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25 -29 of October 2017

# International Climate Change Workshop for the Galapagos Islands

# Welcome

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## WORKSHOP PARTICIPANTS

### International Scientists



**Daniel Pauly, Killam Professor at University of British Columbia**

Dr. Pauly's scientific output is mainly dedicated to the management of fisheries and to ecosystem modelling. It comprises numerous contributions to peer-reviewed journals, authored and edited books, reports and popular articles. The concepts, methods and software he co-developed are in use throughout the world. This applies notably to the ecosystem modelling approach incorporated in the Ecopath software, to FishBase, the online encyclopedia of fishes, and the global mapping of fisheries trends.



**William Cheung, Director of Science, Nippon Foundation-Nereus Program**

Dr. Cheung is an Associate Professor at the Institute for the Oceans and Fisheries at UBC and the Director (Science) of the Nippon Foundation-UBC Nereus Program. His main research areas include understanding the responses and vulnerabilities of marine ecosystems and fisheries to global change, and examining trade-offs in managing and conserving living marine resources. His work cuts across multiple disciplines, from oceanography to ecology, economics and social sciences, and ranges from localized to global scales.



**Boris Worm, Professor at Dalhousie University**

Dr. Worm is interested in the interaction between people and marine biodiversity, from a regional to a global scale. He studies how patterns of marine biodiversity arise and how hot-spots of high species richness are formed and maintained. He has been tracking changes in marine biodiversity over time and space, putting emphasis on large marine predators such as sharks, tuna, billfish and whales. He is keen on understanding the factors driving these changes and the relative contribution of human-induced versus natural variation. A lot of his work was focused specifically on the impacts of fishing and climate change, and how they may interact in contemporary ecosystems.

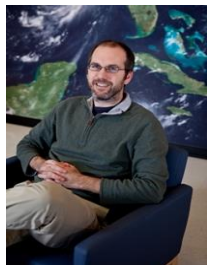


**Regina Ostergaard-Klem, Professor at Hawaii Pacific University**

Dr. Ostergaard-Klem holds a M.Sc. in Environmental Engineering and a Ph.D. in Systems Analysis and Economics for Public Decision Making from The John Hopkins University. After completing her Ph.D., she worked as a Science and Diplomacy Fellow for the American Association for the Advancement of Science (AAAS) in Washington DC. Prior to moving to Hawaii, she was an environmental policy advisor at the US Agency for International Development (USAID), working on urban environmental and energy programs globally. She is currently an associate professor of Environmental Science at HPU.

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## **Charles Stock, Researcher Oceanographer, NOAA Geophysical Fluid Dynamics Laboratory**

Dr. Stock is interested in marine ecosystem dynamics and physical-biological interactions over a broad range of space and time scales. The objective of his work is the production of quantitative predictions and projections of interactions between climate and marine ecosystems on time-scales ranging from seasons to multiple decades. He is pursuing this goal through 1) the innovative application of GFDL's models to assess the impact of climate on marine ecosystems, and 2) the development of next-generation marine ecosystem models for GFDL's Earth System Model.



## **Jon Witman, Professor at Brown University**

Dr. Witman's research has mainly focused on patterns and processes in hard bottom communities such as sub-tidal rocky shores and coral reefs, but also considers how the benthic communities are coupled to events in the water column. Attaining this knowledge is an end in itself, but it is perhaps most rewarding to use it as a baseline to interpret anthropogenic impacts and to inform conservation. The Witman's Lab focuses on figuring out how natural systems function across a range of spatial scales by climate change, habitat destruction and the removal of top consumers.



## **Michiel Schaeffer, Director/Senior Scientist of Climate Analytics**

Dr. Schaeffer is a biophysicist and received his Ph.D. in Dynamic Meteorology at University of Utrecht, The Netherlands, specializing in the interactions between atmosphere, ocean, ecosystems and society. He leads our Science Team. He worked as senior researcher on Earth System science at the National Institute for Public Health and the Environment (RIVM). He is currently affiliated with Environmental System Analysis, Wageningen University and Research Centre (WUR) and is one of the founders of Climate Analytics. Based from 2005 to 2009 in Accra, Ghana and in Kigali, Rwanda, he has worked on building up co-operation with applied scientists and policy makers in the Western and Eastern-African regions about climate change research and policy applications.



## **Valerie Hickey, Manager for Environment, Agriculture and Environmental Services Unit, World Bank.**

Dr. Hickey joined the World Bank as a technical specialist in East Asia and the Pacific, working on rural development projects in and on environmental safeguards. She has since worked across the Bank's regions providing design and implementation support to a variety of operations including in fragile states. Now, as Manager for Environment in the Agriculture and Environmental Services Unit, Valerie manages a cross-sectorial team that covers oceans, sustainable landscapes, climate smart agriculture and environmental economics. Before joining the World Bank, Valerie worked for World Wildlife Fund, Wildlife Conservation Society and the US National Park Service.

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**Samuel Dupont, Professor at University of Gothenburg**

Dr. Dupont is a researcher in marine ecophysiology at the University of Gothenburg and an Honorary Assistant Professor at the School of Biological Sciences, Hong Kong University. His main research topic is on the impact of increased CO<sub>2</sub> and related changes on marine species and ecosystems. His work aims at revealing the mechanisms behind species and ecosystem responses and at developing the needed unifying theory for large scale predictions. He is a member of the Advisory Board of the Ocean Acidification International Coordination Centre (OA-ICC), the Executive Council of the Global Ocean Acidification Observing Network (GOA-ON) and the Steering committee of the EuroMarine consortium.



**Rafael Bermúdez Monsalve, Professor at Escuela Superior Politécnica del Litoral**

Dr. Bermúdez is currently the Director of the Plankton Laboratory and a Researcher-Lecturer at ESPOL. He completed his Ph.D. on Primary producers and future ocean scenarios, working on the effects of ocean acidification on the bio-molecular composition of primary producers and its concomitant influence on food webs. He worked in the effect of riverine inputs in the primary productivity of the southern part of the Humboldt Current System at the EULA Center in Concepción, Chile and on the effect of Ocean Acidification in the biomolecular composition of primary producers and its concomitant influence in food webs at the GEOMAR Research Center in Kiel, Germany. He has extensive experience in the fields of planktonic population studies, cellular biochemistry, microalgae and ocean acidification.

## National Scientists



**Jorge Carrión, Environmental Management Director at Galapagos National Park**

As the Environmental Management Director at the Galapagos National Park Directorate, Dr. Carrión manages all issues related to environmental quality as well as research projects that are carried out in the protected areas of the Galapagos. He has experience in implementing projects in the fields of applied research and environmental quality. Prior to working for the DPNG, he was a professor at the Universidad Central del Ecuador and he holds a Ph.D. on Conservation Biology.



**Santiago Bucaram, Professor at Escuela Superior Politécnica del Litoral**

Dr. Bucaram holds a Ph.D. on agricultural economy and natural resources from the University of California, Davis. His research is focused on the economics of fishery management, climate change and agricultural economy. Many of his papers have been published in prestigious scientific journals. He has also worked as a consultant for institutions like WWF, UNDP, FAO, BID and the World Bank Group. Currently, he is working on developing management policies for the tuna fishery in the Eastern Tropical Pacific. He aims to develop a biological and economical sustainable approach.

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## **Daniel Orellana, Professor at the University of Cuenca**

Dr. Orellana is a geographer. He is part of part of an international platform called OpenStreetMap, in which he helped make maps of Haiti after the 2010 earthquake, of Japan in 2011, and of Nepal last year. He is interested in studying the interactions between humans and their environment. He did a Ph.D. at Wageningen University. Currently, his research is focused in urban spatial analysis, socio-environmental spatial dynamics and studying new methods to obtain geoinformation. Previously, he has worked for the Charles Darwin Foundation developing new models of ecotourism and participating in expedition as a partner in the Google venture to map the archipelago and enable the Galapagos Google's street view service.



## **Arturo Izurieta Valery, Executive Director, Charles Darwin Foundation**

Dr. Izurieta has worked on strategic projects and on the facilitation of relations between government authorities, indigenous people and scientific communities in Ecuador, the Galapagos Islands, Australia, Malaysia and Central America for more than 30 years. He did his Ph.D. on natural and rural systems management from the University of Queensland and was the director of the Galapagos National Park in 2013. He is the first Ecuadorian to hold the position of Executive Director of the CDF where he has focused on organizing strategic planning and strengthening collaboration between researchers and institutions, both national and international, as well as local groups and individuals to support science projects for conservation and sustainability in the archipelago.



## **Pelayo Salinas de León, Senior Marine Scientist, Charles Darwin Foundation**

Dr. Salinas is the Principal Investigator of the Sharks and Mantas Project since August 2012. Prior to working in the Galapagos, he completed his Ph.D. in marine biology at the University of Wellington, New Zealand and developed several research projects in Indonesia and Cuba. He now coordinates several lines of research useful for the sustainable management of resources of socio-economic importance in the Galapagos Marine Reserve and serves as National Geographic Pristine Seas Conservation Scientist. His research and conservation efforts around Darwin and Wolf Islands in the north of the Galapagos were pivotal in inspiring the Ecuadorian government to create a 40,000 km<sup>2</sup> no-take marine sanctuary in 2016.



## **José Marín Jarrín, Senior Fisheries Researcher, Charles Darwin Foundation**

Dr. Marín arrived at the CDF in May 2016 as the Principal Investigator of the Fisheries Project which focuses on studying the life history of several commercially-important fish species; the impact of ENSO events on artisanal fisheries catch; and the role of mangroves for the early life stages of fishes in the Galapagos. He is also working towards developing the first fish age and growth laboratory on the Galapagos Islands. Prior to working in the Galapagos, Jose obtained Ph.D. in Fisheries Science at the Oregon State University studying the fauna of oceanic sandy beach surf zones. He has also worked in Michigan, USA, and coastal Ecuador studying the ecology of larval fish species of commercial importance.

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**Patricia Martí Puig, Senior Marine Ecologist, Charles Darwin Foundation**

Dr. Martí is currently the Principal Investigator of the Seamounts and the Subtidal Ecological Monitoring Projects at the Galapagos Marine Reserve. She has previously worked in

the fields of ecology, genetics, marine protected areas and science outreach in NGOs within the private sector and academia. She is also a board member of the Collaborative Leadership Learning Forum, a program designed to identify outstanding individuals from marine protected areas who have shown leadership skills. She has been recently involved in climate change science at the East Tropical Pacific marine corridor by co-organizing a climate change workshop with the CDF and Galapagos National Park.



**Gustavo Jiménez Uzcátegui, Wildlife Veterinarian and Researcher, Charles Darwin Foundation**

Gustavo is a Doctor of Veterinary Medicine (DVM), a wildlife veterinarian. He has been a researcher

at the CDF since 2001. For the last six years, he has been the Principal Investigator for the Penguins, Flightless Cormorants and Albatross Project. His research on monitoring these key birds and their threats such as climate change, pathogens, non-infectious diseases and human interactions. He also handles the treatment of wild animals that are under an anthropogenic effect and gives advice to GNPD veterinarian group. Gustavo is a member of the Association of Veterinarians of Pichincha, Ecuador since 2002, and a Member of the Working Group for the Agreement for the Conservation of Albatrosses and Petrels, ACAP, since 2012.



**Inti Keith, Senior Scientific Investigator, Charles Darwin Foundation**

Dr. Keith began to work in the marine sciences area of the CDF in 2011 collaborating with the Zero Anchors Project and later with the Shark and Ecological Monitoring

project. Since completing her Ph.D. on Marine Invasive Species in the Galapagos Marine Reserve, she has been the Principal Investigator of the Marine Invasive Species Project, which aims at finding methods to minimize the negative impacts of invasive species in the archipelago, as well as the long-term Subtidal Ecological Monitoring Project in the Galapagos Marine Reserve (GMR). She also works with the Eastern Tropical Pacific Marine Corridor Initiative (CMAR) to further exploit her interest in the connectivity of different Marine Protected Areas in the region.



**Florencia Cerutti, Marine Ecologist, Charles Darwin Foundation**

Dr. Cerutti is a marine biologist interested in producing key information on sharks and rays to improve conservation and

management of their populations. She started her career in México and completed her Ph.D. at Charles Darwin University, Australia. Since 2002, Dr. Cerutti has worked in various projects studying sharks and rays including fisheries, trophic ecology, marine protected areas, movement patterns, photo-identification, genetic barcoding, vulnerability assessments (ERA) and video surveys. She worked with Conservation International in Indonesia and with various NGOs in Mexico. She joined the Charles Darwin Foundation in March 2017 as a marine scientist in the Sharks and Mantas project.

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**Salomé Buglass, Marine Ecologist,  
Charles Darwin Foundation**

Salomé has been a marine scientist at the CDF since 2016. She is engaged in several applied research projects that support the management of the Galapagos

Marine Reserve. These include undertaking the first comprehensive characterisation of deep-sea ecosystems in the Galapagos, supporting the Galapagos National Parks in evaluating the effectiveness of the reserves no-take zones, monitoring the inter-tidal coastal ecosystems, and assessing the spatial and temporal distribution of shark populations within the reserve. Salome has a background in biogeography with a strong focus on climate change and has worked with marine ecosystems and fisheries in the Caribbean, Canada and most recently Ecuador.



**Nicolás Moity, Marine and GIS Scientist,  
Charles Darwin Foundation**

Nicolás has been involved in applied research projects to support the management and decision-taking of Galapagos. These include research in the conservation priorities for the

re-zoning of the protected areas, identifying the 50 environmental research questions of priority for the Galápagos Islands, the Atlas of the key species of Galapagos, the spatial distribution of mangroves and the evaluation of the ecosystem services they provide. He is working on developing a Key Biodiversity Area Index to locate critical areas for conservation; ecological monitoring of the sub-tidal coastal ecosystems; and on spatial analysis of the distribution of key species through distribution modelling. Nicolas is also leading a multi-institutional project on Sustainable Diving.

## Facilitator



**Monica Medina, Senior Fellow,  
Environment Program, Walton  
Family Foundation**

Monica has worked for nearly thirty years at the intersection of law and policy in Washington, D.C. Prior to joining the Walton Family Foundation,

where she is currently a Fellow, Medina was the Senior Director of Ocean Policy at the National Geographic Society, where she worked on the Pristine Seas Project helping to create large, no-take marine reserves all around the world. Previously, she served as the Principal Deputy Undersecretary of Commerce for Oceans and Atmosphere at the National Oceanic and Atmospheric Administration, where she led efforts on fisheries management, climate change, Arctic conservation, and restoration of the Gulf of Mexico after the Deepwater Horizon oil spill. She also served as the U.S. Commissioner to the International Whaling Commission and NOAA's representative at CITES COP- 15.

📍 Puerto Ayora, Santa Cruz, Galápagos, Ecuador.

+ 593 (5) 2526 146 / [www.darwinfoundation.org](http://www.darwinfoundation.org) / PO Box 17-1-3891 Quito - Ecuador

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