



Leopoldina
Nationale Akademie
der Wissenschaften

Leopoldina news

6 | 2018

Deutsche Akademie der Naturforscher Leopoldina –
German National Academy of Sciences

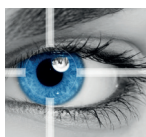
Halle (Saale), 6 December 2018



Following in Alexander von Humboldt's footsteps

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Editorial

Dear Members and Friends
of the Leopoldina,



The diversity of plant and animal species present in agricultural areas in Germany has decreased dramatically in the past 25 years.

This observation served as a springboard for the short statement "Species decline in the agricultural landscape: What do we know and what can we do?", a joint publication by the Leopoldina, the Union of the German Academies of Sciences and Humanities and acatech on 24 October (see accompanying text), which recommends immediate action for species conservation.

Because biodiversity is important for ecosystems and agriculture, and species diversity also speaks to most people's hearts.

There have been a lot of discussions and a host of publications in the past months about species loss, colony collapse disorder, monocultures and plant protection products. In the spring, the Leopoldina also spoke out about the use of plant protection products in its discussion paper "The Silent Spring". So why are we publishing yet another paper, one which is currently being developed by the academy working group Biodiversity for a more detailed statement?

Because the time left for slowing down the extinction of biological species is quickly running out. And because a societal discussion on such topics only really takes off once various players are vocal about them. The Leopoldina's members and our partner academies will continue to keep the conversation about biodiversity going. For that, they have my sincerest thanks. May they be heard!

Please enjoy reading this exciting issue.

K. Böhning-Gaese

Fighting the extinction of biological species with immediate action

Academies present short statement on biodiversity



An ever increasing number of butterfly species are going extinct. Likewise, the biodiversity of these insects is decreasing in agricultural landscapes just like that of plants, birds and mammals.

Graphic: Sisters of Design

The diversity of animal and plant species in Germany has been continuously decreasing for years now, particularly in the agricultural landscape. Under the direction of Prof. Dr. Kathrin Böhning-Gaese ML, Prof. Dr. Alexandra-Maria Klein and Prof. Dr. Wolfgang Wägele, the academy working group "Biodiversity in Agricultural Landscape" released the statement "Species decline in the agricultural landscape: What do we know and what can we do?" It also entered into discussions with representatives from the political and agricultural sectors.

Biodiversity in Germany is not officially monitored on a national level. Thus, the survey of the state of biodiversity in Germany has been compiled from many different sources using differing standards and methods. According to the statement, a massive decline in number of species in Germany and Europe as a whole over the past 25 years is clearly evident. For example, since 1990, more than 30 percent of agricultural landscape birds have been lost and in the same timeframe, the butterfly population has decreased by nearly half.

The causes for this decline are manifold, including the increase in the cultivation of arable land, the precautionary and

exhaustive use of plant protection products, overfertilisation, and the decline of structural diversity which goes hand in hand with the decline of biodiversity.

The academy's recommendations were presented to the public in Berlin on 24 October. Experts see a particular need for action in agricultural policy on the European level and in Germany. Biodiversity-friendly cultivation – a central demand – has to be profitable for farmers. The upcoming reform of the European Common Agricultural Policy should be used to provide more funding for protecting biodiversity.

In the discussion, Hubertus Paetow, President of the German Agricultural Society (DLG) emphasized his association's recognition of the need for action and expressed its support of the recommendations. Dr. Elsa Nickel, Head of the Directorate-General Nature Conservation and Sustainable Use of Natural Resources at the German Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (BMUB), referenced a study of the Soest district that showed more than 200 hectares of land under public ownership being used for agriculture. She is calling for such areas to be used for biodiversity conservation and wildlife corridors.

(ca)

■ STATEMENT SPECIES REDUCTION (GER)

Taking advantage – protecting privacy

Academies present potential actions for protecting data in the age of digitalisation

In the past few years, digitalisation has continued to permeate nearly all branches of society and has contributed to significant improvements along the way, including simplified communication both at work and at home, easier access to information and increased potential for analysing large amounts of data, for instance in the research sector. And these are only three of the many areas of application. However, some non-desirable effects have also become increasingly noticeable – particularly in the realm of privacy, since new technologies frequently subvert data protection measures.

Our right to privacy is rooted in the Universal Declaration of Human Rights as well as in the Basic Law for the Federal Republic of Germany. After all, having protection and being able to decide for ourselves whom we reveal information to is one of the basic prerequisites of freedom and a central aspect of a liberal-democratic society.

Growing level of risk to individuals' privacy

Digitalisation comes with an ever growing amount of data being collected and processed. By analysing data, particularly via its interconnectedness with the aid of machine learning methods, we can recognize correlations that extend well beyond individuals' perceptive abilities. However, the growing amounts of data being created and analysed using digital technologies also mean a growing level of risk to individuals' privacy.

This is exacerbated by a substantial lack of transparency in the use of digital technologies and the management of underlying business models. It is generally not known what data companies generate, link and forward internally to other business units or to other companies, or how machine learning algorithms are designed.

This use of digital technologies brings up the fundamental question: To what extent can today's legal regulations maintain the current level of privacy protection? In addition to the protection of individuals from government authorities, suffi-



Graphic: Sisters of Design



As one of the spokespersons of the working group "Big Data – Data protection – Privacy", Klaus-Robert Müller presented the recent statement of the working group about "Privacy in the era of digitalisation". Photo: Leopoldina | Johannes Mengel

ent methods for warranting protection against private companies – the main drivers of digital transformation – must be ensured. Legislation is compounded by the dissolution of boundaries brought about by new technologies. Digital technologies, their underlying infrastructures and the resulting services are not limited

regionally. Rather, they are often available transnationally or globally, posing unique legal challenges.

Statement "Privacy in the era of digitalisation"

The Leopoldina, the Union of the German Academies of Sciences and Humanities and acatech published a statement on 26 November entitled "Privacy in the era of digitalisation", revealing potential technical, legislative and social actions that could enable us reconcile the benefits of digitalisation with privacy protection. Such actions may include expanding data protection rights and the returning data sovereignty to consumers as well as better monitoring algorithms which combine and analyse data.

Furthermore, economic policies need to address issues such as the protection against oligopolies – a system in which only a few companies dominate the entire market. At a more fundamental level the security of information technology systems does not just constitute the basis of privacy protection, it is also a pertinent economic factor for which standards should be defined. This goes to show that there is a whole array of options available for shaping the digital future together.

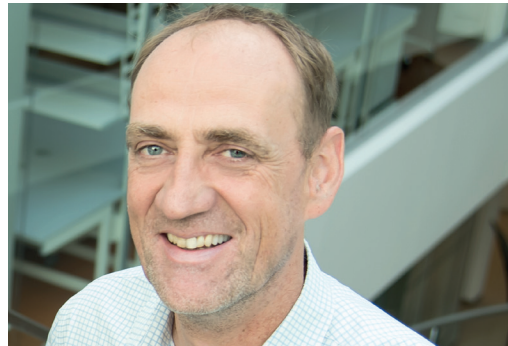
(ew, jm, sw)

Hormone researcher to hold the Leopoldina's Christmas lecture

Jens Claus Brüning receives Carl-Friedrich-von-Weizsäcker-Preis

At the Leopoldina's annual Christmas lecture on 11 December, Prof. Dr. Jens Claus Brüning ML will be honoured with the Carl-Friedrich-von-Weizsäcker-Preis for his research on the fundamentals of obesity and diabetes mellitus.

The prize will be jointly awarded by the Donors' Association for the Promotion of Humanities and Sciences in Germany and the Leopoldina.



Jens Claus Brüning is receiving the 2018 Carl-Friedrich-von-Weizsäcker-Preis. Photo: Erim Giresunlul

"Distinguishing Jens Claus Brüning with this prize means recognising the work of a scientist who was able to gain vital insight into the research of the lifestyle-related diseases obesity and diabetes," says President of the Leopoldina Prof. Dr. Jörg Hacker ML, stating the grounds on which the physician from Cologne won the prize and the 50,000 euros which come with it. Brüning will provide closer insight into his research on neuroendocrinological foundations of both nutritional and metabolic diseases at the Leopoldina's annual Christmas lecture. On 11 December, he will be speaking in Halle (Saale) about "The brain's monitoring of the body's energy balance and metabolism".

The 52-year-old hormone researcher explains his approach: "Science has gained an understanding of the fundamental biological principle of how the brain regulates body weight and which nerve cells

are responsible for this process." Using this knowledge, we can comprehend how the body signals the energy storage levels to the brain and how the brain in turn processes these signals to regulate the feeling of being hungry as well as the body's food intake. "We are working on identifying the nerve cells which react to the body's signals and ultimately influence the metabolism," says Brüning, who has been Director at the Max Planck Institute for Metabolism Research in Cologne since 2011.

He is also addressing the question of why insulin no longer works as a blood sugar regulator in overweight patients, allowing for the onset of type 2 diabetes. "We now know that certain fats which accumulate in the liver and muscles of overweight patients are resistant to insulin and lead to diabetes," Brüning extrapolates. Now, certain enzymes are said to have been discovered which have been connected to the build-up of these types of fats. "If we are successful in developing specific inhibitors, they could serve as a new treatment approach."

Approximately 30 percent of all people in developed countries suffer from obesity or type 2 diabetes. Brüning is working to change this. That is why the Weizsäcker-Preis itself is "special – because it stresses the societal pertinence of science". At the same time, the accolade is considered an important signal to the public that researchers are capable of finding solutions to pressing issues. (bh)

Timely help for traumatised refugees

Refugees' traumatising experiences can be mitigated or avoided altogether. Effective help for refugees on the basis of scientific findings was the topic of the event entitled "Traumatised refugees – immediate response required", held on 5 November at the Berlin-Brandenburg Academy of Sciences and Humanities (BBAW) in Berlin. It drew on the Leopoldina's and BBAW's April statement of the same name.

The experiences of violence, life-threatening danger and loss of loved ones while fleeing from one's homeland can lead to a sensation of permanent threat. Affected individuals can barely manage everyday situations in Germany: learning the language, managing a job or school, or simply taking the tram can easily become absolutely overwhelming tasks. Traumatic experiences are particularly critical in children since many of their brain structures are still being shaped – often with life-long consequences.

Prof. Dr. Thomas Elbert ML, speaker of the working group, explained the biology underlying traumatising and presented a neurobiological treatment and care approach. The Director of the Landesweite Koordinierungsstelle Kommunale Integrationszentren (State Coordinating Office for Local Integration Centres, LaKI) in North Rhine-Westphalia Suat Yilmaz pointed out a critical issue: In states and municipalities, "traumatisation" is on the agenda, yet there is a lack of awareness and personnel to enable the holistic management of integration.

Moreover, refugees tend to be overwhelmed by the existing support systems, according to Mekonnen Mesghena, Department Head of Migration & Diversity at the Heinrich Böll Foundation. An estimate provided by the panellists claims that around a quarter of all people who have arrived in Germany since 2015 require help, which does not necessarily mean that all of them require psychotherapy. Studies show that properly trained specialists could also help traumatised individuals. (kh/sw/jm)

JENS CLAUS BRÜNING

... serves as Director at the Max Planck Institute for Metabolism Research and Director of the Department of Endocrinology, Diabetology and Preventative Medicine at the University Hospital Cologne. Last year, the endocrinologist and molecular biologist was awarded membership of the Genetics/Molecular Biology and Cell Biology section of the Leopoldina. Brüning, born in Cologne in 1966, has received numerous awards, including the 2007 Gottfried Wilhelm Leibniz Prize from the German Research Foundation.

A powerful woman, but a weak view of womankind

Certificate award ceremony for Class IV members and lecture on the role of Empress Maria Theresa

This year's Class IV symposium entitled "Anomalies. Disruption and source of knowledge" took place in Halle (Saale) on 23 and 24 September. The lectures at the conference led by Prof. Dr. Ulrich Gähde ML (Hamburg) were dedicated to the topic of anomalies in science. They challenge established scientific theories and ethical concepts, often advancing science in the process.

On 7 November, the newly chosen members of Class IV were presented with their certificates. To conclude, Prof. Dr. Barbara Stollberg-Rilinger ML (Münster) held a presentation with the title "There is nothing more unbearable than a powerful woman – Empress Maria Theresa and the order of the sexes". For a long time, women's and gender history remained unconcerned with Maria Theresa (1717–1780). Based on her 2018 book "Maria Theresia. Die Kaiserin in ihrer Zeit" ("Maria Theresa. The empress in her time"), Stollberg-Rilinger shed light on the charged relationship between masculinely coded rule and feminine gender during Maria Theresa's reign. She was charged with defending the Austrian country she had inherited from her father in eight-year-long disputes with other European powers. The attacks are depicted in pamphlets and on coins as physical assault on the empress by masculine rulers.

She named her husband Francis I coregent, but in the courtly ceremonial, he was meant to take his place behind



On 7 November, the new members of Class IV received their membership certificates. From left: Prof. Dr. Thomas König ML (Mannheim), Leopoldina Secretary-General Prof. Dr. Jutta Schnitzer-Ungefug (Halle), Prof. Dr. Michael Pawlik ML (Freiburg), Prof. Dr. Tatjana Hörnle ML (Berlin), Prof. Dr. Heiner Fangerau ML (Düsseldorf), Prof. Dr. Ottmar Edenhofer ML (Potsdam), Prof. Dr. Peter Gollwitzer ML (New York/USA), Prof. Dr. Andrea Weber ML (Wien/Österreich), Prof. Dr. Thomas Mussweiler ML (London/UK), Prof. Dr. Rainer Goebel ML (Maastricht/Niederlande), Prof. Dr. Ortwin Renn ML (Potsdam), President of the Leopoldina Prof. Dr. Jörg Hacker ML (Halle), Prof. Dr. Rudolf Stichweh ML (Bonn) und Prof. Dr. Hannes Leitgeb ML (München).
Photo: Leopoldina | Markus Scholz

her, as she was the one who truly executed governmental business. Politically, she was treated like a man, as evidenced for instance by her coronation as King of Hungary. However, as was typical for her time, particularly for a devout Catholic like Maria Theresa, she was of the firm

conviction that women had to be subservient to men, a paradigm that was not changed through her rule. In the 19th and 20th centuries, Maria Theresa served as a shining example for feminine equality, something her true historical personage hardly was. (cb)

Education and income determine level of health

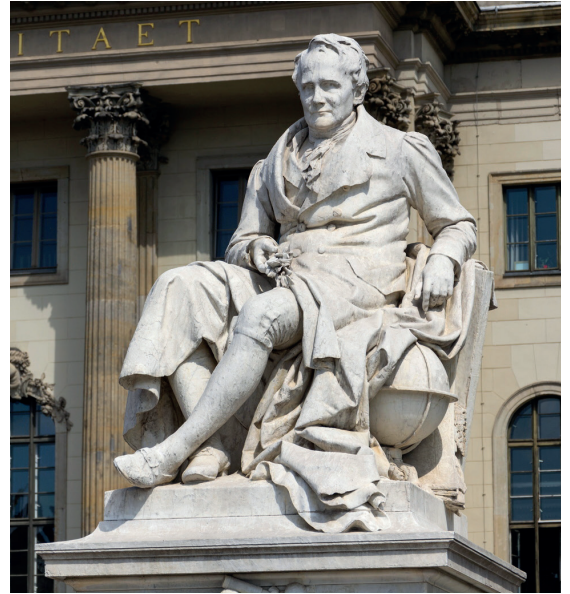
Those who have more money live longer: This sums up what was discussed at the Leopoldina Symposium "Health inequality" in Berlin on 20 November. Germany is said to have outstanding medical care and a good social welfare system, yet this is not reflected in the life expectancy, according to the sociologist Prof. Dr. Johannes Siegrist (Düsseldorf), who coordinated the conference in coordination with psychologist Prof. Dr. Ursula Staudinger ML (New York).

The lectures provided data from many different studies. It has been determined

that social status as determined by income and level of education has a major impact on health for our entire lives. The result? In Germany, up to eight years difference in life expectancy have been measured between low and high income groups. This social gradient takes hold beginning as early as in pregnancy, when, for example, smoking is more common amongst members with a lower social status than those of a higher social status. Such differences in behaviour persist across all age groups and are also subject to a prevention dilemma because changes in behaviour

tend to be more successful in the higher rungs of society. The welfare state, can only gradually improve this situation, and in wealthier countries, relative inequality is even greater.

Possible explanations can be found in experiences of stress during childhood and adolescence, workplace insecurity and environmental factors. During the discussion, it became clear that an individual's behaviour can make just as great a contribution to breaking down health inequality as state intervention to improve living conditions does. (rg)



Alexander von Humboldt was one of the last great polymaths, with work spanning the fields of botany, zoology, mining and meteorology. His support for long-term geophysical measurements laid the foundations for modern climate research.

Repro: Leopoldina | Photo: josefkubes - stock.adobe.com

Alexander von Humboldt's scientific method

Celebrating the 250th birthday of the polymath and Leopoldina member in 2019

Tens of thousands of people joined the celebrations to mark his 100th birthday in New York, Buenos Aires, Paris and Berlin. His work combined meticulous research with a literary style and had a worldwide readership. More plants and animals, more streets and public squares have been named after him than after any other person in history. And now, as the 250th anniversary of his birth approaches, how is Alexander von Humboldt faring?

Some may know him as the eccentric plant collector from the novel *Measuring the World*, by Daniel Kehlmann, or the film of the same name. But even in his home country of Germany, many people confuse him with his brother Wilhelm, an educational reformer. Alexander von Humboldt is most notable for the fact that his name is not associated with one single invention or discovery – like Albert Einstein or Charles Darwin.

His significance for modern science lies in the way that he drew together biology, geography, meteorology and social research to develop a new, holistic understanding of the world. What he termed a “general physics of the Earth” is today called Earth System Science. While Humboldt could not have known at the time how the greenhouse gas carbon dioxide

heats up the atmosphere, he was the first to recognise that human civilisation causes imbalances in nature and permanent changes to the biosphere and atmosphere. “He was one of the first to draw attention to the potential effect of greenhouse gases on the climate,” says Prof. Dr. Gerald Haug ML, a climate researcher at the Max Planck Institute for Chemistry in Mainz, Germany.

In fact, as early as 1844, Humboldt wrote about the global changes that humans were causing “by clearing forests, by changing the distribution of bodies of water, and by generating large masses of steam and gas in the centres of industry”.

HUMBOLDT AND THE MOUNTAINS

On 13 February 2019, the National Academy of Sciences will hold a public event commemorating Alexander von Humboldt's work in Halle (Saale) under the title “Humboldt and the Mountains”. This will mark the 250th birthday of the polymath, who was appointed a member of the Leopoldina in 1793, by presenting his research on mountain ranges as a natural habitat and exploring the modern-day effects of climate change in the Andes.

- LEOPOLDINA CELEBRATION
- ALEXANDER VON HUMBOLDT YEAR 2019

Alexander von Humboldt's most significant scientific expedition was a trip to South America from 1799 to 1804 with the botanist Aimé Bonpland. The two Leopoldina members collected and identified thousands of plants and insects and recorded temperature and atmospheric pressure, compiling an impressive set of findings – a sort of 19th-century version of “big data”. In the years that followed, Humboldt produced a 45-volume work evaluating the collected data.

One result of these endeavours is a tableau illustrating the vegetation zones on Chimborazo, then believed to be the highest mountain in the world. The Danish macroecologist Prof. Dr. Naia Morueta-Holme, of the University of Copenhagen, was so fascinated by this that in the year of 2012 she travelled to Ecuador with a colleague, climbed the mountain and took the same measurements as Humboldt, this time using modern instruments. She found that the vegetation zones had shifted around 500 metres upwards in the intervening 200 years – clear evidence of changes in the climate. “While individual disciplines have become highly specialised,” says Morueta-Holme, “we're now returning, in a sense, to Humboldt's holistic scientific method.”

(cdr)

Dialogue with the President of the European Research Council

The European Research Council (ERC) plays a crucial role in driving scientific breakthroughs in Europe. It provides funding for exceptional projects run by outstanding basic researchers from the postdoctoral phase onward, following a highly selective application process.

To promote dialogue between the ERC and scientists in the Leopoldina's home state of Saxony-Anhalt, the State Minister for Economy, Science and Digitalisation Prof. Dr. Armin Willingmann joined the President of the Leopoldina Prof. Dr. Jörg Hacker ML in inviting members of the state's scientific community to the Leopoldina on 6 November for an evening with Prof. Dr. Jean-Pierre Bourguignon, President of the ERC, and ERC grant recipients from Magdeburg, Halle (Saale) and Gatersleben.

More than 130 attendees, many of whom were natural scientists, took the opportunity to learn first-hand about the aims of the ERC's funding mechanism and how it works, and to discuss the grant recipients' experiences with submitting and implementing their projects. (art)

Academia Europaea honours Leopoldina

The Academia Europaea has awarded the National Academy of Sciences Leopoldina its Gold Medal. President of the Leopoldina Prof. Dr. Jörg Hacker ML received the award on 29 November at the annual conference of the Academia Europaea in Barcelona, where he spoke about the role of the European national academies in providing science-based advice for politicians and the general public.

The Academia Europaea is a scientific society founded in 1988 which now has almost 4,000 members, appointed following nomination and review by a selection committee. Its Gold Medal is awarded to non-members and organisations who have made significant contributions to European science. (art)

Genetic heritage of prehistory



Did Neanderthals and modern humans mix? How much of genetic material from extincted humans do we carry today? How does this genetic heritage influence us in being vulnerable for diseases? Prof. Dr. Svante Pääbo addressed those and more questions in front of 500 attendees in his lecture „Neandertaler – Denisovaner – Moderner Mensch“ (“Neanderthals – Denisovans – modern human”) on November 26 at the Paulinum – Aula and University Church St. Pauli in Leipzig. Svante Pääbo is member of the Leopoldina, Director at the Max Planck Institute for Evolutionary Anthropology Leipzig and honorary professor at the Universität Leipzig. He is paleogeneticist and one of the most influential representatives in his field worldwide. In his lecture, Svante Pääbo talked about how his team develops methods to extract DNA from fossil bones and other remains. (lb)

Photo: Markus Scholz

Academies lead global debate on agriculture and nutrition

Qualitative and quantitative malnutrition are an issue in every country around the world – how can we ensure that the world's population has access to sufficient amounts of safe and nutritious food? Maximising agricultural production often causes unintentional harm – how can we encourage a sustainable food production system that minimises damage to our environment and climate?

This broad spectrum of issues is the focus of the project Food and Nutrition Security and Agriculture (FNSA), which was launched by the global network Inter-Academy Partnership (IAP) in 2015 and is funded by the German Federal Ministry of Education and Research. It has brought together over 130 National Academy of Sciences and Medicine from around the world to produce collaborative, science-based advice on political and societal issues. Initial scientific analyses and recommendations were drawn up by the IAP's four regional networks in Africa (NASAC),

the Americas (IANAS), Asia (AASSA) and Europe (EASAC). These reports formed the basis for the fifth IAP Global Report, “Opportunities for future research and innovation on food and nutrition security and agriculture,” which was presented on 28 November.

The topic was also in the spotlight at the World Health Summit held in October in Berlin, where the IAP and the Leopoldina presented the project FNSA. The European FNSA working group discussed food security on a regional and global scale, particularly in the context of health and wellbeing. The session was led by President of the Leopoldina Prof. Dr. Jörg Hacker ML and former President Prof. Dr. Volker ter Meulen ML. An international audience including many young scientists engaged in lively discussions on the topic. (csd, nh)

Infectious diseases remain a major threat to humanity

There is an international consensus that infectious diseases will continue to represent one of the greatest threats to human life in the future. Multi-resistant pathogens, new dynamics of known viral diseases, climate change and the associated spread of vectors, and growing antibiotic resistance all demand major action in research, medicine and health policy, and across society as a whole.

We urgently need to form alliances and make a concerted effort to fight infection. With this in mind, around 300 internationally recognised scientists from a range of disciplines met with industry and healthcare representatives in Jena, Germany.

They discussed the latest findings of infectious disease research as well as measures to fight infection. The highlight of the meeting was the public evening lecture by Prof. Dr. Harald zur Hausen ML. The Nobel laureate discussed how viral infections can cause cancers to develop.



Harald zur Hausen, Nobel laureate of 2008 and member of the Leopoldina since 1987.

Photo: Leopoldina | Markus Scholz

The event was made possible by the Leopoldina's collaboration with the Union of the German Academies of Sciences and Humanities in Hamburg and the consorti-

um InfectControl 2020, with the support of the Alfried Krupp von Bohlen und Halbach Foundation. (sk)

Mining has a long-lasting effect on regional water resources

Industrial societies need to consume large quantities of raw materials which are mined from the earth. Coal still plays an important role in energy production, and rare earths are essential for technological products such as smartphones. But mining operations and accidents have an immediate and often long-lasting impact on the environment.

Humans can also suffer health-related and other effects.

The Leopoldina and the Brazilian Academy of Sciences organised the workshop "Water Management in Mining and Post-



The workshop was attended by 23 young scientists, predominantly from Germany and Brazil.

Photo: Marcos Cortesao Barnsley Scheuenstuhl

Mining Landscapes" in Belo Horizonte (Brazil) from 1 to 5 October to discuss the impact of mining on regional water resources. The attendees drew up recommendations for political action which

will be published in early 2019 as a science policy statement. Prof. Dr. Peter Fritz ML (Leipzig) headed the academic coordination of this event, the third in the series "Water and Regional Development", on behalf of the Leopoldina.

The academies cooperated with the National Institute of Science and Technology on Mineral Resources, Water, and Biodiversity – INCT-Acqua and the Centre for Water and Environmental Research at the University of Duisburg-Essen. (jn)

Cooperation to meet UN Sustainable Development Goals

Academies help advise on societal issues at regional and national levels

In September, the Leopoldina held a workshop titled “Implementing the Sustainable Development Goals: How Can the Academies Help?”, which was attended by representatives of 21 member academies of the European Academies’ Science Advisory Council (EASAC), four Young Academies in Europe and the Global Young Academy (GYA), as well as political influencers and decision-makers.

The two-day event focusing on the United Nations’ Sustainable Development Goals (SDGs) was organised by EASAC and the global network InterAcademy Partnership (IAP). The discussions between members and academy experts centred around the implementation of the SDGs in Europe and, in particular, national reporting on the progress being made and the contribution of the academies.

Another focus of debate was the status of academies of sciences as advisors on political and societal issues at both a regional and a national level. How can the



The Leopoldina hosted the workshop on the implementation of the UN's Sustainable Development Goals by academies of sciences worldwide.

Photo: Leopoldina | Markus Scholz

academies make a genuine contribution to the global agenda established by the United Nations with the SDGs?

The workshop was part of the IAP pro-

ject Improving Scientific Input to Global Policymaking and was supported by the Carnegie Corporation of New York (USA).
(csd)

Network is Think tank of the Year 2018

EASAC, the network of the National Science Academies of the EU Member States, Norway and Switzerland, the secretariat of which is managed by the Leopoldina, has received the award „Think Tank of the Year 2018“ in November.

This title is awarded annually during the Public Affairs Awards Europe by the PRCA which represents public relations and communications agencies in 67 countries worldwide. Last year, the award was given to the influential European think tank BREUGEL. In previous years, the well-known Centre for European Policy Studies was among the awardees.

EASAC produces and communicates the joint positions of the European National Science Academies on important issues from the areas of Environment, Energy and Biosciences, to the institutions of the European Union.
(csd)

Africa: Impact of neonicotinoids

The use of neonicotinoids in Africa is the focus of a new joint project by the Leopoldina and the Academy of Science of South Africa (ASSAf). The two academies are also collaborating with the European Academies’ Science Advisory Council (EASAC), the global network InterAcademy Partnership (IAP) and in particular the Network of African Science Academies (NASAC). Their aim is to draw up science-based recommendations for raising awareness among African decision-makers of the effects of this group of pesticides on ecosystem services.

The project was launched on 15 and 16 November with a workshop for African and European experts in Pretoria (South Africa). The event began with an overview of existing studies on the topic by European academies from 2015, and the political impact of these studies, which has extended to a ban on almost all neonicotinoids in the European Union.
(csd)

Artificial intelligence and robotics

The Académie des Sciences and the Leopoldina have drafted a joint position paper on the key role of robotics in the context of artificial intelligence (AI). Too often, AI and robotics are seen as separate fields of research, despite the fact that the intersection of the two disciplines holds particularly great potential for innovations and value creation.

President of the Leopoldina Prof. Dr. Jörg Hacker ML delivered the paper to the ministries which are responsible for developing Germany’s AI strategy. France launched a national strategy in March of this year, and the German Federal Government will present the results of its own work this week at the Digital Summit in Nuremberg.

The position paper is the result of the Robotics AI symposium that the two academies organised in Paris in September.
(rn)

(csd)

■ POSITION PAPER ROBOTICS AI

People

Deceased members

■ Harald von Boehmer ML 30 November 1942 – 24 June 2018 Microbiology and Immunology

Harald von Boehmer was Professor of Pathology at Harvard University from 1999 to 2012 and Chief of the Laboratory for Lymphocyte Biology at the Dana-Farber Cancer Institute in Boston (USA) for many years. He was an internationally recognised pioneer in the field of T-cell immunology, and his work on the clonal selection of T-lymphocytes is among the most important biological research of the 20th century. Harald von Boehmer was co-editor of the *Journal of Molecular and Cellular Immunology* and an honorary member of the Scandinavian Society for Immunology and the American Association of Immunologists, among other roles. He was presented with the Helmholtz International Fellow Award in 2013 for his outstanding research on immunology. Harald von Boehmer became a member of the Leopoldina in 2003.

■ Hans Haller ML 17 December 1920 – 2 November 2018 | Dresden, Germany Internal Medicine and Dermatology

Hans Haller was a professor and, until 1986, Director of the Clinic for Internal Medicine at the Carl Gustav Carus Medical Academy in Dresden. His primary focus was basic research on the metabolic disorder diabetes mellitus. He coined the term “metabolic syndrome” to support

his observations, an innovation which is considered his greatest contribution to the field. He was awarded the Max Bürger medal by East Germany’s society for internal medicine, and the Selmar Aschheim medal by the country’s society for endocrinology and metabolic disorders, among other honours. Hans Haller was a board member of the latter society from 1971 to 1986 and served as its chairman for four years. Following his retirement, he chaired the complaints commission of the state medical council in Saxony. Hans Haller was elected a member of the Leopoldina in 1981.

■ Werner Scheler ML 12 September 1923 – 9 October 2018 | Berlin, Germany Physiology and Pharmacology/Toxicology

Werner Scheler was a professor and Director of the Institute for Pharmacology and Toxicology at the University of Greifswald from 1959 to 1971, and its Rector from 1966 to 1970. He was awarded the university’s Medal of Honour in 1971 in recognition of his outstanding services. Scheler published numerous scientific works which contributed to knowledge of the structure and conformation of haemoglobins and clarified physiological and toxicological aspects of haemoprotein research. He helped pave the way for the identification of haemoglobin as a drug receptor. In 1971, Werner Scheler was appointed head of a newly established international research centre for molecu-

lar biology and medicine in Berlin-Buch, the FZMM. From 1979 to 1990 he was President of the East German academy of sciences. He was a foreign member of the Czechoslovakian, Bulgarian and Russian Academies of Sciences and a founding member of the Leibniz Society of Sciences in Berlin. Werner Scheler had been a member of the Leopoldina since 1977.

■ Erwin Schöpf ML 18 October 1936 – 17 June 2018 | Freiburg im Breisgau, Germany Internal Medicine and Dermatology

Erwin Schöpf was Professor of Dermatology and Director of the Department of Dermatology at the University of Freiburg Medical Center from 1978 to 2002. He published the first description of the inherited ectodermal dysplasia, which became known in international scientific literature as Schöpf-Schulz-Passarge syndrome, and introduced tissue engineering to the field of dermatology. He established the Documentation Centre for Severe Skin Reactions (dZh), the only institution of its kind in the world, which researches the pathogenesis of drug allergies and contributes to medication risk assessments. Erwin Schöpf was an honorary member of numerous international dermatological societies. He was a long-standing board member of the German Dermatological Society and also served as its President. The Society awarded him the first Braun Falco prize in 2003 in recognition of his services. Erwin Schöpf was appointed a member of the Leopoldina in 1996.



Leopoldina

Nationale Akademie
der Wissenschaften

Imprint

Deutsche Akademie der Naturforscher Leopoldina – Nationale Akademie der Wissenschaften

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