

AZTI - SOPHIE project SUMMER SCHOOL 2019

5th to 7th June 2019. Aquarium of San Sebastian (Spain)

*Does Human Health and Wellbeing
depend on a Healthy Ocean?*

Ángel Borja

AZTI, Spain

AZTI – SOPHIE project SUMMER SCHOOL Director



Ángel Borja studied Biology, obtained a PhD in Marine Ecology (University of the Basque Country, 1984) and is Doctor in Sciences (honoris causa) by the University of Hull (UK, 2015). He is Principal Investigator at AZTI, a private non-profit research foundation in Spain, where he has been also Head of the Department of Oceanography and Head of the Marine Environment Area. His main work is making marine ecology research useful for policy-makers and managers, studying the effects of human activities on marine ecosystems, monitoring of marine waters and recovery after impact. This includes developing methodologies to assess the marine status under European directives (i.e. Water Framework Directive; Marine Strategy Framework Directive), being some of these methods used worldwide. He is member of the Scientific Committee of the European Environment Agency (since 2013). He is author of more than 240 peer-reviewed papers (H_{index} : 55), and Highly Cited Researcher 2018 (Clarivate Analytics, Web of Science). Specialty Chief Editor of *Frontiers in Marine Ecosystem Ecology*, Associated Editor of *Continental Shelf Research* and *Journal of Sea Research*, and member of the Editorial Board of *Ecological Indicators* and *Marine Pollution Bulletin*. Referee in more than 80 international journals and project evaluation agencies, is member of different advisory boards and scientific associations (ASLO, CERF, ECSA, ESP, SIBECOL), serving as chair in numerous international conferences. He has participated in more than 100 European and international projects, being the coordinator of the EU 7th FP project DEVOTES (DEvelopment Of innovative Tools for understanding marine biodiversity and assessing good Environmental Status). He has been characterized by the continuous dissemination of science and organizer of the AZTI's successful marine summer school since 2004. He was awarded with the SETAC Environment Education Award in 2017.

Mat White

University of Exeter/SOPHIE, UK/USA

June 5th 2019 .. 9:15 – 10:15

Overview of Oceans and Human Health



Dr Mathew White is Senior Lecturer in Environmental & Health Psychology. European Centre for Environment & Human Health, University of Exeter. Mat is an environmental & health psychologist with research interests in natural environments, pro-environmental behaviour, and health and well-being. Since 2010 he has co-ordinated the UK's 'Blue Gym' project exploring the health & well-being benefits of marine and inland waters, publishing >30 papers/chapters on the topic and presenting findings at a range of academic and policy contexts globally. He is currently extending the work on oceans and human health in the UK via three large international projects: 'BlueHealth' (H2020, €6million), 'Blue Communities' (GCRF, £5.7million) and 'Seas Oceans & Public Health in Europe' (SOPHIE, H2020, €2million).

Elisa Berdalet

Institute of Marine Sciences, Spain

June 5th 2019 .. 10:15 – 11:00

Harmful Algal Blooms are a paradigm of the interconnection between human health and oceans and seas



Dr Elisa Berdalet is Scientific Researcher at the Marine Sciences Institute (CSIC) in Barcelona, where she has been serving as Vice-director since 2009. She is involved in Master and Doctorate programmes. She obtained a doctorate degree in Biology from the University of Barcelona in 1991, and conducted her postdoctorate at the Institut Maurice Lamontagne (Québec). Along her career, her global objective has been to understand how physico-chemical processes from small to meso spatio-temporal scales as well as ecological interactions modulate the structure, dynamics and physiology of microplankton. Her studies have provided evidences of the direct effects of small-scale turbulence on the ecophysiology of phytoplankton, especially on dinoflagellates (nutrient incorporation, reproduction, encystment, toxin and DMSP production, predator-prey interactions and parasitic infection). She has also developed biochemical tools for the characterisation of the physiological state of microplankton (bacteria, phyto and zooplankton) and participated in biogeochemical studies. Her main investigation is addressed to the comprehension of the dynamics of harmful algal blooms, integrating field studies and ecophysiological research in the laboratory. At present, she is mainly focused on the blooms of the benthic toxic dinoflagellate *Ostreopsis* and their impacts

on human health. She was a member (2008-) and vice-chair (2010-2013) of the GEOHAB Scientific Steering Committee, and is Chair of the GlobalHAB project (2016-on going). More information about these programmes can be found at www.globalHAB.info

Anne Leonard

University of Exeter, UK

June 5th 2019 .. 11:30 – 12:30

Microbial Pollution, Pharmaceuticals, Antimicrobial Resistance

Dr Anne Leonard was awarded a BSc from the University of Exeter in 2010 and an MSc from the London School of Hygiene and Tropical Medicine in 2011. In 2016 she completed her PhD with the University of Exeter Medical School on the threat that bacteria in the coastal zone pose to human health. Dr Anne Leonard is now an independent Research Fellow at the University of Exeter. Her research spans the disciplines of microbiology and environmental epidemiology, as she works to understand the presence and spread of microorganisms, especially antimicrobial resistant bacteria, in natural environments. This understanding is then applied to assess the impact on human health resulting from exposure to such microorganisms in aquatic environments. She is currently undertaking research for a fellowship funded by the Natural Environment Research Council into catchment-level processes contributing to the transmission of antibiotic resistant bacteria in coastal bathing waters.

Sabine Pahl

Plymouth University/SOPHIE, UK

June 5th 2019 .. 12:30 – 13:30

Marine Plastic Pollution: Changing behavior, engaging communities



Dr Sabine Pahl, Associate Professor in Psychology (Reader), University of Plymouth, UK; www.plymouth.ac.uk/staff/sabine-pahl Sabine is a Social Psychologist who focuses on the human dimension in environmental issues. She investigates perceptions and behaviour change, particularly in the area of protecting marine environments, marine litter and microplastics. Other applied work examines restorative effects of natural environments including the use of natural environments in healthcare and the behavioural dimension of energy efficiency. Sabine has been involved in research projects funded by EPSRC, ESRC, DEFRA, NERC and H2020 amongst others. She has more than 50 peer-review publications including papers in the Journal of Environmental Psychology, Environment & Behavior and Nature Human Behaviour. She is currently the vice-chair of a working group on micro- and nanoplastics preparing an evidence review report for the European Commission's SAPEA/SAM units, tasked by the EU's Chief Scientific Advisors (to be launched in January 2019). She was one of only two behavioural scientists who contributed to the GESAMP Working Group 40 reports on microplastics (2015 and 2016), highlighting the important role of behavioural science in finding solutions for plastic pollution. Within the

MARLISCO project she led the evaluation of science-in-society activities regarding marine litter in 14 European countries plus Turkey, summarised in a guide for influencing behaviour.

Susanne Wuijts

National Institute of Public Health and the Environment (RIVM), The Netherlands

June 6th 2019 .. 9:00 – 11:00

INTERACTIVE WORKSHOP:

Future outlooks on Oceans and Health for Europe's marine waters

June 7th 2019 .. 9:00 – 10:00

Governance of Oceans and Health Interactions: Where and how does it fit into policy agendas?



Susanne Wuijts is a Senior Researcher and Policy Advisor at the National Institute for Public Health and the Environment (RIVM) in the Netherlands. With a background in hydrology and environmental engineering, she has over 25 years' experience in the water industry and water policy and research. She is responsible for coordinating the scenario work in the H2020 project SOPHIE, an interactive and inter- and transdisciplinary approach to identify relevant future trends, their impacts and related research gaps. Outcomes aim to support policies, which plan for future environmental and population change. Her field of expertise is within water

quality management and the protection of drinking water resources. She has conducted studies on the implementation of the Water Framework Directive, the Groundwater Directive, governance of drinking water resources, the effects of climate change on water quality and availability for drinking water, and a future outlook study on the drinking water supply in the Netherlands. Recently Susanne coordinated a project on climate and health, in which scenarios are used to indicate health effects of climate change. Currently she is also working on parallel H2020 projects; BlueHealth and Fairway, and her PhD which focuses on the relationship between governance and water quality.

Nikolaj Bock

European Environment Agency

June 6th 2019 .. 11:30 – 12:15

The European Bathing Water Directive



Mr Bock has since 2009 been working in the European Environment Agency with the task of strengthen EEA's international relations and in particular with regard to the Arctic environment, engaging on Ocean Governance in the EU and coordinating EEA's input to the SDGs. Prior to this position, Mr Bock was Senior Adviser at the Nordic Council of Ministers (2005-2009) with responsibility for coordinating the work of the Nordic Ministers for the Environment, and in particular on Arctic issues, including organising the ministerial conference: Common Concern for the Arctic held in Greenland in 2008. Mr Bock has also held positions as Head of Section in the Danish Ministry of Foreign Affairs (2001-2004) working with Development Aid, Bilateral relations and Nordic corporation and as First Secretary at the European Commission Delegation in the Solomon Islands (2000-2001) with responsibility for EC development aid and reporting on Foreign and Security matters during the civil war in the Solomon Islands. Mr. Bock held a position as Assistant Policy Adviser in the UK Department of Environment, Transport and the Regions (1999-2000) which involved implementing EU environmental legislation and as Executive Officer in the UK Ministry of Agriculture, Fisheries and Food (1998-1999) working with sustainable agriculture. Prior to this Mr Bock was trainee in the European Commission's DG Environment (1997-1998). Mr. Bock holds a Master degree from the University of Copenhagen majoring in EU Environmental Policy (1997).

Lora Fleming

University of Exeter/SOPHIE, UK

June 6th 2019 .. 12:15 – 13:00

Beyond the Blue Gym: Human Health and Wellbeing

Professor Lora E Fleming is a physician and epidemiologist with expertise in Oceans and Human Health based at the European Centre for Environment and Human Health [www.ecehh.org] (University of Exeter Medical School). The research and training at the European Centre is focused on an interdisciplinary approach to the interactions between the health of both humans and the environment. She has co-organized international meetings and co-edited two textbooks and numerous articles dealing with Oceans and Human Health. She is a member of Global HAB with particular emphasis on human health and wellbeing; and she received the Ocean and Human Awards from the Edouard Delcroix Foundation and the IOC Bruun Award. Prof Fleming is leading the H2020 funded BlueHealth Project (<https://bluehealth2020.eu>) and a new H2020

funded Seas, Oceans and Public Health in Europe (SOPHIE) Project (<https://sophie2020.eu>) to establish a network and create a strategic research agenda for Oceans and Human Health in Europe and beyond. Prof Fleming believes that the future health and wellbeing of humans rests on the health of ecosystems, particularly the global ocean. As a physician and epidemiologist with expertise in public health, she has spent over 30 years trying to bring the marine/environmental and biomedical/human health communities together to focus on the next step of Planetary Health to include the health of both humans and ecosystems in its vision.

Josep Lloret

University of Girona, Chair Oceans & Human Health, Spain

June 7th 2019 .. 10:00 – 11:00

The Oceans and Human Health Chair in Roses (Catalonia, Spain)



Dr Josep Lloret, is associate professor at the University of Girona and director of the Oceans & Human Health Chair and the SeaHealth Research Group at the Institute of Aquatic Ecology. During his research career, he has conducted pioneering studies on the complex and substantive relationships between the marine resources and the ecological status of the marine ecosystems on one hand, and human health and well-being on the other, drawing

attention to a range of societally important research questions and challenges. His multidisciplinary investigations have contributed to improve our understanding of the links between fishing activities, the marine environment, the status of marine resources and human health and wellbeing. Dr. Josep Lloret obtained a doctorate degree in Biology from the University of Barcelona (Spain, 2000) and a Maîtrise in Oceanology at the University of Perpignan (France, 1994). He has been awarded with a total of 13 fellowships and awards among which stands out, for its prestige, 3 Marie Curie fellowships. He has participated in 30 EU, national and regional research projects, of which 17 have been coordinated by himself. During his scientific career, Dr Josep Lloret has published more than 60 peer reviewed publications, of which 50 papers in SCI Journals. He has participated in 44 scientific conferences, with 19 of them as guest speaker and 5 as "Chairman" or member of the organizing committee. He has been evaluator of more than 20 R & D projects for agencies such as H2020 program (European Commission), European Science Foundation-COST program, ANR (France) and ANEP and AGAE (Spain). He is member of the Editorial Board of two SCI journals: Scientia Marina and Animal Biodiversity and Conservation. Since 2017, he is member of the Scientific, Technical and Economic Committee for Fisheries (STECF), a scientific advisory body of the European Commission that works to attain sustainable fisheries in European waters. He has also carried out numerous dissemination activities (articles, web, lectures, radio and TV). He has been director of 4 PhD Thesis, has supervised the research projects of more than 30 Master / Final Degree / Erasmus students, and has been member of 14 PhD juries.

Julia Vera Prieto

Submon/Travelecoology SME/SOPHIE, Spain

June 7th 2019 .. 11:30 – 12:30

Weaving alliances between blue tourism and Oceans and Human Health research, through citizen science



Julia Vera Prieto is a responsible travel enthusiast who works to nurture positive links between tourism development and environmental conservation through ecotourism. She is the Managing Director of Travelecoology – a travel & consulting boutique that specializes in ecotourism - and a founding Partner of the WILDSEA Europe network (www.wildsea.eu). Before deciding to invest her professional energy in the tourism sector, she has held management responsibilities in organizations such as Fundación Biodiversidad (Spanish Ministry for the Environment) and Fundación Entorno - Spain's Business Council for Sustainable Development, as well as having worked as international consultant for firms such as KPMG. Her passion for travel has led her to guide in Tambopata (Perú) and to work as Tour Director in Europe. She holds an MSc in Economics from the University of Amsterdam (The Netherlands) and has further developed her management and digital marketing skills at IESE Business School and OBS Business School. Travelecoology is a partner of Project SOPHIE.

Luz Parga

Submon/Travelecoology SME/SOPHIE, Spain

June 7th 2019 .. 11:30 – 12:30

Weaving alliances between blue tourism and Oceans and Human Health research, through citizen science



After graduating from veterinary school in Spain, Luz Parga decided to devote her career to veterinary medicine of wild animals. After completing an MSc in Wildlife Health at the London Zoo and a residency in Wild and Exotic Animal Medicine at the University of Edinburgh, she began to work with sea turtles in Mediterranean Spain. She was the Head of the Rescue Centre for Marine Animals in Barcelona for five years, working closely with fishermen. Currently, she is Project Manager of the marine environmental organization

SUBMON, which specializes in the study, conservation and awareness of the marine environment. Over the past 15 years she has specialised in collaborating with fishermen, fishery scientists and governments, both in Europe and America, to reduce the bycatch and related mortality of marine turtles. She truly believes in the power of education and awareness as a driver for sustainable development in the marine environment, and in the intimate relation of

this sustainable development with human health. As part of SUBMON, she is co-founder of the WILDSEA Europe network and has played an active role in it since its inception, providing her know-how to advance good environmental practice in ecotourism activities. SUBMON is a partner of Project SOPHIE.