



THE CREW OF THE ALLIANCE

ZMT's involvement in the European Union's All Atlantic Research Alliance

ON EXPEDITION

Water does not respect national borders. When the world's most important ocean current – thermohaline circulation, which links all the oceans with one another – alters due to climate change or transports ever more plastic waste, the effects are felt by all the nations on Earth. It is time for an alliance, for a global fleet of ocean researchers, for joint expeditions.

The European Union's aim in creating the All Atlantic Research Alliance is to pool research on the entire North and South Atlantic, embracing not only Arctic and Antarctic waters but also the Caribbean Sea. To ensure the successful launch of this flagship, an experienced crew is needed, which includes ZMT. Since the German-South African Year of Science in 2012, the Bremen institute has also inspired this extensive collaboration. Based on long-term, joint research projects in southern Africa and Brazil – countries that are linked by the major currents in the South Atlantic – ZMT and its collaborative partners, the German Marine Research Consortium and the French IFREMER, brought these partners together with the EU and thus helped to get the so-called Belém Statement signed in 2017. After the signing of the Galway Statement on Atlantic Ocean Cooperation for the North Atlantic in May 2013, the efforts of the EU Alliance have now been extended to the South Atlantic as well. The ideas for joint research activities amongst the 17 institutes currently involved in nine countries on three continents include, for instance, cooperation on climate variability, ocean monitoring and ocean pollution, fisheries management, aquaculture and polar research.

An anchor for everyone

Following the EU calls for several project lines, ZMT has been on board since the end of 2018. On behalf of the German Marine Research Consortium (KDM), ZMT, as the executive institution, is involved in coordinating the maritime research and innovation activities in the Atlantic under the project known as AANChOR (All Atlantic Cooperation for Ocean Research and innovation). Multi-stakeholder platforms are to be set up which will act as advisory boards for ministries and governments addressing the most important topics and setting priorities for joint activities. [>MORE](#)

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THE SECRETARIAT OF THE FUTURE

The International Project Office (IPO) of Future Earth Coasts (FEC) at ZMT Research Alliance

The world is changing. Realising the human impacts on the biological, geological and atmospheric processes on Earth has put sustainability high up on the political agenda worldwide. Climate change and the way we treat the world's resources transform the oceans and coasts of all continents. What do possible paths to greater sustainability look like?

"One research project alone can't come up with the decisive answers to the global issues we face. For that, we need synthesis," says Sebastian Ferse, drawing on his years of experience working with international research teams at ZMT. He has now taken over the leadership of the distributed International Project Office (IPO) of Future Earth Coasts (FEC). The head office, which works together with four additional project offices around the world, moved to Bremen on 1 January 2019 from MaREI (Centre for Marine and Renewable Energy) at Ireland's University College Cork. With it, ZMT as a hub for cooperation in coastal and marine research has gained a new dimension. The project director is looking forward to his new job: "For everyone who works at or with ZMT as a partner anywhere in the world, this means more visibility for their research activities, the opportunity to make new contacts, and transregional collaboration." The global FEC Network also benefits from Ferse's experience in Bremen and his strong connections to Africa and the Pacific region. Looking to the future, Ferse wants to create easier access to ZMT projects and initiatives for the global network, and prompt greater cooperation.

FEC – which has been in existence for 25 years and was known as "Land Ocean Interactions in the Coastal Zone"

(LOICZ) until 2014 – is one of some 20 core projects run by the umbrella organisation, Future Earth. It has a big goal: global research collaboration on sustainability in our use of oceans and coasts with a view to the challenges that will face the Earth in the 21st century.

A new direction at FEC

Since 2018, FEC has pursued a research strategy which Sebastian Ferse will continue to follow in the future. "We have four focus areas where the office now wants to support and kick-start research, collate results and create syntheses for greater efficiency." These hotspots, where most change will be felt in the years to come, are the Arctic, river deltas and estuaries, urbanisation and cities, and small islands. Sebastian Ferse has done a lot of research on Pacific islands in the last five years and sees new opportunities for Future Earth Coasts there. "It might be possible to tackle the issue of the socioeconomic impacts of global environmental change, including the rise in sea levels or ocean acidification, in a holistic way by looking at small islands in the tropical belt right around the globe." Here might be some niches for new activity in the FEC Network, the Bremen scientist believes. One of his responsibilities is to lobby for research fields that pose important questions and promise valuable answers. But the researcher doesn't want to stop there. "We still need a report on the general state of coasts. I would like to make a substantial contribution to producing this scientific reference work, which has been on the drawing board for a long time." [>MORE](#)

At ZMT, Sebastian Ferse previously headed the research project REPICORE (Resilience of South Pacific coral reef social-ecological systems in times of global change). On 1 January 2019, he became the executive director of the International Project Office (IPO) Consortium of Future Earth Coasts (FEC), also at ZMT.

SUPPORTING PEOPLE TO HELP THEMSELVES

Capacity development is a core element of the ZMT mission. Anna-Katharina Hornidge and Werner Ekau describe the Bremen institute's engagement

What does ZMT understand by capacity development today?

Werner Ekau Basically, it's all about helping people to master challenges themselves. If aquatic resources are dwindling, for example, and the solution to the problem is better management, we as a research and teaching institute help our partners in the Tropics to develop the required capacity in coastal and resource management.

Anna-Katharina Hornidge ZMT approaches it on three levels: the individual, the organisational and the societal, meaning institutional, level. This means training and continuing education for junior researchers and future decision-makers as well as organisational development, such as supporting curricula development or the organisation of new academic courses. On the societal and political level, we engage in dialogue about institutional framework conditions. This ranges from elaborating standards or certification schemes via political and market-based incentives to questions about implementing the UN sustainability goals and the possibility of legal changes.

ZMT is a strong partner in capacity development – why is that?

Anna-Katharina Hornidge: In all its projects ZMT takes capacity development very seriously. ZMT has years of experience in areas like organisational development with NGOs, universities and research institutes in our partner countries as well as negotiating and advising ministries in our own country on support measures. In our own personal cases, for example, Werner Ekau, who is a

fisheries biologist, was recently elected onto the advisory board implementing the IOC/UNESCO capacity development strategy.

Werner Ekau: Also, through the International Ocean Institute (IOI) Germany, which has been located at ZMT since 2002, we have made major contributions to capacity development over the last 17 years. On 1 January 2019, Anna-Katharina Hornidge, who is a social scientist with a focus on capacity development related to ocean governance, took over my previous role as director.

What are the activities like in practice?

Anna-Katharina Hornidge Together with the South African and Kenyan IOI centres we have just embarked on a collaborative project called WIOGEN (West Indian Ocean Governance and Exchange Network). The project addresses all three levels of capacity development. Over a period of two years we want to reinforce the exchange between ocean actors in Germany and Africa at the intersection of science and politics and develop a concept for an Ocean Governance Graduate School.

Werner Ekau: ZMT is also actively involved in the IOI's governance courses and integrates some elements in its own courses at the University of Bremen. We can witness the success of these activities, for example, in a bilateral project in Papua New Guinea – where tuna fishery is of highest importance. In 2007, ZMT kick-started a Bachelor's programme in Fisheries Biology at its partner university in Rabaul, which is still running well with 30 graduates every year. They are now working on setting up a Master's programme. [>MORE](#)

The WIOGEN project is funded under the MeerWissen Initiative by the Federal Ministry for Economic Cooperation and Development (BMZ). ZMT successfully acquired a leadership role in three of these projects and is involved in a further two.

Happy birthday!

Gotthilf Hempel is turning 90 and ZMT is inviting his associates from all over the world to a celebratory senate reception at the Upper Hall of Bremen's historic Town Hall (April 4), followed by a scientific colloquium, also in Bremen (April 5). The colloquium will focus on the Bremen Criteria, developed by Gotthilf Hempel and other founding members of ZMT more than 25 years ago. Hempel is one of the most important witnesses of German marine and polar research after the Second World War and the founder of four marine research institutes: Besides ZMT, he established and shaped the Alfred Wegener Institute in Bremerhaven (AWI), the Institute of Polar Ecology at the University of Kiel (IPÖ) and the Leibniz Institute for Baltic Sea Research in Rostock-Warnemünde (IOW). For three decades he was professor for marine and fishery science at the University of Kiel where he supervised more than 70 Ph.D. students, many of them from abroad. Hempel spent some 1,000 days on research vessels: in the Antarctic and the Tropics, in the North and Baltic Seas. In his role as a scientific advisor, he was a member of the German Council of Science and Humanities as well as helping the Bremen Senate to expand Bremen/Bremerhaven as a location for research. Hempel continues to edit scientific books and to organise colloquia on present-day issues in marine ecology. He was awarded the Federal Republic of Germany's Great Cross of Merit in 1993 and is a member of several European academies of science.

Berlin conference on capacity development

Capacity development in the Federal State of Bremen is a topic that has to be discussed in the capital city. On 11 February 2019, ZMT is holding just such a conference at the Bremische Landesvertretung in Berlin, not least because this is a long-term task with which various institutions in Bremen and Bremerhaven are engaging very consciously. Education, training and continuing education are a fundamental precondition for stable development and sustainable use. ZMT looks at capacity development as the basis for strong international partnerships and the guarantor of social stability. In Berlin, ZMT will report on the Federal State of Bremen's successful capacity-development activities and present further ideas for discussion. The panel is expected to include leading names in international capacity development such as DAAD President, Margret Wintermantel, political

**Scientific colloquium on "Bremen Criteria":
"International partnerships in ecological research"**

Since working as an officer of UNESCO's Intergovernmental Oceanographic Commission (1964 to 1967), Gotthilf Hempel has continually fostered the development of marine science partnerships. He later defined them as one of ZMT's core tasks. Building on its early projects in Brazil, the Red Sea and southern Africa, ZMT formulated a short set of rules for its scientific cooperation with tropical and subtropical partners. In 1999, these so-called "Bremen Criteria" were included in the code of practice of the German Society for Tropical Ecology (GTÖ). How have the Bremen Criteria evolved over the years? What role can scientific partnerships play in new German development policy, for example in Africa? These questions will be explored at Universum Bremen on 5 April during short lectures featuring examples from various institutes and in a panel discussion. [>MORE](#)

scientist, Gesine Schwan, and the Honorary President of the International Ocean Institute, Awni Behnam. [>MORE](#)

Successful training course

In December 2018, ZMT and the International Ocean Institute (IOI) ran a successful, three-day training course in Bremen on the basic principles of ecological, economic and social sustainability together with the Thünen Institute of Sea Fisheries and the University of Kiel. Of particular benefit to the 14 participants from five countries (Germany, Indonesia, Russia, China, Brazil) were the intensive group work and interaction on ecological approaches to resources, business and governance to promote sustainability. The practical work on solution-finding profited from the diverse regional and disciplinary experience of the course participants. [>MORE](#)