfolds. The basis for this continues to be the kind of open and constructive dialogue that the IASS promotes.

Best regards from Potsdam,

Eva Söderman

Head of Press & Communications

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NEWS FROM THE IASS



Institute

Meeting with State Government: A Future Commission for Brandenburg

The Governor of Brandenburg and members of the state government came to the IASS in December to discuss energy policy and climate protection. Together with the directors of the IASS and the Potsdam Institute for Climate Impact Research (PIK), they explored the idea of a Future Commission to ensure that Brandenburg's energy transition is socially and economically sustainable. **Read more ...**



Energy

Social Sustainability Barometer Shows Broad Support for the German Energiewende

An IASS study published in November reveals that most people in Germany are in favour of the energy transition. However, many citizens believe that the costs of this project are not being fairly distributed and are sceptical about the implementation process. **Read more ...**



Energy

Novel Insulation for Superconducting Power Cable

Superconducting cables can transport five times more electric power than conventional cables – with almost no losses. But there is one decisive drawback: The cables have to be well-insulated and kept at an extremely low temperature. **Read more ...**

NEWS FROM THE IASS

Policy

Science Platform Calls for Systematic Implementation of the German Sustainable Development Strategy

The steering committee appointed by the German government to oversee the activities of the Science Platform Sustainability 2030 is pushing for a redoubling of efforts to implement the 2030 Agenda in Germany. **Read more ...**

Oceans

Workshop at IASS: Experts Analyse Progress on Protecting Oceans

The oceans are in crisis: Climate change, pollution, and over-fishing have caused severe harm across half of the world's oceans and seas. Ocean conservation ranked accordingly high on the international political agenda in 2017. **Read more ...**

Climate

CO₂ as an Asset: Positive Attitudes to New Technologies in Germany and the UK

Be it nuclear energy or the underground storage of carbon dioxide, people in Europe tend to perceive the risks associated with various technologies differently. A recently published study investigates perceptions of carbon capture and utilisation (CCU) technologies in Great Britain and Germany. **Read more ...**

Air Quality

New Database on Global Surface Ozone Levels Shows Regions Most Affected by Air Pollution

Surface ozone reaches levels that are potentially detrimental to human health in many regions around the globe. This is a key finding of research conducted as part of the international Tropospheric Ozone Assessment Report. **Read more ...**

Digitalisation

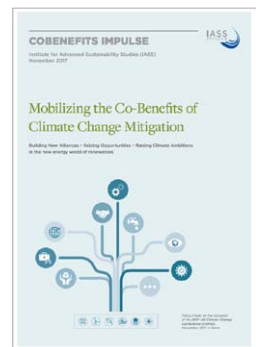
Robots and Artificial Intelligence: What Kind of Working World Will the Future Bring?

Two Oxford professors created a stir a few years ago when they predicted that almost half of all jobs in the US would be automated in 20 years' time. Are robots and algorithms replacing us in the workplace? What does that mean for people – and for democracy? **Read more ...**

IASS PUBLICATIONS



■ **Forschung und Dialog für eine nachhaltige Welt: Das IASS: Zahlen & Fakten 2014 bis 2016, IASS-Rechenschaftsbericht, 2017.**



■ Helgenberger, S., Gürtler, K., Borbonus, S., Okunola, A., Jänicke, M. (2017): **Mobilizing the Co-Benefits of Climate Change Mitigation: Building New Alliances – Seizing Opportunities – Raising Climate Ambitions in the New Energy World of Renewables.** COBENEFITS Impulse, November 2017.

NEWS FROM THE IIASS

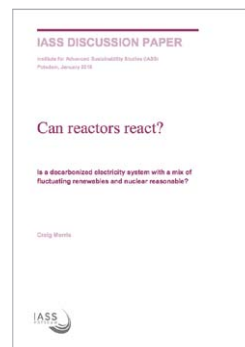
Institute

How Do We Strengthen Democracy? Philosopher Charles Taylor as Fellow at IIASS

The Canadian philosopher Charles Taylor spent a month at the IIASS towards the end of 2017. As a Senior Fellow, he contributed to research projects on truth and knowledge in so-called post-factual times and on the deterioration of democracy and social cohesion. **Read more...**

Anxious Times: New Book by IIASS Director Ortwin Renn

How powerful is fear – and what effect does it have on our society? These questions are at the heart of “Zeit der Verunsicherung” (Anxious Times), a recently published book by the environmental and technical sociologist Ortwin Renn. **Read more...**



- Morris, C. (2018): **Can reactors react? Is a decarbonized electricity system with a mix of fluctuating renewables and nuclear reasonable?** IIASS Discussion Paper, January 2018.



- Koudougou, S., Stiem-Bhatia, L., Bary, H., Tall, F. (2017): **Genre, foncier et gestion durable des terres au Burkina Faso: Étude de cas des villages de Bouéré et Tiarako.** IIASS Working Paper, November 2017.

Institute

Meeting with State Government: A Future Commission for Brandenburg



The discussion on 12 December with (from left to right) Hans Joachim Schellnhuber (PIK), Patrizia Nanz (IASS), Governor of Brandenburg Dietmar Woidke, Ortwin Renn (IASS), and moderator Viola Gerlach (IASS).

© IASS/Andreas Schöttke

It was an illustrious group of people that met at the Institute for Advanced Sustainability Studies (IASS) in mid-December: the Governor of Brandenburg Dietmar Woidke, several ministers from his cabinet, and the Director of the Potsdam Institute for Climate Impact Research (PIK) Hans Joachim Schellnhuber gathered in the Kleist Villa to discuss the future of energy policy, climate protection, and sustainability in Brandenburg with IASS Directors Ortwin Renn, Patrizia Nanz, Mark Lawrence, and Jakob Meyer.

The two-hour meeting was characterised by “very constructive and very open debate on the issues that are exercising all of us,” said climate researcher Hans Joachim Schellnhuber. Whether in relation to the coal phaseout, heavy industry, the mobility transition, agriculture, or a more climate friendly building sector, all participants agreed that now is the time to develop positive visions of Brandenburg’s future and embed them in the context of the global dynamics of modernisation processes such as digitalisation.

The need for research on transformation processes

Governor Woidke pointed out that a number of issues are crying out for scientific support. “How can we in Brandenburg make an even greater contribution to climate protection while continuing to promote social and economic development in the state so as not to leave people out?” For Woidke, this is a huge challenge, exemplified by the job losses in the lignite-mining industry. The Governor welcomed the fact that research institutes like the IASS and PIK are focusing on such transformation processes.

IASS Director Ortwin Renn explained that these processes can only be successful and socially responsible if they are approached systematically: What's needed is a kind of thinking that bridges the conflicting perspectives of the business community, civil society, policymakers, and the local population. "It's very important that transformation processes include all the people who are affected by them." Renn underlined that the wider public should not be viewed simply as people that have to be "won over", because they are in fact active contributors to change.

A coal phaseout without social or economic chaos

Governor Woidke expressed his confidence that Brandenburg will achieve its carbon reduction targets by 2020. That means that the state will gradually wind down its lignite-mining industry in the coming decades. But that needs to happen "without social or economic chaos," Woidke cautioned. The political transformation of the 1990s has shown that transformation processes don't just need a lot of money, but also patience, ideas, and time. And scientific support for this transformation has to be "hands on". "The Future Commission is a good idea if the region feels that its needs are being taken on board," stressed Woidke.

Hans Joachim Schellnhuber reminded the participants of the discussion that the decade from 2020 to 2030 is globally decisive for climate protection. The PIK Director believes that the required transformation is a huge economic opportunity. "Massive and sometimes disruptive innovations are set to happen in all economic sectors by 2030," explained Schellnhuber. Enormous accomplishments can be expected, for example in the field of storage technologies for electricity and heat. "Why shouldn't Brandenburg try to be a front runner in these developments?"



- Stiem-Bhatia, L., Onibon Doubogon, Y., Badou Savi, A. (2017): **Les pratiques de la gestion durable des terres au Bénin: une analyse sous l'angle du genre; Étude de cas dans les communes de Kandi, Bembèrèkè, Djidja et Bantè.** IASS Working Paper, December 2017.

Energy

Social Sustainability Barometer Shows Broad Support for the German Energiewende



Eighty-eight per cent of Germans support the Energiewende across all levels of education, income, political preferences, and in both cities and rural areas. But almost two thirds of the population believe that the cost burden is not equally shared. More than 65 per cent feel that ordinary citizens bear the brunt while companies and the wealthy do not do their fair share. A majority wants those who consume more energy to pay a larger share of the Energiewende's cost. Almost half of those surveyed are unsatisfied with the grand coalition's energy policy. At the same time, 84 per cent say that it's up to the state to ensure that everyone in Germany has sufficient energy access.

These are the main findings of the Social Sustainability Barometer for the German Energiewende 2017, which was presented to the public by the Institute for Advanced Sustainability Studies (IASS), the 100 Prozent erneuerbar Stiftung, and the innogy Stiftung für Energie und Gesellschaft on 14 November. The Barometer is a product of the Dynamis partnership, which was founded by the three partners to focus on an important but often neglected aspect of the energy transition: the question of social sustainability.

A broad consensus for the energy transition

Most Germans (88 per cent) support the Energiewende and want to take part in it (75 per cent). A majority also feels that support for renewables (84 per cent), energy conservation (80 per cent), and energy efficiency (85 per cent) is a good thing. "In all social groups and across all political allegiances, people have positive associations with the Energiewende," explains Daniela Setton, researcher at the IASS and lead author of the study. More than 87 per cent of supporters of the conservative CDU/CSU, the social democratic SPD, the Free

In November, the IASS presented a new instrument for measuring the social sustainability of the energy transition.

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Further information:



■ Setton, D., Matuschke, I., Renn, O. (2017): **Soziales Nachhaltigkeitsbarometer der Energiewende 2017: Kernaussagen und Zusammenfassung der wesentlichen Ergebnisse**, Potsdam, November 2017.

Democratic Party, the Left Party, and Alliance 90/The Greens are in favour of it, on average, as are 59 per cent of Alternative for Germany supporters. Even 77 per cent of climate sceptics support it.

“One surprising finding for us was that there is a similar level of support for a coal phaseout as there is for the nuclear phaseout,” Setton says. Nearly two thirds (63 per cent) of the population want a coal phaseout. This is true even in the lignite-mining states of Brandenburg, North Rhein-Westphalia, Saxony, and Saxony-Anhalt. Of those states, support is highest in North Rhein-Westphalia at 60 per cent. By comparison, 68 per cent of Germans support the nuclear phaseout.

Majority is critical of social imbalance

However, there is greater skepticism regarding other aspects of the Energiewende such as fairness, costs, governance, and citizen involvement. For instance, two thirds of Germans feel that the transition is expensive. Seventy-three per cent believe that it is leading to increased electricity charges. Low-income households in particular stated that ordinary citizens are bearing the brunt of the costs (71 per cent), but even higher-income households shared this perception (57 per cent).

“Nearly half of all Germans say the Energiewende is somewhat unfair; only a quarter say it is generally fair. This is a clear signal. Energy policies should focus more on social acceptance and support for low-income households,” says Ortwin Renn, Scientific Director at the IASS and the study’s project leader. “The astonishing thing is that even those who feel adversely affected by the transition in financial terms nonetheless support it. Politicians can rely on broad support – especially if future energy policy takes greater account of social issues.”

Poor results for political parties

None of the parties in the German parliament have Energiewende policies that convince the public. Twenty-three per cent stated that “no party” has the best concept, while 20 per cent said Alliance 90/The Greens had the best one. All of the other parties ranked lower: 15 per cent for the CDU/CSU, 7 per cent for the SPD, 3 per cent for the Left Party, 2 per cent for the Free Democratic Party, and 1 per cent for the Alternative for Germany. Even when the numbers were expressed according to party support, Alliance 90/The Greens performed the best by far, with 74 of their own voters saying the party had the best Energiewende concept. Indeed, 29 per cent of SPD voters even said Alliance 90/The Greens was more competent than their own party (26 per cent) in the energy transition.

Germans believe the state should ensure a socially equitable transition, specifically low energy prices, so that poor households are not unjustly burdened (57 per cent). Twenty-seven per cent believe that the state should provide financial assistance so that the needy can cover their heat and electricity bills. Eighty-eight per cent want to limit rent increases to a reasonable level when buildings are weatherised. And 75 per cent of landlords agree.

Desire for energy prices tiered by consumption level

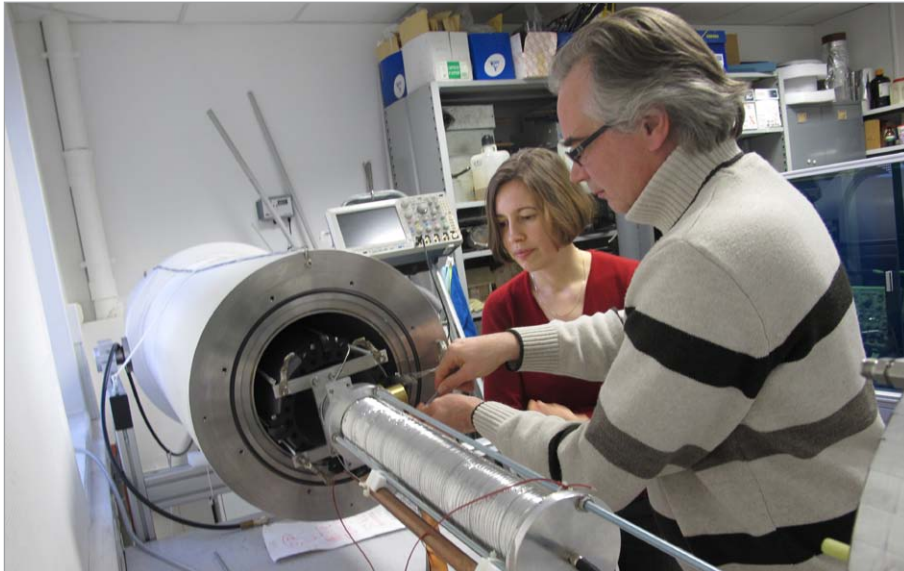
Citizens believe that the exemption of energy-intensive industries from the renewable electricity surcharge should be reconsidered. Seventy-two per cent of the public rejects these exemptions in the Renewable Energy Act. Instead of spreading the cost burden across all consumers via electricity charges, 60 per cent want households and firms with high carbon emissions to cover most of these costs. Roughly half of those surveyed – including 42 per cent of households with high electricity consumption – favour a progressive price component for electricity charges.

Demand for more political participation

The surveyed households also bemoan the lack of opportunities for ordinary citizens to participate in the energy transition, for example in the expansion of wind energy. Eighty-five per cent of Germans believe that citizens should be able to become involved in the planning of wind farms in their areas at an early stage. And fifty-five per cent think that the people likely to be affected by such wind farms should have the final say in the decision on whether to build them at all.

Energy

Novel Insulation for Superconducting Power Cable



Stéphane Holé (ESPCI, Paris) and Adela Marian (IASS) discuss the setup for the space charge tests.

© Frédéric Lesur

To transport electricity effectively, a superconductor has to be inside an extremely well-insulated tube with an interior temperature of -200°C . Commonly used synthetic insulation materials do not cope with such cryogenic temperatures. Now, researchers at the IASS, the ESPCI engineering college in Paris, and French cable manufacturer Nexans have developed a novel form of insulation that is compatible with the low temperatures and the high operating voltage of 320 kilovolts.

“We created an electrical insulation structure with multiple layers of paper immersed in fluid nitrogen. The paper gives the cable sufficient flexibility, allowing it to shrink when it cools down. Such nitrogen-impregnated insulation has a very high electrical performance and is also self-healing, which is very safe for operation,” says project coordinator Christian-Eric Bruzek of Nexans. The results of this experiment were published in a scientific journal in January.

Tests on experimental setup

The researchers were particularly interested in finding out whether a space charge builds up over time in the insulation. Never before had such tests been conducted at such low temperatures and high operating voltage. “Even the best insulation material is not perfect, and a small amount of charge always enters the insulator. The danger is that this charge will get trapped and build up within the insulation to create an additional electrical field. When it then discharges, it can eventually lead to a breakdown of power transmission,” IASS scientist Adela Marian explains. Researchers at the ESPCI designed an experi-

Further information:

■ The publication can be found **here**.

mental setup and conducted measurements to detect the accumulation of space charge in the insulation.

The findings are promising. No space charge was found in the insulation in any of the measurements. The risk of a local electrical field causing a sudden collapse when the cable is in operation thus seems negligible. This suggests that the use of this type of insulation for the magnesium diboride (MgB_2) superconductor and other superconducting devices in the electricity grid is perfectly safe.

Europe-wide research initiative

This research is a part of the EU's Best Paths research initiative to explore the potential of superconductors to transport electricity. Superconductors could help integrate the growing share of renewable energy into Europe's power supply. Because the cables will be underground, take up very little space, and transport large amounts of electricity, they have a relatively small ecological footprint and, unlike overhead high-voltage lines, do not impact the appearance of landscapes.

Policy

Science Platform Calls for Systematic Implementation of the German Sustainable Development Strategy



In the new edition of its Sustainable Development Strategy, the German government has described how it wants to go about implementing the 2030 Agenda for Sustainable Development agreed by the United Nations. Now, the steering committee of the Science Platform Sustainability 2030, led by Patrizia Nanz (IASS), Dirk Messner (SDSN Germany) and Martin Visbeck (DKN Future Earth), has highlighted the importance of the 2030 Agenda as a pact to secure a sustainable future for the global community. The 2030 Agenda provides a guiding strategy and set of goals that are also applicable in Germany and relevant for all its various stakeholders. It also offers a framework for action and assigns responsibility to specific actors.

Yet according to the Science Platform, previous efforts to implement Germany's Sustainable Development Strategy have proved inadequate. The adoption of a "business-as-usual" approach across society, the economy, and policymaking would be both inadmissible and lacking in foresight. The energy transition, the decarbonisation of the economy, and the transformation of our agricultural, food production and mobility systems have all been identified as key challenges by the public. Policymakers and other societal actors have a responsibility to take active steps to advance these transformations.

Science as a guiding force in society

In the view of the platform's steering committee, science serves as a central source of societal self-reflection and as such helps to mobilise diverse forms of knowledge and provides orientation knowledge to guide sustainable development. The mission and broader goal of

Facilitating discussion and providing impetus for change: the steering committee of the Science Platform Sustainability 2030

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Further information:



■ The Brochure on the Science Platform Sustainability 2030 can be found **here**.

the Science Platform Sustainability 2030 is to reflect on sustainability policy and provide new impetus for innovation in policymaking and society as well as in research. In doing so, the platform will tap into the potential offered by Germany's pluralistic system of research and scientific funding to enhance its work.

The platform's efforts to stimulate, organise, and moderate dialogue between science and stakeholders from policymaking, business, and civil society will be central to its success. It will also bring the deliberations of working groups to bear in the further development of the German Sustainability Strategy, submit statements to the State Secretary Committee for Sustainable Development, and discuss further research needs in different dialogue formats.

Science Platform's secretariat at the IASS

The Science Platform Sustainability 2030 was founded in May 2017 and presented to the public at the 13th BMBF Forum for Sustainability. The platform operates independently and receives input from a circle of federal ministries that currently includes the ministries of Education and Research (BMBF), Environment, Nature Conservation, Building and Nuclear Safety (BMUB), Economic Cooperation and Development (BMZ), Food and Agriculture (BMEL), and Labour and Social Affairs (BMAS) as well as the Federal Chancellery. The secretariat of the Science Platform Sustainability 2030 is hosted by the IASS.

Oceans

Workshop at IASS: Experts Analyse Progress on Protecting Oceans



Jorid Hammersland from the Swedish Ministry for the Environment and Energy spoke in Potsdam about regional ocean partnerships.

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The fate of our oceans focussed minds in 2017. Politicians and experts from science and civil society gathered to explore ways out of the marine crisis at the UN Ocean Conference in New York, the EU-organised “Our Ocean” Conference in Malta, the annual Session of the High-Level Political Forum for Sustainable Development, and at the UN Climate Conference. But did they succeed in turning the tide towards greater sustainability? Representatives from science, policymaking and civil society met at the IASS in December to discuss this at the 4th Potsdam Ocean Governance Workshop.

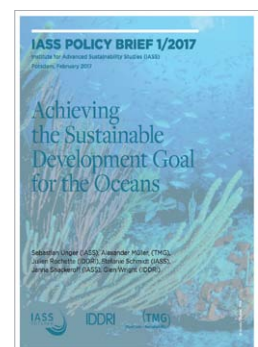
Martin Visbeck from GEOMAR – Helmholtz Centre for Ocean Research Kiel emphasised the importance of viewing the sustainable development goal for the oceans (SDG 14) as an integral component of the UN 2030 Agenda for Sustainable Development. “Analysing the interactions of the oceans goal with the other SDGs is important because it strengthens cooperation and gives impetus for new areas of work,” the oceanographer and climate scientist explained. An international report on this topic was published in May with contributions from Visbeck and ocean research teams in Kiel and at the IASS. The report offers a detailed analysis of how the oceans goal and three further goals interact with other sustainable development goals.

Companies want to stop over-fishing and slavery

According to Meg Caldwell from the David & Lucile Packard Foundation, awareness of these issues and a willingness to change is also growing in the private sector. She highlighted two initiatives presented at the UN Ocean Conference in June 2017 as examples of this development: In the first of these, the Tuna 2020 Traceability Declaration, 18 civil society organisations have united in an effort to stop the distri-

Further information:

- The international report on synergies and conflicts between the different sustainable development goals of the 2030 Agenda can be found [here](#).



- Unger, S., Müller, A., Rochette, J., Schmidt, S., Shackeroff Theisen, J., Wright, G. (2017): **Achieving the Sustainable Development Goal for the Oceans**, IASS Policy Brief, 2017.

bution of illegally caught tuna. Meanwhile, the SeaBOS initiative has brought together nine major fishing companies to prevent unlawful acts such as the use of slave labour and over-fishing. “What makes me optimistic is that companies are getting into the nitty-gritty, into the operationalisation. There is a strong social equity narrative across the SDGs, and industry is picking up on that,” explained Caldwell.

Companies, governments, foundations, scientific institutions and other stakeholders submitted over 1,400 voluntary commitments to the oceans goal in the run-up to and following the UN Ocean Conference. But many of these commitments reflect a half-hearted approach, reported Barbara Neumann of the IASS: “Most of the voluntary commitments were directed to addressing sustainable ocean management, ocean pollution, capacity building and sustainable fisheries. There were very few examples that tackled politically difficult issues such as harmful fisheries subsidies.” Challenges to the implementation of these voluntary commitments include the need to strengthen the hitherto largely neglected sub-goals as well as transparency and quality assurance.

Transparent implementation and closer cooperation needed

Sebastian Unger (IASS) drew an optimistic conclusion following two days of discussions: “The ocean is in a deep crisis. But all the international engagement we have seen in 2017 gives hope that change is possible.” What is needed now, he argued, is a transparent system to track the voluntary commitments made by states and stakeholders, coupled with stronger cooperation within marine regions and a holistic approach to the implementation of the different SDGs linked to the ocean.

Climate

CO₂ as an Asset: Positive Attitudes to New Technologies in Germany and the UK



The carbon dioxide emitted by coal-fired power stations like this one could be put to commercial use in future.

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According to the United Nations, the amount of carbon dioxide in the atmosphere increased significantly last year. Using carbon capture and utilisation (CCU) technologies, the greenhouse gas and climate forcer can, however, be converted into products such as building materials, chemicals, and fuels. That's not just good for the environment: The economy also stands to gain from this potentially worthwhile investment. Now, a study published in the journal *Energy Research & Social Science* has examined attitudes to CCU technologies in Germany and Great Britain. It shows that while people in both countries rate such technologies as positive overall, they also differ in some respects.

German confidence in consumer protection

The Germans surveyed in the study expressed great confidence in consumer protection and were clearly in favour of state control of new products. Some were genuinely excited at the prospect of using products made from a greenhouse gas and protecting the climate in the process. A few British respondents, on the other hand, demanded that the potential users of CCU technologies be more transparent about their reasons for developing them and reveal their financial motives in particular. By so doing, they would help to build public confidence in technological developments in this area. While most of the 28 people surveyed had already heard of CCU, none of them had extensive knowledge of the new technologies.

The team of authors developed the study against the background that new technologies have tended to be perceived quite differently in different countries in the past. As co-author Barbara Olfe-Kräutlein from the IASS explains, "Carbon Capture and Storage technologies, which are intended to capture the CO₂ emitted by power plants and

Further information:

- The complete study can be found **here**.

permanently store it underground, met with far greater opposition in Germany than in other countries. And the risks of nuclear energy are also perceived differently in different parts of Europe. With our study, we wanted to investigate and compare perceptions of the risks presented by CCU in two different regions. This will also help us to draw conclusions about the factors that shape different attitudes to these technologies in future studies.” The results of the study will be used to develop information materials that are tailored to different needs.

Air Quality

New Database on Global Surface Ozone Levels Shows Regions Most Affected by Air Pollution



Smog in Los Angeles, where research on ozone as an air pollutant first began.

© iStock/Daniel Stein

An international team of researchers has compiled and analysed data on ground-level ozone from thousands of monitoring stations around the world to shed light on its distribution. Recently published in the scientific journal *Elementa: Science of the Anthropocene*, the results provide the most ambitious ground-level ozone assessment ever undertaken. IASS air quality expert Erika von Schneidemesser is a co-author of the paper, which is one of a series of publications in the context of the larger international Tropospheric Ozone Assessment Report (TOAR) initiative.

Trouble breathing: Ozone harms human health

In the upper layer of the atmosphere, the ozone layer protects life on Earth from the sun's ultraviolet radiation. Just above the Earth's surface, however, in the troposphere, it is an air pollutant. Formed in chemical reactions between nitrogen oxides and volatile organic compounds emitted from cars, industry, and other sources, ozone at ground level can be harmful to human health. Possible adverse health effects include a reduction in lung function and a higher susceptibility to asthma and infections. Ozone also irritates the membranes of the eyes.

To assess the frequency of periods in which a given population is exposed to harmful ozone levels, the international group of researchers from 14 institutions led by the Universities of Leicester and Edinburgh has now quantified the occurrence of high ozone levels. With data from over 4,800 monitoring stations, the researchers were able to analyse all available global data in a uniform way for the first time.

Further information:

- The publication is available **here**.
- More information about the Tropospheric Ozone Assessment Report (TOAR) is available **here**.

Previously, analyses of ozone trends left researchers unable to draw robust conclusions about regional trends in ozone pollution. The large number of sites included in this more comprehensive dataset now makes that possible.

First comprehensive open access database

The new research shows that “despite improvements in air pollution emissions in Europe and North America, ozone levels that are harmful to human health are still a cause for concern across the world and ozone is rising in East Asia,” explains Dr Zoë Fleming, an atmospheric chemist from the University of Leicester and one of the study’s lead authors. Air quality monitoring is crucial to quantifying current air pollution levels, evaluating the effectiveness of emissions controls, and informing the evolution of air pollution policy.

Professor Ruth Doherty from the School of Geosciences at the University of Edinburgh says: “The ability to quantify for urban regions worldwide the changes in high and peak ozone levels over the last 15 years and longer is an exciting research development that we hope will be useful to air quality managers to inform and evaluate strategies to protect human health from the adverse effects of ozone.”

Digitalisation

Robots and Artificial Intelligence: What Kind of Working World Will the Future Bring?



Digitalisation and globalisation are fundamentally changing the way we work. The development of artificial intelligence could ultimately lead to the replacement of people in the process of value creation, thus dramatically recasting the future of humanity. What role should the state and the market play in these developments? How can we ensure that technological progress benefits humankind? And what consequences could be expected from the abolition of gainful employment? Questions like these dominated discussions among international experts at the “Thinking Space on the Future of Gainful Employment” held at the IASS in late November and early December.

Radical or gradual change?

“The huge structural changes that we are facing call for a reappraisal of the nature and organisation of work across the globe. They are also of great relevance for the United Nations sustainable development goals, especially goal 8, which refers to decent work for all. With the IASS Thinking Space, we wanted to explore not only the normative foundations of sustainability and a good life, but also concrete cases such as the structural transformation of former coal-mining regions, which is presenting their inhabitants with major challenges,” explained IASS Scientific Director Patrizia Nanz, who convened the Thinking Space together with Hans Joachim Schellnhuber, Director of the Potsdam Institute for Climate Impact Research (PIK).

In these regions it is becoming especially clear that in addition to a reorganisation of the working world, we need a revitalisation of democracy at the local level to enable people take questions of their future and identity into their own hands. Manfred Hellrigl, former head of the Office for Future Questions of the state government in Vorar-

Digitalisation is turning the working world upside down and could lead to social upheavals. How should policymakers and society react to these developments? The IASS initiated a discussion on this issue last year.

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Iberg (Austria) and currently Senior Fellow at the IASS, talked about his experiences of public participation processes and advised: “Instead of just throwing money at problems in regions facing significant watersheds, we need to make people masters of their own destinies and take their ideas on board.” A heated debate arose around the question of the advantages of radical caesura such as a new global economic system without ownership over gradual, small changes to the working world.

Is every job loss regrettable?

One thing is clear: As a result of the energy transition, jobs in the fossil energy sector are already being lost, and digitalisation could make entire professions redundant. But for IASS Senior Advisor Hans Joachim Schellnhuber, we shouldn't shed a tear over every lost job: “Ninety per cent of the world's population work to secure a relatively meagre share of the global economy. Children toil in Manila and other parts of the Global South for a whole week to buy a bottle of Coca Cola. That is not what I'd call ‘decent work’.” In Schellnhuber's view, the whole system of gainful employment needs to be abolished to make room for the emergence of a new, more sustainable working world.

Institute

How Do We Strengthen Democracy? Philosopher Charles Taylor as Fellow at IASS



Charles Taylor is Professor Emeritus of Philosophy at McGill University in Montreal and a renowned commentator on political affairs. He has taught at the universities of Princeton, Berkeley, Frankfurt am Main, and the Hebrew University in Jerusalem. From 1976 to 1981, Taylor was Chichele Professor of Social and Political Theory at the University of Oxford, and he is still a Fellow of All Souls College. He came to the IASS as a Senior Fellow for one month in November 2017.

During his stay, Taylor gave the Fritz Stern Lecture titled “Democratic Degeneration: Three Easy Paths to Regression” at the American Academy in Berlin. In that talk, he argued that democracies carry within them the seeds of their own degeneration. He described three paths upon which democracies can easily falter: elitist control, nativist exclusion, and majority rule.

Broad research interests

Taylor is known worldwide for his contributions to political philosophy, the philosophy of social science and intellectual history, and for his sweeping comprehension of the meaning and significance of modernity, as in his widely cited *Sources of the Self* (Harvard, 1989). More recently, Taylor has written on the philosophy and sociology of religion, including in his 2007 book, *A Secular Age* (Harvard, 2007). His latest book is *The Language Animal: The Full Shape of the Human Linguistic Capacity* (Harvard, 2016).

The Canadian philosopher and writer Charles Taylor

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Further information:

Videos of the event “Crisis and Futures of Democracy: A discussion with Charles Taylor and Patrizia Nanz” that took place on 11 December 2017 can be found here:

■ **Section 1: Democracy and crisis**

■ **Section 2: Symptoms and causes – what has gone wrong?**

■ **Section 3: Social media and the crisis of the public sphere**

■ **Section 4: Revitalizing democracy – future imaginaries**

■ **Section 5: Drivers and agents of change**

Countless awards

Taylor is the recipient of numerous academic awards, including the Templeton Prize for Progress toward Research or Discoveries about Spiritual Realities (2007) and the Kyoto Prize for Thought and Ethics, one of the highest awards for lifetime achievements in the social sciences and humanities. In 2015, Taylor and Jürgen Habermas were awarded the prestigious John W. Kluge Prize, which honours the work of scholars in the humanities and social sciences whose specialist area is not covered by the Nobel Prizes. In 2016, Taylor was the inaugural recipient of the Berggruen Prize, for his role as a “thinker whose ideas are of broad significance for shaping human self-understanding and the advancement of humanity.”

Taylor is Foreign Honorary Member of the American Academy of Arts and Sciences and a Grand Officer of the National Order of Quebec. During his one-month fellowship at the IASS he focused in particular on the future of democracy and contributed to the research projects of IASS Scientific Director Patrizia Nanz.

Institute

Anxious Times: New Book by IASS Director Ortwin Renn



Populist movements are on the rise across the globe. At the same time, a deep mistrust of politics, business and science can be observed: Is politics still capable of solving problems? How fair is the business world? And how independent are scientists? "The confidence of many people in the validity of long-standing norms and values has been thoroughly shaken. In the age of 'fake news', they are no longer sure what information they can trust," explains Ortwin Renn.

Guidance in uncertain times

The Scientific Director at the IASS probes the causes and effects, as well as the perception and handling of fears in our society. What exactly are people afraid of these days? What do they feel threatened by? Where do these fears come from? And how can we handle them – as individuals and as a society? "This book is intended to help people orient themselves in uncertain times and regain confidence in their own powers of judgement."

Fascinating insights into the psyche of a nation

Renn dissects the growing angst in our society from a scientific perspective and shows the spectrum of reactions to it: from rage and anxiety to feigned apathy. Are our interests still well served by decision-makers in politics, industry and society? And what does it mean for society when fear becomes too powerful? Renn provides fascinating insights into today's Germany – and a vitally important human emotion.

In his latest book, risk expert Ortwin Renn examines what drives people to populism.

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berlin-event-foto.de

Further information:



■ ebook, 240 pages
Published in November 2017
by Rowohlt-Verlag
ISBN: 978-3-644-40165-5

An extract from the book can be found [here](#).

SELECTED PUBLICATIONS

Selected articles published by IASS researchers in peer-reviewed journals and specialist publications from November to late January 2017:

Journals

Bayer, B., Matschoss, P., Thomas, H., Marian, A. (2018): The German experience with integrating photovoltaic systems into the low-voltage grids. – *Renewable energy: an international journal*, 119, pp. 129 – 141.

■ [Link](#)

Bayer, B. (2018): Experience with auctions for wind power in Brazil. – *Renewable and Sustainable Energy Reviews*, 81, 2, pp. 2644 – 2658.

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Bonn, B., von Schneidemesser, E., Butler, T. M., Churkina, G., Ehlers, C., Grote, R., Klemp, D., Nothard, R., Schäfer, K., von Stülpnagel, A., Kerschbaumer, A., Yousefpour, R., Fountoukis, C., Lawrence, M. G. (2018): Impact of vegetative emissions on urban ozone and biogenic secondary organic aerosol: Box model study for Berlin, Germany. – *Journal of Cleaner Production*, 176, pp. 827 – 841.

■ [Link](#)

Cho, C., Kim, S.-W., Rupakheti, M., Park, J.-S., Panday, A., Yoon, S.-C., Kim, J.-H., Kim, H., Jeon, H., Sung, M., Kim, B. M., Hong, S. K., Park, R. J., Rupakheti, D., Mahata, K., Praveen, P. S., Lawrence, M. G., Holben, B. (2017): Wintertime aerosol optical and radiative properties in the Kathmandu Valley during the SusKat-ABC field campaign. – *Atmospheric Chemistry and Physics*, 17, 20, pp. 12617 – 12632.

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Dreyer, M., Ober, S., Sellke, P. (2017): Wissenschaft und Praxis gemeinsam für die Energiewende: Der transdisziplinäre Ansatz von ENavi. – *GAIA – Ecological Perspectives for Science and Society*, 26, 3, pp. 287 – 287(1).

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Kuik, F., Kerschbaumer, A., Lauer, A., Lupascu, A., von Schneidmesser, E., Butler, T. M. (2017 online): Top-down quantification of NO_x emissions from traffic in an urban area using a high resolution regional atmospheric chemistry model. – *Atmospheric Chemistry and Physics Discussions*, pp. 1–40.

■ **Link**

Mahata, K., Panday, A. K., Rupakheti, M., Singh, A., Naja, M., Lawrence, M. G. (2017): Seasonal and diurnal variations in methane and carbon dioxide in the Kathmandu Valley in the foothills of the central Himalayas. – *Atmospheric Chemistry and Physics*, 17, 20, pp. 12573–12596.

■ **Link**

Marian, A., Holé, S., Lesur, F., Tropeano, M., Bruzek, C. E. (2018): Validation of the superconducting and insulating components of a high-power HVDC cable. – *IEEE electrical insulation magazine*, 34, 1, pp. 26–36.

■ **Link**

Morris, C., Jungjohann, A. (2017): Energize the people to effect policy change. – *Nature*, 551, 7682, pp. 138–140.

■ **Link**

Mues, A., Lauer, A., Lupascu, A., Rupakheti, M., Kuik, F., Lawrence, M. G. (2017 online): Air quality in the Kathmandu Valley: WRF and WRF-Chem simulations of meteorology and black carbon concentrations. – *Geoscientific model development discussions*, pp. 1–38.

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■ **Link**

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Risch, B., Blöcher, K., Holfelder, A.-K., Schehl, M., Weinberger, P. (2017): Konzept und Praxis des Zertifikats „Bildung – Transformation – Nachhaltigkeit (BTN)“ – BNE in der Lehrerbildung. – *ZEP – Zeitschrift für internationale Bildungsforschung und Entwicklungspädagogik*, 40, 3, pp. 11–17.

■ **Link**

Truong, K.-N., Weger, L., Stahl, W., Mouhib, H. (2017): Favored Conformations of Carbonyl Compounds: A Structural Study of n-Octanal. – *ChemPhysChem: a European journal of chemical physics and physical chemistry*, 18, 19, pp. 2631–2636.

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von Schneidemesser, E., Kutzner, R., Schmale, J. (2017): A survey on the perceived need and value of decision-support tools for joint mitigation of air pollution and climate change in cities. – *Elementa: Science of the Anthropocene*, 5:68.

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Blackstock, J. J., Low, S. (2018): *Geoengineering our Climate? Ethics, Politics and Governance*, (The Earthscan Science in Society Series), London: Routledge, Taylor & Francis Group, 272 pp.

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Bruhn, T. (2017): How personalities and participant interactions shape co-creative transdisciplinary processes. – In: *Behaviour Change from the Inside Out: applications of psychosocial ideas to sustainability*, Cambridge, UK : Global Sustainability Institute at Anglia Ruskin University, pp. 31–34.

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Hughes, L., Quitzow, R. (2018): Low-Carbon Technologies, National Innovation Systems, and Global Production Networks: The State of Play. – In: *Goldthau, A., Keating, M. F., Kuzemko, C. (Eds.), Handbook of the international political economy of energy and natural resources*, (Handbooks of Research on International Political Economy Series), Cheltenham: Edward Elgar Publishing Ltd, pp. 281–296.

■ **Link**

Jänicke, M. (2017): Germany: Innovation and Climate Leadership. – In: *Wurzel, R. K., Connelly, J., Liefferink, D. (Eds.), The European Union in International Climate Change Politics Still Taking a Lead?*, (Routledge Studies in European Foreign Policy), München: Routledge, pp. 114–130.

■ **Link**

Klinke, A., Renn, O. (2018): Distributed Responsibility in Risk Governance. – In: *Wilderer, P. A., Renn, O., Grambow, M., Molls, M., Mainzer, K. (Eds.), Sustainable Risk Management*, (Strategies for Sustainability), Cham: Springer, pp. 19–31.

■ **Link**

Mauelshagen, F. (2017): Anthropozän. – In: *Goerres-Gesellschaft (Ed.), Staatslexikon*, Freiburg i. Br.: Herder, pp. 241–243.

■ **Link**

Mauelshagen, F. (2017): Das Zeitalter der Ungewissheit: Zukunftsszenarien und globale Bedrohung nach dem Zweiten Weltkrieg. – In: Hannig, N., Thießen, M. (Eds.), *Vorsorgen in der Moderne: Akteure, Räume und Praktiken*, (Schriftenreihe der Vierteljahrshefte für Zeitgeschichte; 115), Berlin: De Gruyter, pp. 79–104.

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■ **Link**

Röhrkasten, S., Qader, M. (2018): Renewable Energy: a recent, but dynamic trend in the MENA region. – In: Jalilvand, D. R., Westphal, K. (Eds.), *The Political and Economic Challenges of Energy in the Middle East and North Africa*, London : Routledge, pp. 57–69.

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Setton, D., Matuschke, I., Renn, O. (2017): Das Soziale Nachhaltigkeitsbarometer der Energiewende 2017. – In: *Symposium: Soziale Nachhaltigkeit. Beiträge für das „Symposium: Soziale Nachhaltigkeit“ am 2.11.2017, Potsdam (IASS)*, pp. 90–109.

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Bruzek, C., Ballarino, A., Escamez, G., Giannelli, S., Lesur, F., Marian, A., Tropeano, M., Vega, G. (2017): Development of MgB₂ cable conductors for very high power HVDC transmission within the Best Paths project – Abstracts, 13th European Conference on Applied Superconductivity (EUCAS 2017) (Geneva, Italy 2017).

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Escamez, G., Bruzek, C., Vega, G., Lesur, F., Marian, A. (2017): 3-D Numerical Modelling of AC losses in MgB₂ wires for the 10 kA demonstrator of BEST PATHS – Abstracts, 13th European Conference on Applied Superconductivity (EUCAS 2017) (Geneva, Italy 2017).

■ **Link**

Honegger, M., Münch, S., Hirsch, A., Beuttler, C., Peter, T., Burns, W., Geden, O., Goeschl, T., Gregorowius, D., Keith, D., Lederer, M., Michaelowa, A., Pasztor, J., Schäfer, S., Seneviratne, S., Stenke, A., Patt, A., Wallimann-Helmer, I. (2017): Climate change, negative emissions and solar radiation management: It is time for an open societal conversation; White Paper, St.Gallen: Risk-Dialogue Foundation.

■ **Link**

Kamlage, J.-H., Nanz, P. (2017): Public Participation and Democratic Innovations: Assessing Democratic Institutions and Processes for Deepening and Increased Public Participation in Political Decision-Making, World Forum for Democracy 2017 (Straßburg 2017), 36 pp.

■ **Link**

Kloeppel, S., Haberstroh, C., Marian, A., Bruzek, C.-E. (2017): *Cooling Considerations for the Long Length HVDC Cables Cryostat within BEST PATHS Project*. – Talk presented at International Workshop on Cooling Systems for HTS Applications (Karlsruhe 2017)

■ **Link**

Marian, A., Bruzek, C., Ballarino, A., Escamez, G., Giannelli, S., Grasso, G., Grilli, F., Haberstroh, C., Holé, S., Lesur, F., Tropeano, M. (2017): Status of the MgB₂-based high-power DC cable demonstrator within BEST PATHS – *Abstracts*, 13th European Conference on Applied Superconductivity (EUCAS 2017) (Geneva, Italy 2017).

■ **Link**

Murau, S. (2017): Private Credit Money Gone Public: Monetary Transformation and the Accommodation of Bank Notes, Bank Deposits and Shadow Money, PhD Thesis, London: City, University.
Nomos, pp. 341–350.

■ **Link**

Opielka, M., Renn, O. (Eds.) (2017): Symposium: Soziale Nachhaltigkeit. Beiträge für das „Symposium: Soziale Nachhaltigkeit“ am 2.11.2017, Potsdam (IASS), (ISÖ-Text ; 2017-4), Symposium: Soziale Nachhaltigkeit (Potsdam 2017), Siegburg: ISÖ – Institut für Sozialökologie, 191 pp.

■ **Link**

Tropeano, M., Ballarino, A., Bruzek, C., Escamez, G., Giannelli, S., Konstantopoulou, K., Lesur, F., Marian, A., Grasso, G. (2017): MgB₂ round wires for the high-power superconducting cable demonstrator in the Best Paths project – *Abstracts*, 13th European Conference on Applied Superconductivity (EUCAS 2017) (Geneva, Italy 2017).

■ **Link**

NEW PROJECTS

International Partnership to Strengthen Regional Ocean Governance: PROG Forum

Marine protection initiatives face many different challenges, and this calls for new approaches to regional cooperation. After all, marine pollution does not remain within maritime borders. And global problems like climate change also affect regional oceans like the Baltic Sea or the West Indies Ocean. That's why regionally coordinated solutions are so important. Regional measures and ecologically coherent networks of marine protected areas contribute far more to the preservation of marine ecosystems than unilateral measures by individual states.

The project aims to develop effective cross-sectoral regional governance concepts for the protection and sustainable use of our oceans. The PROG Forum represents a new format for solution-oriented learning and exchange among different marine regions, which will be developed, tested and established as a participatory instrument at the interface of science and marine policy. In addition, examples of regional best practice for integrated marine governance will be identified and innovative solutions to governance challenges will be developed.

The project partners are the IASS, the Institute for Sustainable Development and International Relations (IDDRI), and TMG – Think Tank for Sustainability. The project is funded by the Federal Environment Ministry and the Federal Environment Agency (UBA). It is being carried out in cooperation with the European Union. The first PROG Forum in the first half of 2019 will take the form of an international academic conference.

Project duration:
11/2017 to 11/2020

Contact:

- **Sebastian Unger**
- **Barbara Neumann**

Identification and Analysis of Promising Technologies for Carbon Capture and Utilisation (CCU)

For several years, researchers have been looking into ways of using carbon as a raw material in industrial processes, such as the manufacture of building materials and chemicals. Some technologies for carbon recycling (Carbon Capture and Utilisation or CCU) are already quite developed; others are still being tested in the lab or pilot projects. The European Commission's Directorate-General for Climate Action (DG CLIMA) has therefore asked the consulting firm Ramboll, the IASS, and the University of Kassel to produce a study to identify the most promising CCU technologies.

The study aims to analyse the status and further development of various CCU technologies and to determine those that should receive funding. In addition, the researchers are investigating previous regulations for CCU technologies. The goal is to ascertain whether they should be amended or expanded in the EU to allow these innovative climate action technologies play a bigger role.

Development of Standardised Guidelines for the Lifecycle Assessment of Carbon Dioxide Conversion

Carbon capture and utilisation (CCU) technologies do not just expand the raw material base; they also protect natural resources and reduce emissions. The first products made from recycled carbon – such as polyurethane for the manufacture of plastics – are currently going on sale. However, the new technologies also entail challenges. For instance, capturing carbon consumes a lot of energy. A comprehensive assessment of the environmental impacts is therefore needed to determine the potential of CCU technologies.

Lifecycle analyses have proven useful in such cases. They take account of a product's entire lifecycle from the cradle to the grave. The project will produce comprehensive guidelines for the lifecycle analysis of CCU technologies from various sectors. These guidelines will greatly reduce the ambiguity of previous analyses so that stakeholders from industry, politics, and research can make better decisions.

Project duration:
09/2017 to 01/2019

Contact:

■ **Barbara Olfe-Kräutlein**

Project duration:
08/2017 to 07/2018

Contact:

■ **Annika Marxen**

■ **Henriette Naims**

Development of Standardised Guidelines for the Techno-economic Assessment of Carbon Dioxide Conversion Processes

Research on carbon capture and utilisation technologies (CCU) is becoming increasingly important in industry, research, and politics. Yet we still lack a comprehensive and standardised way of assessing these technologies from a technical or economic point of view. This project aims to close that gap by developing guidelines for determining the economic feasibility of CCU technologies. The funders of new technologies are of course especially interested in transparent and comparative assessment approaches.

Most CCU projects are still at an early stage of development. When they enter the demonstration phase, greater investments will be needed. The guidelines are intended to make it easier to calculate expected costs and profits more precisely. Researchers are focusing on the production of methanol, carbonates, and dimethyl ether using CCU technologies. Methanol is used as a fuel and a raw material for chemicals. Carbonates like magnesium and calcium carbonate are used as additives in building materials. And dimethyl ether is mainly used as a fuel additive and an energy storage medium.

Project duration:
8/2017 to 7/2018

Contact:

■ **Henriette Naims**

■ **Annika Marxen**

JOB ADVERTISEMENTS

Academic positions:

The following positions are currently open:

Research Associate specialising in multi-criteria assessment (f/m)

for the Kopernikus project Energy Transition Navigation System

The deadline for applications is: 28.02.2018

■ **To the job advertisement
(in German)**

Student Assistants

The IASS is currently seeking a

Student assistant to provide IT support

This position will remain open until it is filled.

■ **To the job advertisement
(in German)**

Student assistant to support the Facility Management team

The deadline for applications is: 19.02.2018

■ **To the job advertisement
(in German)**

Student assistant

for the project "Narratives and Images of Sustainability"

The deadline for applications is 15.03.2018

■ **To the job advertisement
(in German)**

OTHER NEWS FROM THE INSTITUTE

Jakob Meyer joined the IASS as Administrative Director on 1 October 2017. An experienced research manager, he most recently served in leading administrative roles at the headquarters of the Leibniz Association in Berlin. Prior to that, he contributed as Head of Communications to the setting up of the Hertie School of Governance. Meyer is keen to forge ahead with the institute's organisational development, particularly in the area of administrative services and in accordance with the principles of sustainability.

Sybille Röhrkasten has been appointed to the German government's round table on the Internationalisation of Education, Science and Research, where the IASS researcher will focus on the issues of water, energy and climate. The round table is part of the government's internationalisation strategy, which was developed by the Federal Ministry of Education and Research and adopted in 2017. The strategy is geared to global challenges, such as globalisation, digitalisation and the further development of the European Research Area, that can only be met through international cooperation in the areas of education, science and research.

The 16th stop of the exhibition "examples to follow!" in Valparaíso has been named best international exhibition of 2017 in Chile by the Chilean Art Critics Circle. The exhibition was held from 10 June to 12 August at the Parque Cultural de Valparaíso with the support of the Heinrich Böll Foundation Cono Sur, the IASS, and the Goethe Institute Chile. By addressing the question of what a viable future means through art, it foregrounded the cultural dimension of sustainability. Over 55 national and international artworks reflected on environmental destruction, renewable energies, climate change, recycling, and sustainable business.

EVENTS

February 2018

1 February 2018

Round table

ENavi Stakeholder Meeting

Organised by: IASS

Venue: IASS

(By invitation only)

13 February 2018

Tuesday Talk

John Graham: The future of electric vehicles in the US, China and Europe

Organised by: IASS

Venue: IASS

(Open to the public)

15 February 2018

Potsdam Citizen Participation Day

Keynote speech by Patrizia Nanz

Organised by: Brandenburg Agency for Civic Education

Venue: oskar, the community centre in the garden city

(Open to the public)

17 February 2018

Keynote speech and discussion

ENavi at the AAAS Annual Meeting

Organised by: American Association for the Advancement of Science

Venue: Austin Convention Center, Texas, USA

(By invitation only)

20 February 2018

Symposium

Transformations of Energy Systems: Historical Perspectives on the Anthropocene

Keynote speech by Patrizia Nanz

Organised by: Max Planck Institute for the History of Science

Venue: Harnack Haus, Berlin

(By invitation only)

20 February 2018

Tuesday Talk

Dónal Gaynor: Teaching sustainability in secondary high school

Organised by: IASS

Venue: IASS

(Open to the public)

22 February 2018

Tuesday Talk

Adrienne Goehler: Sustainability needs deceleration needs basic income

Organised by: IASS

Venue: IASS

(Open to the public)

22 February 2018

Expert discussion at the

5th meeting of the steering committee of the Science Platform Sustainability 2030

Organised by: IASS

Venue: IASS

(By invitation only)

March 2018

5–6 March 2018

Workshop

Simulations on high-performance computers

Organised by: Berlin-Brandenburg Academy of Sciences and Humanities, IASS

Venue: Jägerstr. 22–23, 10117 Berlin

(By invitation only)

13 March 2018

Tuesday Talk

Sebastian Helgenberger: Mobilizing the Co-Benefits of Climate Change Mitigation

Organised by: IASS

Venue: IASS

(Open to the public)

19 March 2018

Public presentation

Social Sustainability Barometer for the German Energiewende 2017

Organised by: IASS

Venue: Representation of North Rhine-Westphalia, Brussels
(By invitation only)

20 March 2018

Tuesday Talk

Petra Kuenkel: Patterns of Aliveness – an emerging theory for stewarding sustainability transformation

Organised by: IASS

Venue: IASS
(Open to the public)

22 March 2018

Expert discussion

Blue Action Projekt: Second Yamal Workshop

Organised by: IASS

Venue: IASS
(By invitation only)

April 2018

10–11 April 2018

Workshop

Moving towards standardised guidelines for life cycle and techno-economic assessment of carbon dioxide utilisation technologies

Organised by: IASS, TU Berlin, RWTH Aachen, University of Sheffield

Venue: TU Berlin
(By invitation only)

10–11 April 2018

Workshop

Co-Benefits of Renewable Energies: Lessons learned from Germany and China

Organised by: IASS, German Agency for International Development

Venue: IASS
(By invitation only)

13–14 April 2018

2018 GAIA Annual Meeting: Transdisciplinary Research and Teaching

Organised by: Verein Gaia, IASS

Venue: IASS
(Open to the public)

24 April 2018

Workshop

Transformative Development Cooperation

Organised by: IASS

Venue: IASS
(By invitation only)

■ **To the IASS Calendar of Events**

Join the discussion: Is Germany's grand coalition failing to deliver on climate protection and the energy transition? Twenty years after the Kyoto Protocol: Are we still on the right track? And what will happen if the CO₂ bubble bursts? Read more about these issues in the latest blog contributions by IASS scientists.

Follow us on Twitter!

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CONTACT AND IMPRINT

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