



"WE NEED TO THINK ENVIRONMENT AND DEVELOPMENT AS ONE."

Raimund Bleischwitz - the new scientific director of ZMT

ON BOARD

For sustainability researcher Raimund Bleischwitz, climate change is the central challenge of our time. „In ten years’ time, I would like to see the global sustainability goals achieved,” says ZMT’s new scientific director. By that time, man-made global warming should be limited, the 1.5-degree target should be within reach if possible, and 30 per cent of marine ecosystems should be protected in a sustainable way and in line with the needs of coastal communities. Back in 1987, when he was a student, he had the opportunity to meet Norwegian Prime Minister Gro Harlem Brundtland. At that time she presented the final report aptly titled “Our Common Future” issued by the UN Commission she had headed to forge a political concept for sustainable development – today known as the Brundtland Report. “You had a group of people who said: we can do this,” remembers Bleischwitz, now a renowned economist and social scientist. “They thought environment and development as one. They saw conflicting goals, but also showed us perspectives. That is what has shaped me – the wish to find solutions to challenges.”

Listening – and finding solutions

Today, Raimund Bleischwitz, who joined ZMT from University College London (UCL), is one of those who point out conflicts of interest and develop perspectives. In the coming years, it will be important to shape the sequestration of carbon in a scientifically reliable way, he reckons. „Nevertheless, the activities that aim to store more carbon in coastal marine ecosystems also encounter local communities with their justified socio-economic interests.” Transformation must be designed fairly and the people in the tropics have to be included. Research has a role to play in assessing risks of ‘carbon colonialism’, i.e. an exploitation of the people in the tropics in favour of the climate protection interests of societies or companies in the Global North, he stresses.

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At ZMT, Raimund Bleischwitz has found exactly the group of people he has always appreciated working with in order to develop better solutions and perspectives: motivated and with an ideal range of complementary skills and competencies, including expertise in carbon flows, ecosystems, modelling and social science. „Cooperation is a key word at ZMT, and the institute's successful partnerships are invaluable for sharing knowledge.” Listening to people and finding solutions is what matters now, says Bleischwitz. “In the next few years, I would like to see ZMT’s visibility and its social and political influence grow even further.”

SPREADING KNOWLEDGE HANDS-ON

TICAS – to tackle environmental problems

What does a society need in order to pull together to successfully combat environmental problems? Fact-based knowledge that everyone can access, but also networking to disseminate knowledge effectively. Because spreading knowledge lays the foundations for joint action. “We have to ensure all sectors of society are in position to join the conversation and make informed decisions,” says Tim Jennerjahn, the spokesperson for the research project TICAS at ZMT.

This is precisely the goal of TICAS: to produce and disseminate knowledge that is needed to find solutions to the environmental problems facing China’s coastal ecosystems. To this end, networks have to be built, capacities developed, and the sharing of ideas encouraged among stakeholders in science and society. “Too often this exchange only takes place between science and policy-makers,” explains Tim Jennerjahn. “But if we are going to bring about the necessary changes we must have all sectors of society on board, i.e., NGOs, authorities, firms, educational institutions and the general public.”

Stakeholder workshops, lectures and school projects

Take Hainan: One of the problems in the Chinese island province is the untreated effluent that flows into its coastal waters from aquaculture ponds. The introduction of these anthropogenic substances has an impact on the seagrass beds. For many years, ZMT has been monitoring the situation in situ in the context of bilateral projects, such as the interdisciplinary German-Chinese project [ECOLOCC](#).

The project known as TICAS builds on the research activities of this collaborative undertaking and addresses political decision-makers, environmental organisations and economic stakeholders in aquaculture, fisheries and tourism for the purpose of disseminating knowledge in Hainan. (Janine Reinhardt, ZMT, Spokesperson PA 5)

Together with the TICAS coordinator Jialin Zhang, ZMT has already held a raft of public lectures, stakeholder workshops and dialogues on the spot. “We have also visited schools, done experiments with the students and launched citizen science projects to monitor the seagrass,” Jennerjahn explains. Moreover, this knowledge spreading has produced fact sheets, policy briefs, an exhibition for World Oceans Day and even art and student drawings. “The fact that, in these drawings, children differentiated between the roots and the spreading shoots of the seagrass, so-called rhizomes, tells me that the measures we initiated to spread knowledge are bearing fruit,” the ZMT researcher continues. In China, he notes, there were also signs of increasing environmental consciousness, and the knowledge shared through TICAS was falling on fertile ground in Hainan.

The researchers at ZMT also learn from this collaboration. “We are preparing a scientific publication on the project in order to present the concept and assess what we can achieve professionally,” says the biogeochemist from ZMT. The next interesting step could be to scientifically evaluate the data generated by the citizen science project they have initiated. It is now running without ZMT’s participation – which Jennerjahn also takes to be a good sign.

The bilateral research project “Tackling Environmental Change Issues of Chinas Coastal Aquatic Systems” (TICAS) with China is being funded by the International Office of the Federal Ministry of Education and Research (BMBF) until July 2022. [>MORE](#) It is coordinated within ZMT’s Programme Area 5 – Strategic Management and Development. [>MORE](#)

CO-DESIGN

Thirty years of ZMT expertise. The head of ZMT's Office for Knowledge Exchange, Rebecca Lahl, in conversation with Sebastian Ferse, who led Future Earth Coasts from ZMT for the last three years

What does co-design mean at ZMT?

Rebecca Lahl: Co-design means planning together – in a research team with our partner institutions in the Global South and with stakeholders from society who are engaged into this planning process of our research.

Sebastian Ferse: ZMT recognised very early on where the journey was heading and has a lot of experience. You can see that when you look at our guiding principles, the [Bremen Criteria](#). Application has always been our remit. As an institute in the Leibniz Association, ZMT's research has the prospect of decision-makers ultimately being able to utilise its results. And the co-design approach is one way of tapping the potential of solution-oriented research.

Rebecca Lahl: This is why we chose the name Office for Knowledge Exchange very consciously. For us, it's all about making knowledge available. But not only after the research projects have been completed, and not just in one direction. We foster multidirectional knowledge exchange – ideally, before the research question has even been developed.

How does ZMT contribute to current debates on co-design?

Sebastian Ferse: As part of the UN's Decade of Ocean Science for Sustainable Development, for example, ZMT offered an information session on co-design. We are currently heading a working group of the [German Committee Future Earth \(DKN\)](#) which explores co-design approaches to coastal research and drafts recommendations to the German Research Foundation (DFG). We have also prepared a handbook on co-design in research partnerships for the GIZ's initiative [MeerWissen](#).

Rebecca Lahl: But ZMT itself also learns from discourse and practice – how to incorporate the knowledge of non-scientific stakeholders. For this purpose, we have created a forum for just these activities and projects in our Programme Area 5. Here, staff can share ideas on collaboration, knowledge exchange and capacity building, and learn from one another.

What challenges does co-design pose?

Rebecca Lahl: Co-design calls for a great deal of time, resources and coordination. But up to now, co-design phases have barely played a role in funding schemes. Research funders expect a perfectly thought-through project proposal. But we are observing a trend towards creating more scope and funds for co-design phases.

Sebastian Ferse: ZMT's project PACPATH, which was launched in 2021, is a good example. It is funded by the Belmont Forum with the involvement of the German Research Foundation (DFG). It explores ways to support sustainable development in island states in the Pacific – using precisely an integrated approach. The aim is to generate scientific projects and establish processes, methods and networks that will enable the interest groups from science and local indigenous and civil society organisations to jointly achieve the objectives that revolve around the sustainable development goals. Before the research phase there is a two-year co-design phase devoted to networking activities to discover who the relevant stakeholders in society are that need to come on board. That is the essence of good co-design, a clear preliminary phase that is also appropriately funded.

The research and knowledge exchange project "Pacific Ocean Pathways in support of sustainable development: an integrated approach" (PACPATH) is part of ZMT's Programme Area 5 – Strategic Management and Development. It unites stakeholders and research institutions from France, USA, New Caledonia, Fiji and Germany. It is funded by the Belmont Forum and the German Research Foundation (DFG). [>MORE](#)

NEW BOOK: 12 YEARS OF SPICE-PROGRAMME



One hundred authors from Germany and Indonesia have summed up 12 years of the programme "Science for the Protection of Indonesian Coastal Ecosystems (SPICE)" in a new book. Published in 2021, the book is the synthesis of twelve years of research

and training in the German-Indonesian SPICE programme – led on the German side by ZMT. Scientific, social and economic questions of the management of Indonesian coastal ecosystems and their resources on the more than 17,000 islands were the focus of years of research. The SPICE programme strengthened the scientific database of marine-related research topics, promoted capacity and infrastructure development in the marine sector, and contributed to public education and awareness. [>MORE](#)

OCEAN GOVERNANCE CONFERENCE

More than 300 participants debated at the Western Indian Ocean Governance Exchange Network (WIOGEN) virtual conference. The event, organised by ZMT and IOI South Africa, focused on sharing experiences and outcomes on all aspects of ocean governance in the Western Indian Ocean.



Participants from academia, research and policy, practice and education discussed the latest innovations, trends and solutions for future sustainable

use and governance of marine resources. Topics ranged from sustainable fisheries and aquaculture to co-design, transdisciplinary research and multi-stakeholder engagement. The conference reaffirmed once again that ocean governance can only be managed through transdisciplinary, collaborative work. [>MORE](#)

WAYS TO LIMIT CLIMATE CHANGE

ZMT is coordinating a new research consortium, sea4soCiety, dedicated to developing innovative and socially accepted approaches to improve the natural potential for carbon storage. The focus is on vegetation-rich coastal ecosystems

of tropical and temperate latitudes, such as mangrove forests, seagrass beds, salt marshes or kelp forests, which sequester huge amounts of carbon dioxide (CO₂) from the atmosphere. The research consortium sea4soCiety is funded for three years by the Federal Ministry of Education and Research (BMBF) and brings together almost 40 scientists from nine Northern German universities and research institutes. Their goal is to quantify and analyse the storage capacity for "blue carbon" in four different types of coastal ecosystems on the German North Sea and Baltic Sea coasts, in the Caribbean and the Indonesian Sea. The consortium is one of six research consortia within the mission "Marine carbon sinks in decarbonization pathways" – in short: CDRmare – of the German Marine Research Alliance (DAM). [>MORE](#) [>MORE](#)

FS SONNE EXPEDITION TO BENGUELA CURRENT



From August to November 2021, the German research vessel SONNE (FS SONNE) was on a two-month expedition "SO285" off South Africa and Namibia. In the Benguela upwelling area,

which is one of the most productive and fish-rich regions of the Atlantic Ocean, the research team on board the FS SONNE investigated how climate change is affecting the marine ecosystem in order to better assess the consequences for fisheries and the ocean's CO₂ uptake. The expedition "SO285" was led by ZMT and involved 30 researchers from Germany, Namibia and South Africa. [>MORE](#)

Join the Ocean Decade Laboratory "A Healthy and Resilient Ocean" in March



Register now for the UN Ocean Decade Lab "A Healthy and Resilient Ocean", which takes place from 9-11 March 2022 and is organised and chaired by PD Dr Tim Jennerjahn from ZMT and Prof. Dr Karen Wiltshire from the

Alfred-Wegener-Institute. The Ocean Laboratory aims to catalyse action for the Ocean Decade and to strengthen dialogue and outreach. It encompasses a core event that will be complemented by a diverse range of satellite activities. You can register here: [>ONLINE REGISTRATION](#)

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