

## Annex 4 – Profiles of experts

### EXPERTS

**Adolfo ALVIAL** – General Director of Adolfo Alvial Asesorías S.A., a consultancy company based in Chile providing support to the aquaculture sector, with emphasis in salmon farming. He is also President of the Business Incubator company INER Los Lagos, Member of the Directory Board of the Regional Agency for economic development, member of the Technical Council of the Technological Institute of Salmon of the Chilean Salmon Farming Association (SalmonChile), member of the Global Aquaculture Alliance Salmon Technical Committee. He has been Director of Marine Harvest – Chile Area, Director of the Technological Institute of Salmon, Director of the Aquaculture Division of Fundación Chile, Secretary General of the Arturo Prat University (former university of Chile – Iquique), and Director of the Marine Science Department at the same university. He has undertaken several research projects related to phytoplankton ecology in northern and central Chile, and on El Niño impacts on pelagic fisheries and aquaculture. He has been in charge of new aquaculture business developments in Chile, such as turbot, abalone, hirame, halibut, Chilean sole, hake and white sturgeon. He has published numerous papers in national and international science journals. Furthermore, Mr Alvial has produced a number of reports for private clients, including national and foreign governments, mostly on aquaculture, but also on environmental management and ecotourism. Adolfo Alvial has supported several aquaculture pioneer companies in Chile in salmon, abalone, and turbot production. His areas of expertise also include coastal zone management, integrated management systems in aquaculture and environmental monitoring and forecast systems in coastal waters.

**Dror ANGEL** – Senior researcher at the Recanati Institute for Maritime Studies and lecturer at the Departments of Marine Biology and of Maritime Civilizations at the Charney School of Marine Sciences, University of Haifa, Israel. He is also the head of the new International MA Programme in Maritime Civilizations at the same university. Dror, a Ph.D. in Biological Oceanography from the City University of New York, has been working in the field of aquaculture and marine ecology for the past 20 years. In addition to studying the interactions of aquaculture with the environment, Dr Angel has examined a number of different options, including artificial reefs and integrated aquaculture to ameliorate aquaculture effects, and to make the activity more environmentally acceptable and economically sustainable. In recent years, he has been involved in numerous efforts by FAO and the International Union for Conservation of Nature (IUCN) to apply the ecosystem approach to aquaculture and to establish applicable guidelines for the industry. Although he is primarily an ecologist, Dr Angel's recent activities have included an examination of the factors that affect public attitudes and opinion, coastal management, policy, and, ultimately, decision-making. Dr Angel has participated in numerous national and international research projects focusing on mariculture and has carried out research in different parts of the world. He has published numerous scientific publications on aquaculture-environment related topics in peer-reviewed journals and in books.

**Francesco CARDIA** – Dr Cardia is an aquaculture consultant, primarily working for private companies operating cage aquaculture activities. He graduated in 1993 from the University of Rome in Natural Sciences and Ecology and, in 2002, obtained his Ph.D. in Parasitology from the Veterinary faculty of the University of Turin, with a thesis on marine finfish parasitosis in Italian cage farms. Following this, he worked for five years at an inland freshwater aquaculture farm (cyprinids, reproduction, selection and ongrowing). From 1998 to 2003, he gained field experience in marine cage aquaculture while working full-time as a production manager with intensive cage farms producing European seabass and gilthead seabream. During the aforementioned period, he undertook a research activity together with the Chair of Parasitology of the “Tor Vergata” University in Rome. In 2002, he commenced his consulting activity in Italy, providing several cage farm companies with technical and biological advisory support, focusing on farm project and start-up, production planning, maintenance planning, traceability, and quality improvement. Since 2004, Dr Cardia has also been working as a consultant with FAO, and he continues to be involved in several activities, mainly related to cage aquaculture practices.

**John FORSTER** – President of Forster Consulting Inc., which has provided advice on aquaculture to private/public sector clients since 1994. Links to recent work for the United States and the Canadian Governments are: [aquaculture.noaa.gov/pdf/econ/3.pdf](http://aquaculture.noaa.gov/pdf/econ/3.pdf); [aquaculture.noaa.gov/pdf/econ/12.pdf](http://aquaculture.noaa.gov/pdf/econ/12.pdf); [dfo-mpo.gc.ca/csas/Csas/Publications/SAR-AS/2008/SAR-AS2008\\_001\\_E.pdf](http://dfo-mpo.gc.ca/csas/Csas/Publications/SAR-AS/2008/SAR-AS2008_001_E.pdf). Specific areas of interest include development of offshore aquaculture, the future for large-scale farming of seaweed, and the application of commercial disciplines learned in salmon farming to new aquaculture opportunities. From 1994–2005, Dr Forster was also President of Columbia River Fish Farms, a company that he founded and developed to become the largest producer of steelhead rainbow trout in Northern America before it was sold in 2005. Previously, from 1974 to 1994, Dr Forster worked in technical and management positions for Stolt Sea Farm Washington Inc., which farmed salmon and sturgeon in the United States of America, and Shearwater Fish Farming Ltd., which farmed rainbow trout in the United Kingdom of Great Britain and Northern Ireland and provided services to aquaculture clients worldwide. Dr Forster began in aquaculture in 1965 with the Ministry of Agriculture Fisheries and Food (MAFF), the United Kingdom of Great Britain and Northern Ireland, working in research on the mass culture of prawns and the design of marine water reuse systems. Dr Forster has served on the Fisheries, Marine Fisheries Advisory Committee (MAFAC) of the National Oceanic and Atmospheric Administration (NOAA) (from 2002 to 2008), as well as a Board Director of Aquaculture without Frontiers, The Washington Fish Growers Association, and Chairman of the Global Aquaculture Alliance’s Salmon Technical Committee.

**Enrica FRANCHI** – A researcher at the Laboratory of Lagoon Ecology, Fisheries and Aquaculture a research branch of the Polo Universitario Grossetano, a private consortium associated with the University of Siena. She was awarded a Ph.D. in Environmental Sciences and is currently a contract professor of Aquaculture and Ecological Restoration at the University of Siena. She has been working in the field of marine ecology and aquaculture for the last 15 years. Her research expertise is mainly concerned with the interaction of aquaculture on the environment and testing methods such as biodepuration, phytodepuration and integrated aquaculture to minimize negative impacts of aquaculture on the environment. Her most recent project was modelling the impact of aquaculture wastewater on the water quality of the receiving basin. Dr Franchi has participated in several European Union (Member Organization) and Italian sponsored projects on aquaculture and environment-related issues and has authored and co-authored numerous publications in peer-reviewed journals.

**Marianne HOLMER** – Head of Institute and Full Professor in Marine Ecology at the Institute of Biology, University of Southern Denmark. She has a Ph.D. in Marine Ecology from Odense University (now University of Southern Denmark). Her research expertise is primarily in marine benthic ecosystems in coastal zones and off-the-coast areas with particular focus on the ecosystem approach to management of marine aquaculture. Her primary area of research interests are impacts of disturbance on coastal and open-sea ecosystems, with marine aquaculture as a case study of organic enrichment. Her scientific publications (96) are all peer-reviewed, and published in well-recognized journals. She has edited one Springer book (*Aquaculture in the Ecosystem*, 2008) and written 11 book chapters. She has coordinated several European Union (Member Organization) projects on marine aquaculture, and participated in several other European Union (Member Organization) and national projects on aquaculture. She has research experience from Europe, Africa, Asia, Australia and North America through a series of short- and longer-term research projects in these areas. She is an appointed member of the Danish National Board for Oceanology and is an active member of the European Aquaculture Technology and Innovation Platform (EATIP). She teaches terrestrial and marine ecology and biological oceanography at all university levels.

**Andrew JEFFS** – An Associate Professor of Marine Science at the University of Auckland in New Zealand, where he teaches aquaculture. He is also a Director of Two Fathom Ltd., an aquaculture and marine environmental consultancy based in New Zealand. He has undertaken aquaculture research and consultancy work in many countries including Australia, Belize, the Caribbean, Viet Nam, Malaysia, Fiji and the United States of America. For ten years he was an aquaculture scientist for New Zealand's national aquaculture research institute, leading their major research programmes and subsequently becoming an executive manager for the institute. He played a major role in forging new working relationships with commercial aquaculture operators and with indigenous Maori for progressing aquaculture research and development. Prior to this, he was a senior officer for the New Zealand Government, responsible for coastal management, and was involved in establishing some of the first marine protected areas in New Zealand. He has published more than 100 papers in international science journals and in excess of 300 reports for commercial clients, mostly on the aquaculture of a wide range of species, including spiny lobsters, fishes, abalone, sea cucumbers, geoduck, mussels and oysters. His research and consulting efforts have resulted in many commercial outcomes, including the development of practical lobster holding and aquaculture diets, commercial lobster seed harvesting technology in New Zealand, pilot commercial spiny lobster farms in New Zealand and overseas, and mussel broodstock conditioning technology.

**James McDaid KAPETSKY** – Founder and Secretary-Treasurer of Consultants in Fisheries and Aquaculture Sciences and Technologies, Inc., Wilmington, the United States of America, that has been in business since 1999. As a Senior Fisheries Resources Officer in the FAO Inland Water Resources and Aquaculture Service (now the Aquaculture Branch) he specialized in promoting the use of GIS, remote sensing and mapping applications in aquaculture and inland fisheries beginning in the early 1980s. After retirement in 1999, he continued working in the same subject area, mainly on contract with FAO, but with other assignments with the United States Agency for International Development and Hatfield Consultants Ltd. In recent years he has focused on spatial approaches to improving estimates of marine aquaculture potential, particularly in the open ocean. Dr Kapetsky is an editor of GISFish, an FAO portal on spatial tools in fisheries and aquaculture ([www.fao.org/fishery/gisfish/index.jsp](http://www.fao.org/fishery/gisfish/index.jsp)), author of book chapters on GIS in aquaculture and inland

fisheries, respectively, and a co-author with Dr J. Aguilar-Manjarrez of a number of FAO and other publications. Those dealing directly with marine aquaculture include a recent symposium presentation entitled “Spatial data needs for the development and management of open ocean aquaculture” ([www.csc.noaa.gov/geotools/sessions/Thurs/H08\\_Kapetsky.pdf](http://www.csc.noaa.gov/geotools/sessions/Thurs/H08_Kapetsky.pdf)), an FAO Fisheries Technical Paper “*GIS Remote Sensing and Mapping for the Development and Management of Marine Aquaculture*”, a symposium proceedings “*Spatial perspectives on open ocean aquaculture potential in the US eastern Exclusive Economic Zones*” and a Fisheries and Aquaculture Technical Paper No. 549 entitled “*A global assessment of offshore mariculture potential from a spatial perspective*”.

**Gunnar KNAPP** – Dr Knapp is a Fisheries Economist at the University of Alaska Anchorage. He earned both a B.A. in Economics (1975) and a Ph.D. in Economics (1981) from Yale University. Since 1981, he has been on the Faculty of the University of Alaska Anchorage’s Institute of Social and Economic Research (ISER), where he has held the rank of Professor of Economics since 1992. Dr Knapp has undertaken a wide variety of research related to fisheries markets, fisheries management, the seafood industry and the aquaculture industry. Much of his work has focused on the Alaska salmon industry and changes in world salmon markets and the Alaska salmon industry resulting from the development of salmon farming. He has also studied: markets for Alaska pollock, herring, halibut, and cod; effects of the implementation of catch-share fisheries management systems in the Alaska halibut and crab fisheries; and effects of fisheries management on safety in the fishing industry. Dr Knapp recently authored two chapters of a study on “Offshore Aquaculture in the United States: Economic Considerations, Implications & Opportunities” for the United States National Oceanographic and Atmospheric Administration (NOAA) aquaculture programme, which examined the economic potential for and economic impacts of United States offshore aquaculture. Dr Knapp also teaches an Internet-based University of Alaska distance education course on fisheries economics and markets. Dr Knapp is an active participant in the International Institute of Fisheries Economics and Trade (IIFET) and the North American Association of Fisheries Economists (NAAFE) and was a founding member of NAAFE.

**Yngvar OLSEN** – Professor at Norwegian University of Science and Technology (NTNU), Trondhjem Biological Station, from 1995 till present. He has, since 2006, acted as Director of the Strategic Marine Focus Area at NTNU, responsible for facilitating, coordinating, and directing marine research at the university. He was earlier a senior scientist at SINTEF and is now a senior advisor at SINTEF Fisheries and Aquaculture. Professor Olsen has 25 years’ experience within the main research field of aquaculture and marine plankton, including: live feed technology for marine fish larvae, lipid nutrition and first feeding of marine larvae, marine phyto- and zooplankton interactions, food web dynamics, trophic cascades, biochemical composition, nutrient cycling, and coastal eutrophication. He has published about 110 papers in international peer-reviewed journals. Scientific interests are marine juvenile production, coastal eutrophication, and environmental interactions with aquaculture. Besides his academic and research activity, Professor Olsen has been, among others, a member of the Board of Directors and a Vice President of the World Aquaculture Society (2002–2006). He has been involved in the organization of several WAS and European Aquaculture Society conferences. He acted as President of Norwegian Board for Cooperation in Marine Sciences (2001–2005). He is currently Co-chair of the Thematic Area Environmental Interaction with the Environment in the European Aquaculture Technology and Innovation Platform (EATiP) and a member of the Scientific Advisory Board of the German Leibniz Institute of Marine Sciences (IFM-GEOMAR), Kiel, Germany (2004–2012).

**David PERCY** – Borden Ladner Gervais Professor of Law at the University of Alberta. He holds an MA degree in Jurisprudence from Oxford University and an LLM degree from the University of Virginia. He has been a Visiting Scholar at Stanford, Virginia and the Centre for Socio-Legal Studies at Oxford and worked as a Visiting Research Scientist at FAO in Rome. He teaches Contracts, Natural Resources Law and Energy Law. He has published the leading works on Water Law in Alberta and in Canada. He acted as counsel to the Federal Inquiry on Water Policy in Canada in 1987 and worked on drafting the Alberta Water Act from 1989 to 1996. He has published three books on water law and advised governments and government agencies in six Canadian jurisdictions on water law matters. He is currently Co-Chairperson of a committee advising the Minister of Environment on water allocation issues in Alberta. David Percy’s work in water law led him to develop an interest in aquaculture. In 2000–2001, David was seconded to work for FAO on problems of aquaculture in five African countries. During his period of leave, he co-authored (with Nathanael Hishamunda) a work on the Promotion of Sustainable Commercial Aquaculture in sub-Saharan Africa. In 2002, he worked as a consultant for FAO on Aquaculture Law in Namibia. In this capacity, he drafted the Aquaculture Act of Namibia (with Annick VanHoutte, FAO Senior Legal Officer, and led a national consultation on the legislation when it was in draft form. In 1995, Mr Percy won the WPM Kennedy Award for outstanding merit in Canadian Law teaching, and in 1996 he won the Rutherford Award for excellence in undergraduate teaching at the University of Alberta. In 2000, he received the Tevie H. Miller Award for Teaching at the Faculty of Law.

**Neil SIMS** – Co-founder and CEO of Kampachi Farms, LLC, an aquaculture research and development company based in Kona, Hawaii, the United States of America, and La Paz, Mexico. Kampachi Farms is developing commercial production of sashimi-grade Cabo Kampachi (*Seriola rivoliana*, longfin amberjack) in Mexico and other regions of the world, and is researching offshore technologies, alternative feedstuffs and new fish species for culture. Neil was also co-founder and President of Kona Blue Water Farms, the first United States integrated marine fish hatchery and open ocean mariculture operation, off Hawaii’s Kona Coast, which produced more than 1 350 kg/week of longfin amberjack from an offshore site. He is Founding President of the Ocean Stewards Institute, a trade association that advocates for rational, considered development of offshore mariculture. He obtained a B.Sc. in Marine Biology/Zoology (James Cook University, Australia, 1980) and an M.Sc. in Zoology (University of New South Wales, Australia, 1990). From 1983 to 1988, he led the establishment of the Fisheries Research Division of the Cook Islands Ministry of Marine Resources, working in research and management of subsistence fisheries, and artisanal fisheries for pearl shell, *Trochus*, giant clams and finfish. At the same time, he led the research and development supporting the growth of the black pearl culture industry in the Cook Islands. Since 1993, he has been based in Hawaii, where he has led more than 40 federally funded research projects in aquaculture development, primarily focused on pearl oyster and marine fish hatchery development and open-ocean mariculture. He has led commercial ventures in Australia, Hawaii and the Marshall Islands, and has consulted for private companies, governments and regional agencies throughout the South Pacific and Southeast Asia. From 2001 to 2004, he led the development of breakthrough hatchery technology for “difficult-to-rear” marine fish, such as groupers, snappers and trevallies, which evolved into the pioneering open-ocean mariculture operation.

**Piergiorgio STIPA** – An aquaculturist by profession, with practical knowledge gained in different countries. He has worked on shrimp farming in Albania, and fish hatcheries and mariculture farms in Greece and Italy for more than 15 years. He is currently the technical head of both a marine cage offshore fish farm and a land-based

pond fish farm in the Mediterranean (Italy). The farms are part of a wider commercial group selling top-quality fish (European seabass, gilthead seabream and meagre) in the European market with the brand “Fish from Orbetello”. Mr Stipa has a background in marine biology (he graduated in 1992 at the University of Rome) and has conducted research activities in Italy and in the United States of America (Stanford University). He is a commercial and fishing captain, being a former Italian Navy officer, and has served one year in a commercial fishing boat in the Indian Ocean. He has a commercial diving licence, with more than 10 years experience in offshore cage installations and diving operations. He has also worked and collaborated with International Organizations such as the United Nations Industrial Development Organization (UNIDO) and FAO, promoting training in environmental and aquaculture matters in countries such as Nigeria and Viet Nam. At regional level, he has collaborated in several research projects focusing on fish and mollusc farming technologies and fish quality improvement. He has recently been involved in promoting marine aquaculture activities on the island of Palawan (the Philippines), with local entrepreneurs. Nowadays, his main interests are offshore fish farming and practical applications on submerged cages and remote feeding systems.

#### **FAO EXPERTS**

**José AGUILAR-MANJARREZ** – Ph.D. (1992–1996) and M.Sc. (1991–1992) in Aquaculture (Aquaculture Planning and GIS) from the University of Stirling in the United Kingdom of Great Britain and Northern Ireland. He graduated in Oceanography in 1989 from the Faculty of Marine Sciences in Ensenada, Baja California, Mexico. He has worked for the FAO Fisheries and Aquaculture Department for 14 years, first as a visiting scientist (1996–1998), then as a consultant (1998–2000) and since 2001 as an Aquaculture Officer in the Aquaculture Branch (FIRA). His responsibilities at FAO-FIRA cover two different areas: GIS-related activities, and assistance to field projects on rural aquaculture in a number of countries in Latin America and Africa. Activities specific to GIS have broadly included: (i) the development of methodologies, technical papers, reviews and training materials on GIS applications to aquaculture such as FAO Fisheries Technical Paper. No. 458 ([www.fao.org/docrep/009/a0906e/a0906e00.htm](http://www.fao.org/docrep/009/a0906e/a0906e00.htm)); (ii) the construction of georeferenced information systems such as GISFish ([www.fao.org/fishery/gisfish](http://www.fao.org/fishery/gisfish)); and (iii) the formulation, implementation and review of field projects that have a GIS and/or remote sensing component. His main current interest is in GIS and remote-sensing approaches for estimating the potential for offshore mariculture.

**Nathanael HISHAMUNDA** – He holds a B.Sc. in Agronomy and an Engineer of Agriculture degree from the National University of Rwanda, an M.Sc. in Fisheries and Aquaculture from Auburn University, Alabama, the United States of America, and a Ph.D. in Agricultural Economics with a specialization in Agricultural Policy, Trade and International Development from the same institution. He began his career as Head of Aquaculture Extension within the Rwanda Ministry of Agriculture, Livestock and Forestry in 1984. In 1986, he led the Rwanda National Aquaculture Service until he left to pursue his higher education in 1992. While at Auburn University, he served as a Research and Teaching Assistant in Agricultural Trade and Policy and in Aquaculture and Fisheries Economics, from 1993 to 1999. He joined FAO in 1999 as a Fishery Planning Analyst and currently leads the Aquaculture Economics and Policy Group, which deals with complex and diverse issues of national, regional and global importance, and coordinates the Branch assistance to FAO Members in the areas of aquaculture socio-economics, policy, planning and governance. With more than 50 publications, he has produced leading works on aquaculture economics, aquaculture policy and governance and aquaculture and food security. He has prepared aquaculture

development policies and strategies, national aquaculture development plans and has contributed to the preparation of legal and regulatory frameworks for sustainable aquaculture development for numerous countries in Africa.

**Jiansan JIA** – He has been working with FAO as Chief of the Aquaculture Branch since 1998. Before joining FAO, he worked for the Government of China for more than 20 years, holding several leading positions with provincial and central government authorities, in both national and international agriculture, fisheries and aquaculture development (e.g. Director General, China National Corporation for International Cooperation in Agriculture, Livestock and Fisheries; Director General, International Cooperation, Ministry of Agriculture; Executive Vice-President, China National Fisheries Corporation; Deputy Director General, Bureau of Fisheries; Vice Governor, Wujiang County, Jiangsu Province). During the past 12 years, he has devoted himself to sustainable development of aquaculture at global and regional levels by leading the FAO Aquaculture Branch based in Rome. He was one of the leading organizers of the Conference on Aquaculture in the 3rd Millennium held in Bangkok in 2000, and promoted the establishment and advancement of the FAO's Committee on Fisheries (COFI) Sub-Committee on Aquaculture. Mr Jia was the Co-Chair of the International Organizing Committee of the Global Conference on Aquaculture 2010.

**Blaise KUEMLANGAN** – He has been a Legal Officer in the Development Service of the Legal Office of FAO since 1996. He holds a Masters (LLM) in International and Comparative Law, Kent School of Law, Chicago, and a Bachelor of Laws (LLB) from the University of Papua New Guinea. Prior to joining FAO, he was a Senior Legal Officer with the State Solicitors Office of the Papua New Guinea Attorney General's Department, where he provided legal advice and assistance to government agencies including the Department of Foreign Affairs, Civil Aviation, Trade and Industry, Environment and Conservation and Fisheries and Marine Resources. He was also involved in fisheries enforcement, including the prosecution of offences. In the FAO Legal Office, he specializes in the international law of the sea in the field of fisheries and the development of national fisheries and aquaculture law through technical advice and field assistance to FAO Members in many regions of the globe. He has drafted or contributed to the review and development of the aquaculture laws of many developing countries. His typical annual work includes the provision of assistance and advice on the legal aspects of fisheries and aquaculture normative work, projects and consultations of FAO's Department of Fisheries and Aquaculture.

**Alessandro LOVATELLI** – A marine biologist and aquaculturist, he obtained his B.Sc. and M.Sc. degrees at the universities of Southampton and Plymouth (the United Kingdom of Great Britain and Northern Ireland), respectively. His first experience with FAO dates back to 1987, working as a bivalve expert attached to an FAO/UNDP regional project. His subsequent FAO assignment was in Mexico, working on a regional aquaculture development project funded by the Italian Government. From 1993 to 1997, he worked in Viet Nam, Somalia and then again in Southeast Asia. In Viet Nam, he headed the aquaculture and fisheries component of a large European Union (Member Organization) project developing, among other activities, ten regional aquaculture demonstration, training and extension centres. In Somalia, he acted as the lead aquaculture and fisheries consultant for the European Commission. Following an additional year in Viet Nam as one of the Team Leaders under the Danish-funded Fisheries Master Plan Project, he was recruited by FAO as the Aquaculture Advisor attached to the FAO-EASTFISH project based in Denmark. In 2001, he once again joined the FAO Department of Fishery and Aquaculture in Rome. The main activities he is currently focusing on are marine/offshore aquaculture development, transfer of

farming technologies and resources management. Mr Lovatelli has coordinated and co-authored numerous FAO technical reviews and papers, mainly focused on marine aquaculture development.

**Doris SOTO** – Obtained her B.Sc. in Limnology from the University of Chile in 1975 and her Ph.D. in Ecology (aquatic ecology/food webs) in the Joint Doctoral Program between San Diego State University and University of California in Davis, the United States of America, in 1988. She worked as a Professor at the Fisheries and Oceanography Department at Austral University in Puerto Montt, Chile, until 2004. She was also an Adjunct Scientist at the Institute of Ecosystem Studies in Millbrook, New York (the United States of America) from 1999 to 2005. Up to 2005, she was involved in research activities on aquaculture environmental management and nutrient cycling of salmon farms and other aquaculture systems, both in freshwater and marine environments. She has carried out research to evaluate the effect of escaped salmon and trout on aquatic ecosystems. She joined FAO in 2005, where she has been leading the development of a framework for an ecosystem approach to aquaculture. She is the focal point for climate change impacts on the aquaculture sector. She has conducted extensive fieldwork in Latin America and worked with FAO partners in the Mediterranean Sea on various aspects of mariculture and the environment. She has published numerous scientific papers and reports, and has led different types of projects.

**Rohana SUBASINGHE** – A Senior Aquaculture Officer at the Fisheries and Aquaculture Department of FAO. He is specialized in aquaculture development and aquatic animal health management. Since his graduation in 1980 from the University of Colombo, Sri Lanka, he has worked in all parts of the world, with most experience in Asia. He joined FAO in 1994 and took responsibility in implementing numerous projects on aquaculture and aquatic animal health at national, regional and international levels. Among others, at FAO, he is also responsible for analysis of trends in aquaculture development globally. A former teacher at the University of Colombo and the Universiti Putra Malaysia, Mr Subasinghe earned his Ph.D. at the University of Stirling. He has been responsible for initiating major policy changes in aquatic health management in relation to aquaculture in Asia and globally. He currently serves as the Technical Secretary to the Sub-Committee on Aquaculture of the Committee on Fisheries (SCA-COFI) of FAO, the only global intergovernmental forum on aquaculture.

**Diego VALDERRAMA** – He holds a B.Sc. in Marine Biology from the Universidad Jorge Tadeo Lozano (Colombia), an M.Sc. in Aquaculture/Fisheries from the University of Arkansas at Pine Bluff (UAPB) (the United States of America), and a Ph.D. in Environmental and Natural Resource Economics from the University of Rhode Island (the United States of America). His expertise is in the economics of aquaculture and marine resources. In addition to numerous peer-reviewed articles, he has co-authored three book chapters on aquaculture economics issues. As a Master's student, he investigated the production economics of shrimp farming in Central America, catfish farming in the southeast of the United States of America, and the economics of aquaculture effluent regulation. His doctoral work examined a variety of issues in marine resource economics. His work has also addressed the economic potential and implications of offshore aquaculture development in the United States of America. In 2009 and 2010, he joined FAO as an Aquaculture Officer (Economics) in the Fisheries and Aquaculture Department, where he contributed to the Department's work on social and economic aspects of policy and strategy development to ensure sustained livelihoods for all beneficiaries in aquaculture. He is currently an Assistant Professor at the Food and Resource Economics Department at the University of Florida (the United States of America), where he teaches and conducts research on marine resource economics and international economic development.