



YOUMARES – A Conference from and for YOUng MARine REsearchers

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Abstract

YOUMARES is an annual early-career scientist conference series. It is an initiative of the German Society for Marine Research (DGM) and takes place in changing cities of northern Germany. The conference series is organized in a bottom-up structure: from and for YOUng MARine REsearchers. In this chapter, we describe the concept of YOUMARES together with its historical development from a single-person initiative to a conference venue of about 200 participants. Furthermore, the three authors added some personal experiences and insights, what YOUMARES means to them.

Concept and Structure of YOUMARES

Education is the central key component for the progression of societies. As such, it is the basis to cope with the *challenges* of globalization. At the same time, the oceans are the biggest and most important ecosystem, securing the survival capabilities of mankind on earth. It is, therefore, of pivotal interest that young researchers commit themselves to shape

the future of this ecosystem in a sustainable way. To jointly develop the most important future topics, a vibrant and interdisciplinary network of research, economy, and society is necessary. As such, YOUMARES is much more than a regular annual research conference. It is a platform which aims to establish a network especially for early career scientists (Einsporn 2011). It thereby promotes the research and communication activities of High School, Bachelor, Master, and PhD students. Similar to regular conferences, the participants have the possibility to present their research in oral or poster presentations. Additionally, different kinds of workshops, plenary discussions and social events enable the participants to extensively exchange with each other at eye level. Providing an exchange platform should ultimately lead to a young researcher network and to the enhancement of individual and collective competence (Fig. 1).

YOUMARES is an initiative of the working group “Studies and Education” of the German Society for Marine Research (Deutsche Gesellschaft für Meeresforschung e.V. – DGM). Right from the beginning in 2010 on, an essential part of the idea was to drive the organization of the conference bottom-up (Einsporn 2011). The whole conference is organized by early career scientists. In each winter a core organization team publishes a “Call for Sessions”, which encourages young marine researchers from all kinds of scientific fields to apply alone or in pairs for hosting one of the scientific sessions at the upcoming conference. The applications contain the CVs, a motivation letter and most importantly a “Call for Abstracts” for the proposed session. If two or more applicant groups propose similar sessions, the core organization team brings them into contact and encourages them to organize a joint session. Once the applications are reviewed and the sessions are being set, the different “Calls for Abstracts” are published. The session hosts have several responsibilities. They handle the abstracts of their sessions and organize, structure, and moderate their session at the actual conference. Additionally, they are asked to write a literature review of the field of research (or one aspect of it)

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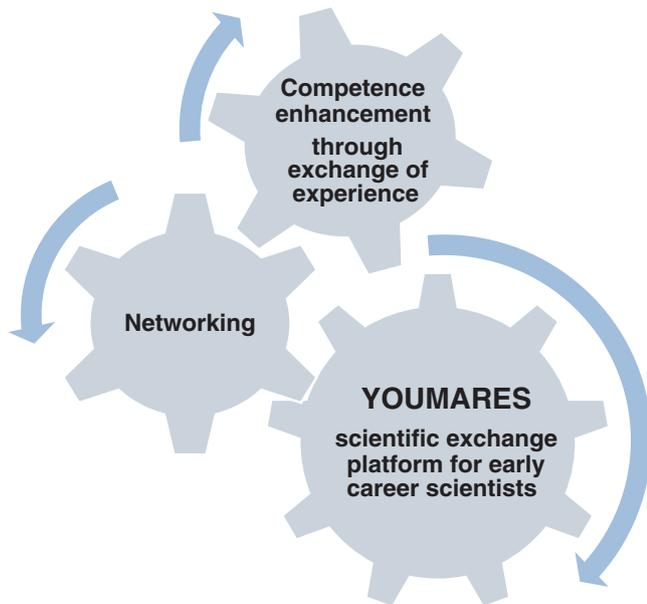


Fig. 1 The interplay between the provision of an exchange platform for early career scientists, networking efforts, and the enhancement of competence

they cover with their session. The product of all these efforts of the session hosts is the book at hand. It summarizes the literature reviews of most sessions and all presenter abstracts of the latest edition of the conference series, YOUMARES 8, held from 13 to 15 September 2017 in Kiel, Germany.

A Brief History of Getting Larger

YOUMARES was established by the initiative of a single person – Marc Einsporn. Marc came up with the idea of a platform where especially the young generation of scientists would be able to exchange and to present their research to an audience of a similar career stage. Starting off as a national conference, the first YOUMARES took place under a different name (“Netzwerktreffen junge Meeresforschung”) in Hamburg in June 2010 with less than 50 participants (Table 1, Einsporn 2010). Already 1 year later, the name “YOUMARES” was established and it took place with about 130 participants over 3 days in September (Einsporn 2011). From then on, the conference acquired an international reputation and was held each September in different cities in northern Germany. By 2017, eight editions of YOUMARES took place; so far in seven different cities (Table 1). Already in 2012, participants came from more than ten different countries, in 2013 from more than 15 different countries (Wiedling and Einsporn 2012, Einsporn et al. 2013). Over the years, YOUMARES has expanded into the largest meeting of young marine scientists in Germany. The most recent edition, YOUMARES 8, had about 195 participants and 95

oral presentations (Table 1). Organizing an event of this size obviously requires a large team of organizers and helpers.

The topical sessions of each YOUMARES edition offer an interesting insight into the spectrum and the diversity of research early career scientists are conducting in the marine field (Table 2). In few cases, the same people applied for hosting a session in subsequent years. However, some topics are reoccurring relatively often over the years as for instance aquaculture, plastic pollution, invasive species, coral reefs and polar regions.

How to Get in Contact: Personal Experiences as a Young Researcher

YOUMARES – Science Works Best When Being Shared

Viola Liebich

I had joined YOUMARES as a participant some years ago when I was still a PhD student. When I first heard about this conference I didn’t realize just how special it was, to be honest. Being on-site, I liked the atmosphere and noticed the rather young audience. However, it was only later in my PhD career that I joined ‘big’ and ‘professional’ meetings in an international set-up. The topic of my PhD was the introduction of invasive species via ballast water and I took a turn joining an EU project ‘with application’. Applied science still has a bit of a stale taste to it for many researchers. The different worlds seem to collide on ballast water management conferences when biologists meet vessel fleet managers, government representatives, lawyers, engineers, and project managers – the guys in suits as they were called in my old institute. Dinners often were five courses served with wine you had to fight off to be not re-filled all the time. Now, was that an inspiring and relaxing atmosphere? No, I enjoyed the nice food but didn’t feel comfortable talking to people I didn’t know and went home with a missed chance to enlarge my network. But YOUMARES had showed me that we are as scientists not alone with our topics, ideas, questions, and problems. I learned from my first supervisor that science works best when being shared and that is, in my opinion, what YOUMARES also stands for.

Thus, when I got the chance to organize this year’s YOUMARES as head of the team, I recalled that feeling. Above all, I wanted to create that easy atmosphere with people of similar minds – as if we would all meet up in a student house kitchen. At the same time, we had the expectation to offer a professional conference. The bottom-up approach done by young volunteers when organizing it should not be an excuse that the conference and everything around it doesn’t provide you the best options. Although it was often challenging to find the time to call after sponsors, facility

Table 1 Key data of YOUMARES conferences until 2017

Year	Dates	Place	Motto	No. participants	No. sessions	No. talks	No. posters	Reference
2010	12 June	Hamburg	Netzwerktreffen Junge Meeresforschung – Young marine research: Diversity and similarities	46	4	17	?	Einsporn (2010)
2011	07–09 September	Bremerhaven	YOUMARES 2 – Oceans amidst science, innovation and society	130	6	31	33	Einsporn (2011)
2012	12–14 September	Lübeck	YOUMARES 3 – Between space and seafloor – Aqua vita est	130	10	60	50	Wiedling and Einsporn (2012)
2013	11–13 September	Oldenburg	YOUMARES 4 – From coast to deep sea: Multiscale approaches to marine sciences	150	15	53	35	Einsporn et al. (2013)
2014	10–12 September	Stralsund	YOUMARES 5 – Opportunities and solutions – Research for changing oceans	100	10	35	16	Jessen and Golz (2014)
2015	16–18 September	Bremen	YOUMARES 6 – A journey into the blue – Ocean research and innovation	126	14	47	27	Jessen et al. (2015)
2016	11–13 September	Hamburg	YOUMARES 7 – People and the 7 seas – Interaction and innovation	110	11	42	29	Bode et al. (2016)
2017	13–15 September	Kiel	YOUMARES 8 – Oceans across boundaries: Learning from each other	195	15	95	27	This contribution

Table 2 Session topics of YOUMARES conferences until 2017

Year	Session number and session	Reference
2010	(1) Biologie und Chemie (Biology and chemistry)	Einsporn (2010)
	(2) Fernerkundung (Remote sensing)	
	(3) Mikro- und Molekularbiologie (Micro- and molecular biology)	
	(4) Aquakultur (Aquaculture)	
2011	(1) Human impacts on the oceans and subsequent environmental responses	Einsporn (2011)
	(2) Remote sensing: Higher orbits for deeper understanding	
	(3) Aquaculture: Main research priorities to fulfill our need for sustainable seafood	
	(4) Living with the Sea: Coastal livelihoods and management	
	(5) Marine technologies – The art of engineering in synergy with natural sciences	
	(6) Ocean of diversity: From micro scales to macro results	
2012	(1) Aliens from inner space: Where do they come from, what do they do and how can we stop them?	Wiedling and Einsporn (2012)
	(2) Between sea and Anthroposphere: Marine socio-economics in an era of global change	
	(3) Environmental changes in the pelagic: Consequences and acclimatization strategies – From plankton to fish	
	(4) Integrated aquaculture – Polyculture of plants, invertebrates and finfish	
	(5) Ocean modelling: Theory & concepts	
	(6) Physical oceanography – Between measuring and modelling	
	(7) Reefs from shallow to deep – Environmental constraints and perspective	
	(8) The aquatic climate archive: Tracking the rise and fall of ancient civilizations.	
	(9) Lessons from the past, for the present and the future?	
	(10) Water resources in coastal areas – Scarcity and management implications	
2013	(1) Dissolved Organic Matter (DOM) – small in size but large in impact: Basis of life in the world’s ocean	Einsporn et al. (2013)
	(2) Aquatic microorganisms: Between producers, consumers and pathogens	
	(3) Marine plastic pollution: From sources to solutions	
	(4) Importance of coral reefs for coastal zones: Services, threats, protection strategies	
	(5) Fluctuations in cephalopod and jellyfish abundances: Reasons and potential impacts on marine ecosystems	
	(6) Responses of marine fish to environmental stressors	
	(7) The ecosystem approach and beyond: Multidisciplinary science for sustainability in fisheries	
	(8) Aquaculture: Fish feeds the world – but how?	

(continued)

Table 2 (continued)

Year	Session number and session	Reference
	(9) How to integrate blue biotechnology in food industry and medicine	
	(10) Marine measurement technologies: Science and engineering	
	(11) Operational oceanography	
	(12) Methods and applications of ocean remote sensing	
	(13) Coping with uncertainties in marine science – From crisis management to the new risk approaches in the Baltic Sea chemicals management	
	(14) Marine habitat mapping: Stretching the blue marble on a map	
	(15) What's up with coral reefs?	
2014	(1) Small-scale fisheries research – Towards sustainable fisheries using a multi-entry perspective	Jessen and Golz (2014)
	(2) Individual engagement in environmental change	
	(3) Aquaculture in a changing ocean	
	(4) Coral reef ecology, management and conservation in a rapidly changing ocean environment	
	(5) Tools and methods supporting an ecosystem based approach to marine spatial management	
	(6) Measurement and control engineering – The clockwork in marine science	
	(7) Aquatic plastic pollution – Tackling environmental impacts with new solutions	
	(8) Mangrove forests – An endangered ecological and economic transition zone between ocean and land	
	(9) Effects of global climate change on emerging infectious diseases of marine fish	
	(10) Cold water research – From high latitude coasts to deep sea trenches	
2015	(1) Frame works for sustainable management of water resources	Jessen et al. (2015)
	(2) Population genetics as a powerful tool for the management and sustainability of natural resources	
	(3) Cephalopods and society: Scientific applications using cephalopods as models	
	(4) Challenges and innovative solutions for monitoring pollution and restoration of coastal areas	
	(5) ScienceTainment	
	(6) From invasive species to novel ecosystems	
	(7) From outer space to the deep-sea: Remote sensing in the twenty-first century	
	(8) No living without the ocean: Social-ecological systems in the marine realm	
	(9) How our behavior can make the difference in ocean conservation	
	(10) Recent approaches in coral reef research: Traditional and novel applications towards building resilience	
	(11) Latest developments in land-based aquaculture	
	(12) Active study in times of Bologna	
	(13) Multispecies and ecosystem models for fisheries management and marine conservation	
	(14) Aquatic plastic pollution	
2016	(1) From egg to juvenile: Advances and novel applications to study the early life history stages of fishes	Bode et al. (2016)
	(2) Dissolved organic matter in aquatic systems: Assessment and applications	
	(3) Fighting eutrophication in shallow coastal waters	
	(4) Deep, dark and cold – Frontiers in polar and deep sea research	
	(5) Going global: Invasive and range-expanding species	
	(6) How do communities adapt?	
	(7) Marine species interactions and ecosystem dynamics: Implications for management and conservation	
	(8) Coastal and marine pollution in the Anthropocene: Identifying contaminants and processes	
	(9) Social dimensions of environmental change in the coastal marine realm	
	(10) Phytoplankton: Are we all looking at it differently? Diverse methods and approaches to the study of marine phytoplankton	
	(11) Coral reefs and people in changing times	
2017	(1) Sentinels of the sea: Ecology and conservation of marine top predators	This contribution
	(2) Reading the book of life – -omics as a universal tool across disciplines	
	(3) Physical processes in the tropical and subtropical oceans: Variability, impacts, and connections to other components of the climate system	
	(4) Cephalopods: Life histories of evolution and adaptations	
	(5) Ecosystems dynamics in a changing world: Regime shifts and resilience in marine communities	
	(6) The interplay between marine biodiversity and ecosystems functioning: Patterns and mechanisms in a changing world	

(continued)

Table 2 (continued)

Year	Session number and session	Reference
	(7) Ocean optics and ocean color remote sensing	
	(8) Polar ecosystems in the age of climate change	
	(9) The physics of the Arctic and subarctic oceans in a changing climate	
	(10) Phytoplankton in a changing environment – Adaptation mechanisms and ecological surveys	
	(11) How do they do it? – Understanding the success of marine invasive species	
	(12) Coastal ecosystem restoration – Innovations for a better tomorrow	
	(13) Microplastics in aquatic habitats – Environmental concentrations and consequences	
	(14) Tropical aquatic ecosystems across time, space and disciplines	
	(15) Open session	

details, caterers, accommodation offers, and of course all the scientific input, we put our mind to it. And I am very proud of this year’s team. We achieved all we could have hoped for and managed to make YOUMARES 8 the biggest one so far!

YOUMARES and the DGM – Interlinking the Young and the Experienced

Maya Bode

My first contact to YOUMARES was from a different point of view: When I was in the final stage of my PhD thesis, I participated in the DGM-Meerforum in Bremen in 2015 where marine researchers met politicians and climate scientists. Discussions about hot topics such as the plastic problem, geoengineering and deep sea diversity, and the limits and responsibility of human actions were indeed inspiring. Especially the interdisciplinary exchange between young and experienced researchers was extremely motivating: that we, as young marine researchers, really have the possibility to change what is going on in the world, if we efficiently use our resources, as such work together, constantly update ourselves about recent research findings and interlink various disciplines of marine sciences, engineering, social sciences, politics, and economics. As vast as the ocean may appear, we know and experience these days that resources and ecosystem’s carrying capacities are limited and already overexploited in many regions of the world ocean. Efficient science with the ultimate aim to serve nature and society needs creativity and constant interdisciplinary exchange of knowledge. During the last decades, the society of marine scientists has grown and together with new technologies and sophisticated networking, we have the opportunity – better than ever before – to exchange new findings, bring our knowledge into the world and enhance interdisciplinary research, partnerships, and cooperation. YOUMARES serves as such a platform and has the potential to make marine research more efficient in the future.

To help to aim this goal, I became a member of the DGM in 2015 and helped organizing the YOUMARES 7 as scientific coordinator. Then, in 2016, I became a board member of

the DGM with the main motivation to enhance the exchange of experienced and young marine researchers. Since 2015, the DGM-Meerforum takes place each year, 1 day before the YOUMARES, bringing together young and experienced scientists, in the afternoon by inspiring talks and discussions and later in the evening by getting together at the icebreaker party of the YOUMARES. The DGM was founded in 1980 as a platform for exchange of information and views on all kinds of marine topics, having around 400 members nowadays. For the future, I would like to be part of the DGM growing larger and achieving a new standing and reputation among marine researchers and political institutions. With the experience of the DGM members and potential new young members, together with the DGM-Meerforum and YOUMARES as an annual meeting and conference, we create a large and sustainable network all around the world.

YOUMARES – A Conference for the Future

Simon Jungblut

My first contact with YOUMARES was back in 2013. The conference was about to be held at the University of Oldenburg and was obviously growing bigger in the last editions. During this time, I was a student in the “Erasmus Mundus Master of Science in Marine Biodiversity and Conservation” and based at the University of Bremen. At some point, I read about YOUMARES online and shortly thereafter some posters appeared on the black-boards in our faculty building. The posters advertised YOUMARES as “convention for young scientists and engineers”. That raised my interest. I identified myself with being a “young scientist” and decided to participate in the conference as a listener. The whole conference was interesting and amazing. I spoke to a lot of other participants and learned about their study programs and institutes. In addition, the talks and posters were interesting and informative. Right from the beginning I liked the concept of giving young students and scientists a relaxed and open platform to present and discuss their first research projects. After hosting sessions in the years 2015 and 2016, I took over the scientific organization of

YOUMARES 8 in 2017. I was responsible for the scientific program of the conference. This included collecting and first review of session applications and later abstract applications, the arrangement of the time schedule and the on-site coordination of hosts, conference participants and plenary speakers.

Being a part of the organization team was a totally new aspect for me. I liked to connect people and to bring them together to discuss and to network. The bases for shaping the networking experiences of young researchers are, to my experience, the shared research interests of the participants but also that the conference provides useful interdisciplinary workshops and other socializing activities. Thus, I see the future of YOUMARES in promoting such workshops and activities, side by side with the scientific presentations. Participants should be able to present their research to a broad, young audience and to participate workshops providing skills, which are useful for their future scientific life. Additionally, there should be enough room and time to effectively connect to other young scientists. Connecting young researchers might be a key component to help them establish collaborations. In this sense, a conference like YOUMARES helps to make research more efficient and more interdisciplinary, which ultimately might be a step towards a more efficient battle against the big problems the world ocean is facing right now.

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