Sebastiaan "Bas" de Vos is a marine biologist specializing in algae aquaculture, particularly the green seaweed, Ulva. With a lifelong passion for the ocean and a strong commitment to sustainable practices, Bas is driven to make a tangible difference in the marine world. His career has spanned working with invertebrates and fish in aquaculture, but his focus has now shifted to seaweed production, recognizing its immense potential for positive global impact.

Recently completing his Ph.D. titled; 'Using modelling to assess the feasibility of a commercial scale recirculating aquaculture system integrating sea urchins (Tripneustes gratilla) and seaweed (Ulva lacinulata)," Bas explored the physiological processes of algae growth, nutrient dynamics, and optimization of seaweed and sea urchin production. His expertise in production modelling and data analysis has been instrumental in optimizing operations and assessing the economic and environmental viability of seaweed cultivation. Bas's practical solutions have empowered farmers, bridging the gap between theory and real-world application.

Beyond academia, Bas has gained hands-on experience in large-scale seaweed, abalone, and fish farms, equipping him to navigate the challenges of commercial-scale production. This unique blend of academic knowledge and practical experience sets him apart in the industry.

Driven by a commitment to the future of aquaculture, Bas continues to push boundaries and drive innovation. He is particularly excited about the potential of using Ulva as a biofuel. With his expertise and passion for sustainable seaweed production, Bas is a respected authority dedicated to creating a positive and meaningful impact on the planet. Madadh MacLaine is a visionary entrepreneur working in sustainability and the maritime sector. She is the Founder and CEO of Zero Emissions Maritime Technology Ltd (ZEM-Tech) Secretary-General of the Zero Emissions Ship Technology Association (ZESTAs), co-founder of the International Windships Association (IWSA), as well as Founder Director of the sustainable development NGO, Fair Winds Trust. She has a background in hydrogen water electrolysis and maritime systems, having represented ITM Power, plc, in the maritime industry.

Madadh has been working in zero-emissions shipping since she began designs for a ZE multi-access cargo ship in 2000. Frustrated by the lack of available technology, she set off on a course to bring ZE Ship Technology to the market. She founded ZESTAs to promote the interests of the Zero Emissions Ship Technology Industry in 2019. The goals of ZESTAs are to support ZE Technology development, represent its interests in the international shipping industry and regulatory bodies, and ensure a level playing field for Zero Emissions Ship Technologies, as well as shipowners, who are coming under increasing pressure to decarbonize their fleets. ZESTAs has recently been granted consultative statuse at the IMO.

Short Bio and image

Jörn is working on social-ecological systems, marine and fisheries ecology, inter- and transdisciplinary concepts, knowledge co-production, and games for communication (www.ecoocean.de, www.go-jelly.de). He has worked in the Baltic and North Sea, Senegal, Cabo Verde, Haida Gwaii (Canada), Sitka (USA) and Peru. Jörn is now working with the ICES science network of over 6000 scientists to implement ICES strategic and science plans. He is Chair of the Science Committee of the International Council for the Exploration of the Sea (ICES), Senior Research Fellow at the Center for Ocean and Society at Kiel University (CeOS) and adjunct professor at the Marine Affairs Programme at Dalhousie University.



Kathleen ONeil, the Deputy Director of the NOAA National Weather Service's National Data Buoy Center since 2008 has been with NDBC for more than 30 years in a variety of management positions, including Chief of both the Engineering and Operations Branches. Ms. ONeil has served as the NWS representative for several NOAA committees including the Fleet Working Group, Ocean Infrastructure Valuation Task Force and the Environmental Compliance Working Group. Prior to joining NDBC, Ms. ONeil worked with Gibbs and Cox, Inc. in New York City and Washington, D.C. doing ship design and naval architecture primarily for the US Navy. Ms. ONeil has a BS in Marine Engineering from Texas A&M University and an MS in Engineering Management from the University of New Orleans.



Lindy Weilgart has been specializing in underwater noise pollution and its effects on marine life since 1994. She has studied whales since 1982, primarily sperm whales, and her M.Sc. (Memorial Univ. of Newfoundland), Ph.D. (Dalhousie), and post-doctoral studies (Cornell) were all in the field of whale acoustic communication in the wild. Lindy spent one year sailing 50,000 km across the Pacific and back in a 13 m sailboat following groups of sperm whales for her post-doctoral research on dialects. Lindy has served as invited noise expert for the United Nations, Food and Agriculture Organization (FAO), Convention on Biodiversity (CBD), International Maritime Organization (IMO), NATO, European Parliament, U.S. Marine Mammal Commission, International Whaling Commission (IWC), and the Department of Fisheries and Oceans Canada, among others. She is currently an Adjunct Professor in the Department of Biology, Dalhousie University, Canada, and Senior Ocean Noise Expert and Policy Consultant for OceanCare, a Swiss NGO. Previously, she was employed as Scientific Advisor by the private foundation Okeanos. She was a Scientific Expert on the German government's Antarctic Commission. She is currently a member of the Technical Group on Noise for the European Union's Marine Strategy Framework Directive and is on the Correspondence Group for Underwater Radiated Noise under the International Maritime Organisation (IMO)'s Subcommittee on Design and Construction.

Mark Sokol Bio



Mark is widely respected as a thought leader in IT infrastructure and has been at the forefront of networking and data centre trends over the past two decades. Mark is serves as a non-executive director on the board of FiberSense, non-executive director on the board of EdgeCore, and is currently the CTO of AtlasEdge.

Prior to joining AtlasEdge, Mark served as the Senior Director of Infrastructure for Google across various posts in North America, APAC, and EMEA. In that role, he was directly responsible for undersea cables, edge strategy, as well as site selection, networking, and development. Before Google, he worked in leadership positions at Lumen Technologies.

Mark is a dynamic team-driven leader, focused on reliable, positive return and a firm believer in partner-enabled innovation.

Mark holds a BS in Mechanical Engineering from the University of Virginia and has completed executive education programs from the University of Pennsylvania and University College Dublin.

Mark is married with one child. He enjoys hiking, fishing, skiing, and classic Land Rover restoration. He also has a passion for developing infrastructure in emerging markets through his board seats and development efforts.

PROFILE



Name: Nguyen Ba Thuy Title: Associate Professor, PhD Position: Depute director, Vietnam National Centre for Hydrometeorological Forecasting Date of birth: December 24th 1969 Place of birth: Bac Ninh Province, Viet Nam Address: No 8, Phao Dai Lang, Dong Da, Hanoi, Vietnam.

Tel: +84 0975853471

Email: thuybanguyen@gmail.com

Dr. Nguyen Ba Thuy got a Ph.D. degree in oceanography from Saitama University, Japan (2010). He is presently Depute director of Vietnam National Centre for Hydrometeorological Forecasting. His research is focus on ocean and coastal engineering, mainly in marine forecasting. He is participated in and managing more than 20 research projects. Dr. Nguyen Ba Thuy is an author/co-author of 20 international research journal papers, and more than 70 domestic research papers.

Noah Silberschmidt Biography

Noah founded Silverstream Technologies in 2010 and has led the company to becoming a market-leading clean technology business, and the fourth fastest growing European business in 2023 as recognised by the Financial Times.

Noah's entrepreneurial acumen and extensive networks within the shipping industry have been central in bringing the company's patented hull air lubrication system (ALS), the Silverstream[®] System, to market and global commercial success.

In 2014, Noah secured a landmark deal with Shell to fund one of the most robust and rigorous sea trials for a clean technology within the shipping industry, the results of which proved the validity of the Silverstream[®] System. The impressive performance of this and subsequent installations has driven orders across the maritime sector, from a variety of market segments including LNGCs, containers, dry bulkers, tankers, cruisers, VLOCs, Ro-Ros and PCTCs.

Today, Silverstream works with the world's leading ship owners and charterers including MSC, Shell, Grimaldi, Carnival, Maersk, Vale, ADNOC L&S and many others. Through a substantial investment in data analytics, gaining unparalleled insights into the hydrodynamic performance of ships, and the integration of new digital capabilities into our product, Silverstream is on track to realising its ambition of ALS becoming a standard on all newbuild vessels entering the global fleet.



Peer Fietzek works as the Senior Business Development Manager Ocean Science at Kongsberg Discovery in Germany. He is a convinced advocate for science-industry collaboration and supports research projects and community activities through work in advisory boards or groups and technical committees. His current work focus is on innovative applications for quantitative acoustic sensors and for comprehensive digital ocean data solutions.

After having graduated in physics in 2007 from the Technical University of Darmstadt, Germany, he has been spending his entire career in the marine sector working for a research institute, a start-up, an SME and a global corporation. He worked at GEOMAR Helmholtz Centre for Ocean Research Kiel

and at CONTROS Systems & Solutions GmbH as a sensor developer for chemical oceanographic parameters followed by several technical management positions. Peer joined Kongsberg Maritime in 2015 as a Manager Science & Research before supporting the Ocean Science department in the field of business development. It was during that time, when he started to be concerned with the topic of intersectoral collaboration and ocean observing technology and services market considerations. Since 2023 Ocean Science is part of the newly founded business area Kongsberg Discovery.

Until today, he has authored and contributed to more than 60 peer-reviewed and other publications as well as 115 posters and presentations in the field of e.g. subsea and surface water sensors and platforms, marine carbonate chemistry, dissolved gas measurements (carbon dioxide, methane, oxygen), ecosystem monitoring, ocean observing, science-industry collaboration.

Natalie Andersen

Scientific Lead, International Programme on the State of the Ocean (IPSO)

Presentation Title: *Is the ocean our climate savior? Emerging maritime technologies and the need for a precautionary approach.*

Biography

Natalie Andersen is a marine scientist with experience working within a variety of sectors including industry, science, conservation, and NGOs. As Scientific Lead for the International Programme on the State of the Ocean (IPSO), Natalie works across a range of projects to make marine science accessible to a wider audience and mobilise action for ocean conservation and protection through impactful ocean-climate narratives. She is a PhD candidate at the University of Exeter studying the resilience of tropical coral reefs to climate change. Natalie has also worked as an environmental consultant within a multi-disciplinary planning and design consultancy, conducting environmental and social impact assessments and undertaking terrestrial and marine ecological monitoring for large-scale infrastructure projects in Africa, the Middle East, and the United Kingdom. More recently she has worked with grassroots organisations in Tanzania on marine conservation, sustainable tourism, behavioural change, and community engagement.

Gavin Allwright Secretary General - International Windship Association (IWSA)

Gavin Allwright is the Secretary General of the International Windship Association (IWSA). Established in 2014, this grouping of maritime wind propulsion companies, industry adopters and scientific stakeholders is working to promote and facilitate the uptake of wind propulsion solutions in commercial shipping. Alongside his work as association secretary, he also leads the policy work stream, requiring regular attendance at the International Maritime Organisation (IMO), where IWSA has consultative status, the European Sustainable Shipping Forum, IRENA's Coalition for Action and numerous reference groups and advisory committees focused on decarbonisation in shipping.

Gavin has presented at over 200 international fora and he was also the coordinator for the groundbreaking 'Ambition 1.5C: Global Shipping's Action Plan' summit at COP23 in Bonn in 2017. His work extends to being a non-executive board member for the World Wind Energy Association (WWEA), a work package leader on the EU Interreg Wind Assist Ship Propulsion (WASP) and advisor on various other shipping decarbonisation projects. He is also a regular guest lecturer at the UN World Maritime University (WMU) in Malmo, Sweden among others.

Gavin holds a Masters degree in Sustainable Development, specialising in small scale sustainable shipping and logistics in developing countries. He has contributed to numerous studies, projects, books and articles on alternative propulsion solutions and helped coordinate and contributed to the UN-affiliated IRENA technical brief – Renewable Energy Options in Shipping and more recently was an expert reviewer for the IPCC special report on 1.5C climate change.

www.wind-ship.org

www.decadeofwindpropulsion.org

LUCA CENTURIONI Scripps Institution of Oceanography

La Jolla, CA 92093-0213

PH:(858) 534-6182; Email: lcenturioni@ucsd.edu

Bio-Sketch

Dr. Luca Centurioni is a physical oceanographer with research interests in ocean circulation, air-sea interaction, global observing systems and ocean technology. During his early career he was a research fellow at Hydraulic Research Wallingford Ltd., UK, working in the field of coastal management and defense. He received his doctoral degree in 2000 from the Southampton Oceanography Centre University of Southampton, United Kingdom.

Dr. Centurioni was involved in the early start of the U.K. Argo project and in 2002 he moved to the Scripps Institution of Oceanography (SIO), University of California San Diego, where he joined the Faculty in 2005. Dr Centurioni is the Principal Investigator of Global Drifter Program (GDP, <u>https://gdp.ucsd.edu/ldl/</u>), the principal international component of the *Global Surface Drifting Buoy Array* of the Data Buoy Cooperation Panel (DBCP), a joint body of the World Meteorological Organization (WMO) and of the International Ocean Commission (IOC). Dr. Centurioni is also the Director of the Lagrangian Drifter Laboratory (LDL), a center of excellence for the development and application of scientific methods and technologies that utilize satellite-tracked surface Lagrangian drifters. The LDL is also recognized by the WMO as a data assembly center (DAC).

Throughout his career Dr. Centurioni has served in several task teams, projects and boards within DBCP/WMO and more recently as panelist for the Ocean Studies Boards of the US National Academy of Sciences.

Bio

Dr. Libby Jewett founded and has served as Director of the U.S. National Oceanic and Atmospheric Administration's Ocean Acidification Program (OAP) for the past 12 years. Libby has a PhD in Marine Science from the University of Maryland and a Master of Public Policy from the Kennedy School of Government at Harvard. Her PhD focused on the changes in community structure of hard bottom communities, with a special focus on invasive species. More recently, she has served as a lead author on: the IPCC AR6 Working Group 2 report focusing on North America, the last two World Ocean Assessments and the last three U.S. National Climate Assessments. Her work documenting the growing impacts of climate change on the ocean has inspired her to work on implementing climate change solutions, such as marine Carbon Dioxide Removal and offshore wind, in a way that minimizes harm to the ocean, ocean life and coastal communities. Tarmo Soomere is mathematician and marine scientist, PhD in oceanology 1984, Doctor of Mathematics 1992, Professor of Coastal Engineering at Tallinn University of Technology 2005. Since 2007 he is elected member and since 2014 the President of the Estonian Academy of Sciences. In this capacity, he is *de facto* acting as Chief Science Advisor in the country.

His scientific interests are concentrated to the analysis of wave climate, wave-driven coastal processes, mitigation of marine hazards, and preventive methods of coastal protection. He has published >200 research papers and dozens of science policy essays.

He has received twice the national science award and state decoration of 3rd class White Star order for developing coastal science in Estonia. International recognitions include membership of Academia Europaea, foreign membership of Latvian Academy of Sciences and Lithuanian Academy of Sciences, and honorary doctorate by Klaipeda University. Several highly unusual distinctions for a scientist came from society: he was declared the Person of the Year in Estonia 2005 by daily newspaper The Postman for his contribution to the forecast of a devastating storm and received The Friend of Press 2017 award by the Estonian Society of Newspapers.

Currently he is the member of the Prime Minister's Research and Development Council in Estonia, representative of Estonia in European Marine Board, chairman of the European Science Advisors' Forum (ESAF), and chairman of the International Science Council (ISC) European Members.

Lisa Levin Revised Bio.

Lisa A. Levin is a Distinguished Professor Emerita at the Scripps Institution of Oceanography, University of California, San Diego. Her research interests include biodiversity of continental margin ecosystems, the effects of climate change (especially ocean deoxygenation) and human impacts on the deep ocean, with work in the Pacific, Indian and Atlantic Oceans (on over 50 research cruises). She is co-founder and a co-lead of the Deep-Ocean Stewardship Initiative, which seeks to advise on ecosystem-based management of resource use in the deep ocean and strategies to maintain the integrity of deep-ocean ecosystems within and beyond national jurisdictions. She also helps to lead the Deep Ocean Observing Strategy, a program within GOOS. Dr. Levin is active in bringing climate science to policy and contributed to multiple IPCC

reports. She served for 6 years as Director of the Center for Marine Biodiversity and Conservation at Scripps. She is a Fellow of the American Geophysical Union and the Association of AAAS, has received lifetime achievement awards from the Am. Soc. of Limnology and Oceanography and Western Soc. Naturalists, and received the Prince Albert I Grand Medal in Ocean Science in 2019.

A.J. Reiss is the Director of the National Weather Service's Ocean Prediction Center and responsible for its mission to sustain the \$300 billion dollar American marine economy through life and cargo saving marine forecasts, warnings and decision support. He also leads the NOAA NWS component supporting the tri-agency U.S. National Ice Center and serves on its Executive Steering Committee. He is a retired U.S. Navy Captain who served on ships, commanded a maritime weather forecast center and an operational oceanography and supercomputing center, and led major science and technology programs at the Oceanographer of the Navy and the Office of Naval Research.

Short Bio

Douglas McCauley is a Professor at the University of California Santa Barbara and an Adjunct Professor at the University of California at Berkeley. He is the Director of the Benioff Ocean Science Laboratory – a center that combines cutting edge ocean research with innovative tech to solve the ocean's most pressing challenges. This solutions portfolio ranges from shark spotting drones to whale collision avoidance systems. McCauley also co-directs the Eric and Wendy Schmidt Center for Data Science and Environment at UC Berkeley.

Prof. McCauley is a Sloan Research Fellow in the Ocean Sciences and a member of the World Economic Forum's Friends of Ocean Action. He was named a "Human of the Year" by Vice Media and a "Climate Visionary" by the Washington Post.

Research by Dr. McCauley has been published in leading research journals such as Science, Nature, and the Proceedings of the National Academy of Sciences USA and has been featured in outlets such as the New York Times, BBC, TIME, and US National Public Radio.

Prof. McCauley has degrees in political science and biology from UC Berkeley and a PhD in Biology from Stanford. He conducted postdoctoral research at Stanford, Princeton, and UC Berkeley. Ellen K. Pikitch, Ph.D. is the inaugural Endowed Professor of Ocean Conservation Science at Stony Brook University. Dr. Pikitch's contributions range from the local to the global levels and have resulted in basic science innovations, fisheries management improvements, and domestic and international policy change. She is frequently called upon to provide her expertise at professional meetings, global scale fora on the oceans, and to decision-makers at the state, national, and global levels.

Currently, Dr Pikitch's areas of focus include marine protected areas and the use of <u>eDNA technology</u> for non-invasive assessment of fish and invertebrate communities. Her eDNA research on Long Island, NY, has demonstrated that eDNA is superior to other fishery survey methods in detecting a much broader spectrum of biodiversity and in detecting rare species. DNA sequence counts and occurrences in fishery surveys using trawls compare favorably for common species detected by both methodologies. In the next phase of her research she will be testing the use of autonomous technologies for in situ analysis of eDNA. Such technologies have the potential to enable biodiversity monitoring of large remote areas of the ocean that have heretofore been unexplored.

Dr. Pikitch is also an expert in MPAs, other area-based conservation methods, and ecosystem-based fishery management.

Dr. Pikitch's work has truly transformed the way the ocean is perceived and managed. A native New Yorker, she has traveled to more than 110 countries, has authored more than 200 scientific and popular articles and edited two books. View her faculty page <u>here</u>.

Frida M. Armas Pfirter

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Prof. Armas is a lawyer and holds a Ph.D. in International Law by the University of Buenos Aires. Her thesis was graded *Summa cum Laude* and awarded the "Faculty Prize" by the University of Buenos Aires (2000). In recognition of her academic career and vast legal expertise, she was elected as a full member of the National Academy of Law and Social Sciences of Buenos Aires (2021).

She has been a professor of Public International Law since 1987, teaching both undergraduate and graduate courses in Argentina and abroad. She is currently a full professor of Public International Law at the University of Buenos Aires

In 1997 she was appointed to lead the creation of the National (Argentine) Commission on the Outer Limit of the Continental Shelf (COPLA). Ever since the formal creation of the Commission in 1998, she has served as its General Coordinator. As such, she has led the group of more than sixty professionals in charge of the scientific and legal work for the demarcation of the outer limit of the Argentine continental shelf. For this work she was awarded with an Honorable mention by the Argentine Senate (2016).

She has performed various tasks related to the Law of the Sea in the United Nations system. She is currently a Conciliator and Arbitrator of the dispute settlement system of the United Nations Convention on the Law of the Sea, and an expert for the purposes of Special Arbitration of Annex VIII of UNCLOS. She is one of the 15 members of the UN Ocean Decade Advisory Board, UNESCO-IOC, 2022-2023.

Between 2001-2022 she has made a valuable contribution to the activities of the International Seabed Authority (Jamaica) as an expert in the Legal and Technical Commission and in the Finance Committee.

BIO

Julia is a Brazilian enthusiast when it comes to achieving equity between states. She is a PhD candidate in Law at NSL, UNL, Portugal. She holds a Master's in Law and Economics of the Sea, NSL, and a postgraduate degree in International Law from UFRGS, Brazil. Since 2019, she has joined the Brazilian delegation at IGC-BBNJ as an advisor. From the fourth session onwards, Julia played a relevant role in building bridges between the different actors in the process, particularly the connection between scientists and negotiators. Since then, the PhD candidate has collaborated with the NOVA IPSI, NSL, and CEDMAR, USP. More recently, she became a visiting fellow at the Ocean Voices Programme, an initiative between The Nippon Foundation and the University of Edinburgh.

Profile

Masanori Kobayashi, Senior Research Fellow, OPR-SPF, m-kobayashi@spf.or.jp

Mr. Masanori Kobayashi is Senior Research Fellow, Ocean Policy Research Institute (OPRI) of the Sasakawa Peace Foundation (SPF) in Tokyo, Japan. He undertakes research work on ocean and sustainability policy including sustainable blue economies, marine resource management, sustainable fisheries and marine renewable energies. He worked on sustainability issues at the Ocean Policy Research Foundation, the Yokohama National University, the Institute for Global Environmental Strategies, the United Nations (New York, Geneva and Bonn) and the Permanent Mission to the United Nations in New York of the Japanese Ministry of Foreign Affairs. He holds LL.M (University of Georgia School of Law), M.A. (International Christian University), LL.B. (Chiba University), and completed the doctor course without degree on life and agricultural sciences (University of Tokyo). Kobayashi, M. et al (2022) Capitalizing on Co-Benefits and Synergies to Promote the Blue Economy in Asia and the Pacific". In: Morgan, P. et al. eds. Blue Economy and Blue Finance - Toward Sustainable Development and Ocean Governance. Asian Development Bank Institute, pp. 150 – 189., Kobayashi, M. (2022) "The COVID-19 impacts and challenges to achieving sustainability in Japan's fisheries and aquaculture". Marine Policy, 143, pp. 1-10., Kobayashi, M. (2017) Sustainable Development Goal 14 for Conservation and Sustainable Use of Oceans and Resources: Strategies and Challenges for Pacific Small Island Developing States" Journal of Japan Society of Ocean Policy and Kobayashi, M. (2014) Participatory Sustainability Research for Risk Management and Leadership Development" Springer, 2014.

Nicolas Entrup is Director of International Relations, a Senior Ocean Policy Expert specialized in animal and species conservation, as well as underwater noise pollution at OceanCare and lead's the organisation's Invisible Pollution Programme.

Since the age of 20, parallel to studying international politics and social and cultural anthropology, Entrup got engaged in animal protection campaign initiatives and soon started to focus on marine species conservation. From 1999 – 2011 he acted as Managing Director at the Whale and Dolphin Conservation (WDC) in Germany. In 2011, Entrup founded his own campaigning consultancy agency Shifting Values and since then works with the Swiss-based, international marine conservation organisation OceanCare. He is the Director of International Relations at OceanCare and has been leading the Invisible Pollution Programme since 2018 focusing on the reduction of ocean noise pollution and addressing the activities negatively impacting marine wildlife, as well as global warming. Focus of the programme is working towards an end of hydrocarbon exploration, reducing the ecological footprint of shipping, especially of ocean noise, greenhouse gas emissions and the risk of collisions with large marine megafauna. Entrup represents OceanCare in numerous international and regional for a and MEAs, including the Agreement on the Conservation of Cetaceans in the Black Sea, Mediterranean Sea and Contiguous Atlantic Area (ACCOBAMS) the Barcelona Convention (UNEP/MAP), the Convention on Migratory Species (CMS) and the International Whaling Commission (IWC) as well as in the Marine Strategy Coordination Group (MSCG) of the European Union focusing on the implementation of the Marine Strategy Framework Directive. He has been invited guest-speaker at high-level events, including was invited Panelist at the Nineteenth Meeting of the United Nations Open-ended Informal Consultative Process on Oceans and the Law of the Sea on "Anthropogenic Underwater Noise" in New York in 2018. In 2019, he was invited by the Belgian government as speaker at the Climate Action Summit and the United Nations in New York.

Recent publications and opinion pieces:

Risch, D., Belin, A., Entrup, N., Leaper, R., Panella, E., Taylor, B., Weilgart, L., Werner, S., Ziebarth, N., 2020. Underwater Noise – The neglected threat to marine life. 14 pp. Simmonds, Mark P., Entrup, N., Weilgart, L. 2021. The threat posed by ocean noise pollution to Europe's cetaceans. In: UNDER PRESSURE. The need to protect whales and dolphins in European waters. An OceanCare publication.

Recent Blog addressing shipping and whale conservation related matters: https://www.oceancare.org/en/stories and news/shipping-and-whales/

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Recent Blog addressing shipping and whale conservation related matters: https://www.oceancare.org/en/stories and news/shipping-and-whales/

Short Biography

Bruce M. Howe Chair, Joint Task Force for SMART Subsea Cables Research Professor, University of Hawai'i at Mānoa

Dr. Howe is Chair of the international <u>Joint Task Force (JTF)</u> <u>SMART Cable initiative</u>, (Science Monitoring And Reliable Telecommunications) to incorporate sensors into commercial trans-

ocean submarine telecommunication cable systems for climate, ocean circulation and sea level monitoring and tsunami and earthquake warning, now with several projects funded.

Dr. Howe develops ocean observing infrastructure, including cable systems. Projects have included basin-scale acoustic thermometry and planning, development, and operation of cabled observatories. At Station ALOHA 100 km north of Oahu, he and his team installed and operate the <u>ALOHA Cabled Observatory</u> – the world's deepest plug-and-play power and Internet node on the planet at 4728 m water depth, now with more than 10 years of continuous data.

After obtaining engineering and oceanography degrees at Stanford University and the University of California at San Diego, he worked at the Applied Physics Laboratory, University of Washington, and since 2008, at the University of Hawai'i, Department of Ocean and Resources Engineering.

BIO

Dr. Kelly Goodwin is a marine microbiologist with NOAA Ocean Exploration working to develop and apply molecular biological tools for water quality and biodiversity assessments. Dr. Goodwin chairs the NOAA 'Omics Working Group that works to apply bioscience solutions to the many challenges facing the marine environment. For example, biomolecular mapping serves a range of national priorities, including understanding the ecosystem impacts from large-scale threats such as pollution, pathogens, invasive species, ocean acidification, and warming.

Dr. Goodwin serves on a variety of committees catalyzing solutions through research and innovation, including the Biodiversity Interagency Working Group eDNA Task Team under the U.S. Subcommittee of Ocean Science and Technology (SOST), the Ocean Biomolecular Observing Network (OBON) under the United Nations Decade of Ocean Science for Sustainable Development, the Atlantic Ocean Research Alliance (AORA) Marine Microbiome Working Group under the Galway Statement on Atlantic Ocean Cooperation, and Omic BON, a new theme under the Group on Earth Observations Biodiversity Observation Network (GEO BON). She serves as a NOAA subject matter expert on Marine Genetic Resources (MGR) for the biodiversity beyond national jurisdiction (BBNJ) process.

Dr. Goodwin earned M.S. and Ph.D. (1996) degrees in Environmental Engineering Science from the California Institute of Technology, a minor in Oceanography from the Scripps Institute of Oceanography, and a B.S. in neurobiological science from the University of Florida.

2023 United Nations Open-ended Informal Consultative Process on Oceans and the Law of the Sea

"Capacity-Building and the Transfer of Marine Technology under the BBNJ Agreement"

European Union

Discussion Panel on International cooperation and coordination in promoting new maritime technologies for sustainable development

7 June 2023

Biography

Dr. Sylvain Gambert is the environment and oceans expert at the Delegation of the European Union to the United Nations in New York. Dr. Gambert holds a Ph.D. from the European University Institute where he researched marine and water governance in the European Union. He then worked on marine spatial planning, and maritime policy in the Baltic and North Sea between 2010 and 2015 in the Directorate-General for Maritime Affairs and Fisheries of the European Commission. Dr. Gambert also worked on environment and marine environment policy coordination in the Secretariat-General of the European Commission and was Deputy Head of the Political Section at the EU Delegation to Albania prior to his current position.

José Dallo is currently the Director of the Office of Environmental Management and Mineral Resources in the International Seabed Authority. Previously, he was Senior Environmental and Sustainable Development Officer at the Executive Office of the Secretary General. Before he established and directed the UNEP Subregional Office for South America. Previously, he served as Senior Policy Advisor on Development Policies and Global Partnerships in UN DOCO and was a member of the core team of the UN supporting the negotiations of the 2030 Agenda. Before that, Jose worked in the Directorate of UNDP's Bureau of Development Policy, where he coordinated the cross-sector work on local development, governance, and sustainable development.

Before joining the UN, he was Representative of the Spanish Cooperation Agency (AECID) in Honduras and Uruguay and Deputy Representative in Nicaragua and El Salvador.

José holds a Degree in Economics, a Degree in Law, and an M. Sc. in Local Development from the Pompeu Fabra University. He completed his postgraduate studies at the UNAN University in Nicaragua as well as other prestigious academic institutions, such as the Harvard Kennedy School Executive Programme.

Presentation Title:

Ocean Technologies for People and the Rest of Nature

Biography

Dr Kim Friedman (Kim.Friedman@fao.org) is a Senior Fishery Resources Officer with the Fisheries and Aquaculture Division of the Food and Agriculture Organization of the United Nations (FAO). Kim leads the Resilience Team, the FishFinder program and is the Fisheries and Aquaculture Divisions focal point for Convention on Biological Diversity, CITES and SIDS.

Dr. Jon Kaye leads a variety of portfolios within the science program at the Gordon and Betty Moore Foundation. He manages the Symbiosis in Aquatic Systems Initiative as well as the sunsetting Marine Microbiology Initiative, and is also currently stewarding the Data-Driven Discovery Initiative to a close. In addition to leading grant portfolios focused on aquatic ecology and evolution, Jon is engaged with the foundation's evidenced-based policy efforts and several projects at the intersection of the organization's science and environmental conservation programs. He is curious about the reciprocal relationships between earth systems and the living organisms of the planet, and how those relationships change with time. He is also inspired by how advances in technology enable scientists to observe nature in new ways.

Jon trained as a deep-sea microbial ecologist and spent many months on research vessels investigating seafloor hydrothermal vent systems in the Pacific Ocean. After postdoctoral research, he worked at the Environmental Protection Agency as a science and technology policy fellow of the American Association for the Advancement of Science. Jon earned a B.S. in geology–biology from Brown University and a Ph.D. in oceanography from the University of Washington.

Dr Emma Heslop

Act. Director - Global Ocean Observing System (GOOS) Intergovernmental Oceanographic Commission (IOC) of UNESCO

Emma is a physical oceanographer with significant strategic & business development expertise. An initial career in the technology industry developed skills in new market development and communications. Sailing made her profoundly aware of the importance of the oceans and of the human impacts on them. She completed a PhD in physical oceanography is passionate about the need for sustained monitoring of the oceans and the utility of ocean data for science, government and industry applications, now and into the future.

Her experience encompasses circulation variability, new technology such as gliders, model validation, multi-platform ocean observing systems, the economics of ocean data and ocean data products. She has proven leadership of research, international collaboration and in applying business practice to bridge the gap between ocean science and societal applications.

In 2018 she joined the IOC of UNESCO to support the development of the Global Ocean Observing System (GOOS), in particular developing and now implementing its ambitious 2030 Strategy. The ocean has a key role to play in our sustainable future and ocean observations are the foundation to achieving this.

