

“A RACE WE MUST WIN”

When he took part in the Vendée Globe, 39-year-old Boris Herrmann created a real sailing sensation: on January 28th, the Hamburg native reached the finishing port in Les Sables-d’Olonne, France, after more than 80 days on the world’s oceans. Many people were on the edge of their seats when Boris Herrmann collided with a fishing boat shortly before the end of the race – narrowly missing out on a place on the winner’s podium and finishing fifth. And he performed a great service to science.



PHOTO: YVAN ZEDDA

Under full sail: Boris Herrmann regularly sent data on the CO₂ content of the sea surface via satellite.

Peter Landschützer from the MPI for Meteorology also followed the race with excitement: Boris Herrmann regularly sent the climate researcher measurement data on the CO₂ content of the sea surface via satellite. Peter Landschützer is researching the carbon cycle in the ocean and reveals in an interview why the solo sailor took the time to do this despite lack of sleep during the world’s toughest regatta.

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Mr Landschützer, was Boris Herrmann’s data collection successful?

Yes, it all worked out well, although at this point I don’t have the most recent data yet. In the heat of the moment, transmitting data wasn’t the top priority for Boris. But I have received all data until January 5th, when Boris had just sailed around Cape Horn. We have already uploaded 60,000 to 80,000 data points to SOCAT, which stands for “Surface Ocean CO₂ Atlas”. This is the most comprehensive database on the CO₂ content of the surface of the world’s oceans and coastal waters.



PHOTO: MPI FOR METEOROLOGY

Peter Landschützer

How did Boris actually come to take samples for you?

We met in 2018. It was Boris who proposed a collaboration to me a short time later. He is passionate about climate research. So the words “A race we must win” on his sail not only stand for his sporting success, but also for his fight against climate change. Together we then developed the idea of carrying the OceanPack – a lightweight sensor that measures CO₂ – on Boris’ yacht.

Can you already derive initial findings from the data?

One finding that is not new, but which has been confirmed by the measurement data, is that the ocean – with a few exceptions – has less CO₂ than the atmosphere. The ocean therefore absorbs CO₂ from the atmosphere in most regions. This makes the ocean an important factor in our climate system. Particularly valuable for us are the samples Boris took from such remote places as the Southern Ocean. There was hardly any data on this before. I was a bit surprised that the CO₂ content in the Southern Ocean fluctuates so much.

What is the reason for this?

In the Southern Ocean, different water masses meet: water from the subtropics, but also deep water that is driven to the surface by the wind. These are separated by strong fronts, through which Boris sailed. If we want to understand CO₂ uptake in the ocean, we also need to understand how these fronts change dynamically. This confirms that we need more observations. Because CO₂ in the ocean cannot be measured by satellite,

we are also unable to model such strong dynamics satisfactorily.

Did you and Boris keep in touch during the race?

Yes, we connected via WhatsApp from time to time. We had to coordinate so that I could submit everything to the SOCAT database in time: when can Boris send the data? How much time do I need to look at and check the data? We received some compliments from other scientists about our data. I immediately passed them on to Boris – also as motivation for the last days before he reached the finishing line.

What happens now?

It will be weeks, if not months, before the first studies of the Vendée Globe data are available. However, the first scientific evaluations of Boris’ data from recent years have already been incorporated into the global carbon budget. These are estimates of CO₂ fluxes – on land, in the ocean, in the atmosphere.

What do you think: will Boris stay “on board” and continue collecting data for climate research?

Well, we have achieved our first big goal, the Vendée Globe. We now have to sit down together and plan further steps. Of course, I hope that Boris will continue to collect data for us in the future, for example in other races such as the Ocean Race in 2022. Perhaps we will also win over other sailors for our research who will be infected by Boris’ enthusiasm.

Interview: Petra Maaß

COOPERATION WITH AFRICA

Max Planck researchers have been actively conducting research in Africa for a long time. Now the Max Planck Society is exploring to what extent it can better support African scientists on the ground. The first Africa Round Table (ART) was held on December 15th, 2020 – initially only virtually due to the pandemic.

The MPI for Evolutionary Anthropology maintains field stations for behavioral research on great apes in the Congo and the Ivory Coast. Teams from the MPI for Animal Behavior are traveling through Kruger National Park to record animal movements there with GPS transmitters. The MPI for Psycholinguistics is investigating linguistic diversity in different regions of Africa. And with H.E.S.S. in Namibia or the Square Kilometre Array (SKA) in South Africa, huge measuring instruments for astronomy

have been created with the cooperation of Max Planck Institutes.

“I myself have been carrying out research in Africa since 1991,” says Bill Hansson, who is now chair of the “Africa Round Table”. “Africa has continued to develop as a great research environment and to produce great researchers. And I think what is needed now is that we start engaging in genuinely equitable partnerships with African researchers.”

Africa’s population is young – half of its billion-plus inhabitants are under 19. And even if the young Africa of smartphones and solar cells has not yet quite conquered established politics, it continues to shape and develop societies. “We want to open up opportunities,” says Hansson.

As a first step, the Max Planck Society wants to establish low-threshold measures, such as lectures and mentorships. There

will also be a special partner group program (link to partner group page) and mobility grants for African scientists who want to work temporarily in Germany at an MPI. “An important aspect must be to provide returning junior scientists with the right opportunities to develop their careers at home with a view to strengthening Africa’s science and innovation base,” so Bill Hansson.

The bigger challenge, however, will be to establish a long-term scientific environment and adequate research conditions. How do you make a science system work? “While we should always be willing to learn from best practice around the world, we should not simply take our cue from European institutions like Max Planck or the CNRS,” Hansson explains.

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HIGHER PAY FOR DOCTORAL RESEARCHERS

A new development that has been prepared over a long period of time has finally come to fruition: the Gemeinsame Wissenschaftskonferenz (GWK) has granted the MPG its approval to apply the DFG’s gold standard to doctoral candidates’ remuneration. The novel contract details were published on December 14th, 2020 within the Organisationshandbuch (OHB).

Starting January 1st, 2021, all doctoral researchers with Max Planck contracts will be remunerated in accordance with the DFG funding rates. Both ongoing and new contracts will be subject to this renewal. If signatures of contracts are delayed, for example due to the necessity to work from home resulting from COVID-19, the regulation and payment will be applied retroactively. Additionally, Institutes may also define higher base salaries to account for discipline-specific salaries. Untouched by the

new regulations is the continuing possibility of individual recruitment boni.

The new regulations will apply to all MPIs in Germany, as well as the Netherlands and Italy. The Institutes are expected to cover the increased costs for their own doctoral researchers from their local budgets, although according to Ilka Schießler-Gäbler of the Department for Human Resources Development and Opportunities, “current centrally funded Max Planck Research Groups (Competitive W2 Groups), which are in particular open-topic Max Planck Research Groups, Lise-Meitner Groups, Minerva Max Planck Research Groups, as well as Otto Hahn Groups, receive an annual grant of €7,500 per group. The same applies to the current so-called institute-bound Max Planck Research Groups. International Max Planck Research Groups will receive single, nonrecurring remuneration.”

As the new PhDnet spokesperson for 2021, Lea Heckmann, explains, “The new contract regulations are a great step forward, as they will not only ease the financial situations of doctoral candidates but also bring greater equality to doctoral researchers’ salaries, since they will reduce the section- and gender-specific pay gaps – a discrepancy which was also reflected within the last PhDnet surveys.” The former PhDnet spokesperson Lindsey Bultema, was also enthusiastic: “We’re very pleased that this milestone of improvement in the doctoral candidates’ situation has now been achieved, and we’re thankful to the many generations of PhDnet steering committees who have pushed this project forward, as well as to the MPG Administrative Headquarters General Administration and the General Secretary Rüdiger Willems for spearheading this progress.”