



From Angela to Willem - PIK Alumni Newsletter, No. 2, 08/2019

Dear PIK Alumni,

Welcome to the second newsletter of the PIK Alumni programme, through which we hope to share with you a brief selection of highlights and information from the Potsdam Institute from the past few months. The contents include:

New departments, new heads, new structures at PIK

Visits: Angela Merkel, King Willem-Alexander, Greta Thunberg

PIK research: Heatwaves, CO2 pricing, and carbon-neutral living

Publication highlights

What's new with you? Please get in touch if you have moved to a new job or need to update your contact details, with news you'd like to share, or with feedback to the newsletter.

Stay in touch!

Alison Schlums, PIK Alumni Officer

Changes at PIK

Some of you may have noticed that there has been some news at PIK since the start of 2019. We are particularly pleased to welcome [Prof. Dr. Dr. Sabine Gabrysch](#), who joins Hermann Lotze-Campen as Head of Research Department 2 – now named Climate Resilience - and as Germany's [first-ever Professor for Climate Change and Health](#) in a joint appointment with Charité – Universitätsmedizin Berlin. Altogether three of PIK's four Research Departments have new names better reflecting their directions of research. RD3 is now titled Transformation Pathways, focusing on climate risks and sustainable development, and with Katja Frieler and Elmar Kriegler as the new acting heads of department. In RD4 Complexity Science, Anders Levermann joins Jürgen Kurths as department head; the department will focus on machine learning, nonlinear methods and decision strategies, including work on artificial intelligence.

A new feature will follow with the so-called FutureLabs, which provide additional opportunities to address topical and cross-departmental research themes. Keep an eye on the [PIK webpage](#) for further information on how the FutureLabs take off.

What do they have in common? Visits to PIK

What do Greta Thunberg, King Willem-Alexander and Angela Merkel have in common? They all visited PIK in spring/summer 2019.



The initiator of the Fridays for Future movement Greta Thunberg, together with Luisa Neubauer of the German Fridays for Future movement, visited PIK in April 2019 to meet with Directors Johan Rockström and Ottmar Edenhofer and other PIK experts. [Read more ...](#)

Greta Thunberg in discussion with the PIK Directors. Photo: Copyright Benjamin Kriemann.

King Willem-Alexander and Queen Máxima of the Netherlands visited the Albert Einstein Science Park during their stay in Brandenburg in May, and met with directors and representatives of PIK, the Leibniz Institute for Astrophysics (AIP), and the German Research Centre for Geosciences (GFZ). A cooperation agreement between PIK and the Vrije Universiteit Amsterdam was signed on the occasion. [Read more ...](#)

In June, the Potsdam Institute was honoured by a visit from Chancellor Angela Merkel, who came to PIK for a scientific briefing on CO₂ pricing and other topics with Director Ottmar Edenhofer. Around 20 PIK experts joined the meeting to discuss further topics like weather extremes and climate change effects on human health and on agriculture. [Read more ...](#)



Researchers from all Research Departments took part in the exchange with Chancellor Angela Merkel. Photo: PIK/Greb

PIK Research

PIK expertise on CO2 pricing shapes the political discussion

Following the visit of Chancellor Angela Merkel, PIK expertise on a CO2 pricing reform as a pathway to find solutions to the climate crisis was pivotal in a recent special report for the German government's "Climate Cabinet." A special report requested and presented to the German Chancellor by the "Five Sages" of the German Council of Economic Experts, is largely based on an extensive analysis, ["Options for a Carbon Pricing Reform,"](#) by researchers at MCC and PIK. The report outlines ways in which the government can meet EU 2030 emission reduction targets, the main idea being to provide a fair price for carbon emissions across all sectors of the economy, thereby providing an effective incentive to avoid emissions and invest in climate-friendly technologies. The special report also serves as a background for the Climate Cabinet's decision on a new climate policy package scheduled for this September.

[Read more](#)

Ottmar Edenhofer and Christoph Schmidt, Chair of the German Council of Economic Experts from RWI Essen, Leibniz Institute for Economic Research, had already last November published a joint position paper on a CO2 pricing reform. This was the heart of a cover story by [SPIEGEL magazine on climate change](#), featuring further PIK experts like Stefan Rahmstorf and Anders Levermann in a story about risks and solutions to the climate challenge.

On a related theme, a recent study published in *Energiewirtschaftliche Tagesfragen* by a group of PIK authors including Michael Pahle on the risks of phasing out coal concludes that planned phase-out by 2038 could actually increase emissions due mechanisms within the European Emissions Trading Scheme, unless combined with a minimum price for CO2 or the cancellation of existing emission certificates. One effect of Germany's coal phase out would be to reduce the demand for emission allowances in the ETS, with the result that their price will fall. Electricity producers in other countries would buy more of the then cheaper allowances and hence increase their CO2 emissions. Reliable and fair pricing of CO2 could help prevent this. [Read more ...](#)

"Heat waves are on the rise"

As Europe experienced a second exceptionally hot and dry summer with record-breaking temperatures of over 45°C in France and 42.6°C in Germany at the end of June, PIK issued a statement: ["Heat waves are on the rise,"](#) quoting PIK scientists Stefan Rahmstorf and Dim Coumou. The basis for the statement is a series of articles on the changing behaviour of planetary waves:

In an article in *Environmental Research Letters* published in April 2019, a team of authors headed by PIK Alumnus Kai Kornhuber showed that the extremes occurring almost simultaneously around the Northern Hemisphere in the summer of 2018 (including record-breaking heatwaves and droughts in North America and Western Europe, and torrential rainfall and floods in South-East Europe and Japan) were connected by a newly identified

pattern of the jet stream encircling the Earth. The jet stream formed a stalled wave pattern in the atmosphere which made weather conditions more persistent and thus extreme in the affected regions. The same pattern occurred during European heat waves in 2015, 2006 and 2003, which rank among the most extreme heatwaves ever recorded. In recent years, the scientists observed a clear increase of these patterns. [Read more ...](#)

Previous work on the same theme, such as the article published in *Science Advances* by an international team including Michael Mann, Stefan Rahmstorf and Kai Kornhuber, links the amplification of planetary waves and stalling of weather systems to increased Arctic warming and air pollution. [Read more ...](#)

Climate-Neutral Living in Berlin

A bottom-up approach to climate protection has been explored in a recent project "Climate-neutral living in Berlin" (KLiB) led by PIK's Fritz Reusswig. For a year, more than 100 Berlin households tried to shift to a more climate-friendly everyday life and succeeded in reducing their climate footprint by an average of around 10 percent, even though they had, on average, already started the project around 20 percent below the German average. The results of the project showed that in all sectors, from nutrition and consumption to electricity, heating and mobility, there is great potential for everyone to reduce their CO₂ emissions. [Read more ...](#)

A two-day "KLiB-up Municipal Workshop" was recently organised by PIK in which representatives of municipalities active in climate protection discussed how such real laboratories can be implemented throughout Germany. Potsdam's Mayor Mike Schubert took part: Potsdam is one of Germany's master plan municipalities and aims to reduce its greenhouse gas emissions by 95 percent by 2050. [Read more](#)

Publication Highlights

Looking beyond the farm gate: New IPCC Special Report on Land Use and Climate Change

The latest landmark report on Climate Change and Land issued in August by the Intergovernmental Panel on Climate Change (IPCC) is just out. Alexander Popp is a lead author of the chapter on climate-land interactions, while Prajal Pradhan is a lead author of the chapter on food security. The report highlights the decreasing ability of the land to sustain humanity under climate change. "The report touches on many aspects of human life on land that are fundamentally entangled: What we eat influences what we grow or raise, which in turn influences how we use our land," explained Alexander Popp, who was also interviewed in [SPIEGEL Online](#). [Read more ...](#)

A major report and a new cookbook to promote healthy lives and a liveable planet

In January, PIK's Director Johan Rockström was one of the lead authors of a report by the EAT-Lancet Commission on healthy diets from sustainable food systems. In "Food in the

Anthropocene" international experts worked with the leading medical journal *The Lancet* to develop the first comprehensive and detailed science-based targets for improving our food system in a way that ensures healthy lives and a liveable planet for all. The report showed that major changes are required in what we eat and how we produce it, but that feeding a growing population is possible if we shift towards a planetary health diet. Current diets are one of today's greatest causes for ill-health worldwide and in the same time threaten climate stability. [Read more ...](#)

As a practical complement to his research on food, Johan Rockström has also published a cookbook "[Eat Good – Das Kochbuch, das die Welt verändert](#)" (available in German and Swedish). What we eat can make a decisive contribution to our health and that of our planet. The book combines healthy and sustainable recipes from breakfast to dinner with practical tips and facts about food and its processing. [Read more ...](#)

Other news

Congratulations to ...

... some members and former members of PIK on their appointments or honours:

- Johan Rockström has been appointed to the new EU Mission Board on Climate Adaptation, including Societal Transformation
- Reik Donner was appointed to a Professorship in Mathematics at Magdeburg-Stendal University of Applied Sciences
- Nicola Botta has been appointed as an Adjunct Associate Professor in Computer Science (Computing for Sustainability) at Chalmers University of Technology, Göteborg, Sweden
- John Schellnhuber has been appointed Distinguished Visiting Professor at Tsinghua University in Beijing, China
- Stefan Rahmstorf was awarded the "ZEIT Wissen prize 'Mut zur Nachhaltigkeit' – Encouraging Sustainability" for his achievements in communicating climate change
- Jonathan Donges won the Heinz Mayer-Leibnitz Prize of the German Research Foundation (DFG)
- Ronja Reese was awarded the PhD Prize of the Friends and Promoters of PIK. She is also joint winner of the Michelson Prize, Potsdam University's award for the best doctoral thesis of the year.



Photo: PIK/Greb

Forthcoming events

Climate Lecture 2019: "Zwischen Klimademos und Klimakabinett - wie die CO2-Bepreisung gelingen kann" with Ottmar Edenhofer, Luisa Neubauer and others, 19 September 2019 at 5:00 pm in the Audimax of the TU Berlin, Straße des 17. Juni. Please register to attend at <https://www.events.tu-berlin.de/ClimateLecture2019>.

PIK's Alumni programme

With the initial project phase of the PIK Alumni programme now over, the position of Alumni Officer is integrated into PIK's Science Management & Transfer unit. With members of staff and guests being asked to join PIK Alumni as they leave PIK, the database of former members of PIK continues to grow. The Friends and Promotors of the Potsdam Institute are kindly providing financial support for some activities within the programme. This will make it possible to again invite Alumni returnees for return visits to Potsdam in 2019/2020. Keep an eye on the PIK Alumni website for more details of this: <https://www.pik-potsdam.de/contact/alumni>.

IMPRESSUM

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NEWSLETTER

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KEEP US UPDATED

If your contact details have changed, please let us know by sending an email to alumni@pik-potsdam.de.

DATA PROTECTION STATEMENT

We use your data to keep in touch with you as Alumni, to provide you with occasional news about the Potsdam Institute and its activities, and to send targeted information about scientific and other events. PIK's full privacy policy can be found on the PIK website (Section 7.2. relates to Alumni).

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You can unsubscribe from the PIK Alumni newsletter by or sending an email with the subject "Unsubscribe PIK Alumni newsletter" to alumni@pik-potsdam.de.



Michelson House with summer meadow, 2019. Photo: A. Schlums/PIK