



Member of



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Leibniz-Zentrum für Marine Tropenökologie (ZMT) GmbH

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GENUS in progress!
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HELMSMAN TO NEW HORIZONS

ZMT advises GIZ in India

India's coastal ecosystems sustain the livelihoods of millions of people. But they are also changed by human activity. Drastic pollution, overfishing and the effects of climate change are responsible for the critical state of some of these marine ecosystems. The German Development Corporation, GIZ, and India's Ministry of Environment and Forests, MoEF, want to counter these developments by introducing conservation measures in the period up to 2017. ZMT is helping to point the way forward by delivering the appropriate toolbox for the GIZ project, "Sustainable management of coastal and marine protected areas".

Outfitters for global tasks

In order to establish marine conservation areas, you first have to evaluate the state of the systems you want to protect. "The economic baseline studies on India's coasts are based on a strategy we developed at ZMT for our research," explains Tim Jennerjahn of ZMT. The special feature of this strategy is that it uses predefined indicators to measure the ecological, social and economic dimensions of sustainability. If you return to take measurements of water quality or biodiversity along certain parameters several years later, you can still compare the data and discover whether the conservation measures are having an impact. And if you compare the surveys on alternative sources of income, for instance, you can make statements on the social and economic sustainability of the project.

Hands-on know-how on board

If the introduction of conservation areas is to be successful in the long term, it is important to assess the role played by coastal ecosystems in the livelihoods of the local population, the biogeochemist from Bremen emphasises. "In our projects at ZMT we have clocked up years of experience in determining the status of socio-ecological systems on tropical coastlines." This expertise can be used all over the world – the scientists at the institute in Bremen adapted their methodology to the conditions in India and are now passing it on to their colleagues in the GIZ project. "The fact that ZMT staff have been asked to provide expert advice reminds us once again of the social relevance of our research projects, which are always interdisciplinary," says Achim Schlüter, head of the Department of Social Sciences at ZMT. In this advisory capacity ZMT can now underscore its scientific engagement in yet another format – for new horizons in the sustainable management of coastal ecosystems.



BRIDGING THE DIVIDE

Bevis Fedder coordinates knowledge exchange at ZMT

Strictly speaking, he is a ZMT veteran: Bevis Fedder, who took up a position created specifically to coordinate knowledge exchange in April 2014, first entered the building ten years ago. Two of those years were spent on the Master's course in International Studies in Aquatic Tropical Ecology (ISATEC) during which he got to know and value ZMT's international project groups. This experience was to change his life. "I arrived as a biologist wanting to become a marine researcher and left to take a doctorate in law and campaign for the fair distribution of knowledge worldwide."

As a biologist he understands the research being undertaken at ZMT and as a former student he is familiar with the institute's overall mission. Now, as a lawyer, he knows what has to be done to make sure the outcomes of the research conducted in Bremen can be of long-term use to societies in the tropics. In order to provide a scientific basis for the sustainable use of ecosystems in tropical coastal regions, the knowledge generated within the many partner projects is a central resource. Unless this resource is shared by researchers, politicians and the people living and working in the tropical coastal regions, it will not be possible to achieve sustainability and to protect biodiversity in the long run. In order to professionalise this knowledge exchange, ZMT recruited its former student, who now holds a Ph.D. in Law. "I always thought there was a gap between science and legal policy issues in cooperation, particularly with developing countries. I now want to help bridge the divide," says Bevis Fedder.

Raising knowledge exchange capacities

It has always been one of the aims of ZMT projects to communicate the emerging knowledge to everyone concerned. But now, with the help of Bevis Fedder's expertise, the relevant structure has been created at the Bremen institute for the first time. The goal is to raise general knowledge exchange capacities at ZMT and to support specific projects involving partners in the tropics. "Furthermore, with the aid of ZMT's valuable experience, we will

develop a strategy for successful knowledge exchange - a best practice example for everyone."

Essentially, this means that guidelines based on international standards will encompass ethically-motivated principles, many of which ZMT researchers already work with – such as long-term collaboration between colleagues and taking account of the interests of local partners when pursuing common goals. An initial workshop in Bremen in January 2015 will bring together important international experts (see box). As part of his project support activities, Bevis Fedder will also monitor the influence of knowledge exchange activities on environmental protection in the tropics – the results will then translate into the guidelines. But the broadly-educated expert is already convinced that "a professional flow of information between everyone involved in research projects will have crucial advantages for the sustainable use of ecosystem services."

On Science for Sustainability

In his capacity as the new Officer for Knowledge Exchange at ZMT, the biologist and lawyer **Bevis Fedder** is organising the "1st Workshop on Science for Sustainability" from 18 to 21 January 2015. It will bring together researchers, politicians, practitioners and stakeholders in civil society from all over the world, including representatives of the World Bank, the United Nations and the Deutsche Gesellschaft für internationale Zusammenarbeit (GIZ). They will analyse various approaches to knowledge exchange with the aim of creating a comprehensive good practice catalogue that will be accessible worldwide on the ZMT website.



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OPENING UP A TREASURE CHEST

Those who do research for ZMT are valued even after their projects have been completed
Kristin Gembiak and Werner Ekau on the institute's new alumni activities

What is the significance of ZMT's networking with former project staff?

Gembiak: ZMT's alumni are its treasure. Since 1991, some 800 people – students, graduates and researchers – have spent time working on projects run by the institute all over the world. Many are still in contact with their former hosts as well as with one another. 23 years down the line, ZMT now wants to strategically foster all the connections within this international group and benefit from opening up such a unique treasure chest.

Ekau: For an institute like ours that works globally it is very important to maintain contact with former students and project staff. This is the only way to continue cooperating successfully in research. It generates a strong feeling of cohesion amongst the partners over many years and produces research collaborations that have a long-term impact.

Join the dynamic ZMT Network!

www.zmt-bremen.de/Alumni.html

Gembiak: ZMT alumni are therefore a valuable link to countries and institutions, and can initiate new collabora-

tions. Any kind of personal as well as institutional cooperation is based on trust, which has to be built up and cultivated from the very start.

How has the network been fostered and used so far?

Ekau: Every single ZMT project engenders a network, simply because of each individual researcher's personal activities. I myself, for example, have a lot of links with Brazil as a result of many successful joint projects. If I have a new idea for scientific cooperation, I look at my address list, contact former staff and colleagues, and ask whether anyone is interested. That is the way many individual networks at the institute have worked up to now. However, professional alumni activities are much more comprehensive.

What does ZMT's new alumni strategy involve?

Gembiak: We have gained a new information hub by establishing the ZMT Alumni Relations Office. All our alumni are contacted by the office and we compile a database with information on where they are and what they are doing. We are also setting up an online platform for alumni where they can both network and exchange ideas. We should like to present research results and publications on the platform, too, and spark discussions with ZMT staff on scientific issues. In future, it should also be possible to take part in lecture series and webinars.

Ekau: It is inspiring to hold regular conversations on current topics and share information in such a lively format, and it also opens up new opportunities for our alumni to approach ZMT with new ideas for projects. This allows the institute to get valuable input from outside.

Gembiak: We are also underpinning this goal by planning alumni events at ZMT and summer schools in Bremen and partner regions.

ZMT is one of the 11 winners of the Alexander von Humboldt Foundation's "Research Alumni Strategies Competition". The social scientist, **Kristin Gembiak**, is the new Alumni Relations Officer responsible for implementing the successful strategy. The marine biologist, **Werner Ekau**, heads ZMT's Department of Ecology and the working group on Fisheries Biology. He has more than 20 years' experience of successfully fostering contact with former doctoral students, staff and colleagues in Brazil, South Africa and other parts of the world.



ACUTE

Leibniz Association funds ZMT research

Ever more people require ever more food. One way of meeting the increasing demand for seafood is aquaculture – which is an expanding industry. But aquaculture automatically brings about changes in the human-nature system. From 2015, ZMT's group leader Astrid Gärdes will study the impact of aquaculture. Her research project, "AquaCULTure practice in Tropical coastal Ecosystems - Understanding ecological and socio-economic consequences" (ACUTE) was selected for funding in the Leibniz Competition. [> READ MORE](#)

SGD-NUT

New junior research group at ZMT

"Submarine Groundwater Discharge from tropical islands as NUTrient supply for marine ecosystems", known as SGD-NUT, is the subject being addressed by a new group of young researchers at ZMT, headed by Nils Moosdorf. The scientists, who are being supported by the Federal Ministry of Education and Research (BMBF), are systematically investigating what happens to marine ecosystems in the tropics when humans on land change the nutrient transport in ground water – for example either by pumping off groundwater or by adding nutrients as agricultural fertilisers. Coastal ecosystems are affected by these changes when the groundwater is discharged into the ocean. Taking Java as an example, the junior research group will investigate these processes until 2018, assess the impact and communicate their findings to decision-makers. [> READ MORE](#)

GOAL ACHIEVED

New professorship with the uni in Oldenburg

ZMT's negotiations with The University of Oldenburg have been crowned with success: at the end of November 2014, the Bremen and Oldenburg institutions announced a joint professorship in ecotoxicology. This marks the achievement of a long-held ambition at ZMT. The professorship will be established at The Institute for Chemistry and Biology of the Marine Environment (ICBM) in Oldenburg, whilst research will be conducted at ZMT. The application period for this position is open until 31 January 2015. [> READ MORE](#)

A VISIT TO ASIA

ZMT meets minister

On his recent visit to Asia, the German Foreign Minister, Frank-Walter Steinmeier, met ZMT researcher Tim Jennerjahn. The minister was in Jakarta for talks with the new Indonesian government and took the opportunity to learn more about German-Indonesian collaboration in marine research during a boat trip. ZMT's research links with Indonesia date back to the 1990s – the most important joint research programme "Science for the Protection of Indonesian Coastal Marine Ecosystems (SPICE)" has been running since 2003. [> READ MORE](#)

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ZMT FACES

ZMT congratulates its board member, **Dr Indroyono Soesilo**, on being appointed to the position of Coordinating Minister for Maritime Affairs in Indonesia. Together with ZMT, the geoscientist spearheaded German-Indonesian collaboration in marine science and became a member of ZMT's International Scientific Advisory Board this year. [> READ MORE](#)



Coastal geomorphologist **Daniel Harris** joined ZMT in November 2014 as a new postdoctoral researcher. The marine scientist from Sydney is a member of the Junior Working Group "Sea Level and Coastal Changes", headed by Alessio Rovere, which is a collaboration with MARUM Bremen. He will look at hydrodynamic processes in the surf zone of modern coral reefs to understand their response to strong wave events. [> READ MORE](#)



PUBLICATIONS

Books

Neuston net sampling

W. Ekau and M. Leal, 2014, in: Guide to best practices to study the ocean's surface. Occasional publication, ed. by M. Cunliff et al., Marine Biological Association of the United Kingdom, Plymouth, UK, 51-58. [> READ MORE](#)

Articles

Comparative growth and mortality of cultured Lion's Paw scallops (*Nodipecten subnodosus*) from Gulf of California and Pacific populations and their reciprocal transplants

M. Wolff et al., 2015. Aquaculture Research 46/1, 185-201. doi: 10.1111/are.12175 [> READ MORE](#)

Assessing Long-Term Changes in the Beach Width of Reef Islands Based on Temporally Fragmented Remote Sensing Data

T. Mann, H. Westphal, 2014. Remote Sens 6 (8), 6961-6987. doi: 10.3390/rs6086961 [> READ MORE](#)

PLEASE REGISTER

You want to be informed about ZMT research collaborations and publications?

You want to contact former friends and get the latest updates about funding opportunities and career pathways?

For becoming part of the living ZMT Alumni network, please register here:

www.zmt-bremen.de/Alumni.html