This program is the first iteration of the World Fisheries Congress 2021 program and it is subject to change. Please note that only the presenting author is listed in the first iteration of the program. The final program and full details, including co-authors, will be provided in due course.

Contents

Opening Address

Ambassador Peter Thomson is the United Nations Secretary-General's Special Envoy for the Ocean, in which role he drives global support for UN Sustainable Development Goal 14, to conserve and sustainably use the ocean's resources. Ambassador Thomson will deliver the Opening Address at the World Fisheries Congress 2021 (WFC2021).

Plenary speakers

Professor Toyoji Kaneko on behalf of Professor Katsumi Tsukamoto. Professor Katsumi Tsukamoto, winner of the International Fisheries Science Prize and Professor at the University of Tokyo, is a world leader in the biology, ecology and conservation of freshwater eels. Katsumi's research will be presented by Professor Toyoji Kaneko, University of Tokyo, on his behalf. Professor Kaneko is an expert in fish osmoregulation and is currently engaged in research on the application of osmoregulation to the fisheries industry, especially to land-based aquaculture of marine fish.

Professor Manuel Barange, the Director of the Fisheries and Aquaculture Policy and Resources Division at the Food and Agriculture Organization in Rome, Italy, has expertise in physical/biological interactions, climate and anthropogenic impacts on marine ecosystems, fish ecology, behaviour and trophodynamics, and fisheries assessment and management.

Ms Meryl Williams, has over 40 years' experience in fisheries, aquaculture, conservation and human development having been the Director General of WorldFish, Director of the Australian Institute of Marine Science and Executive Director of Rural Sciences (Australia). In recent years, Meryl has focused on trends in fish value chains, impacts on women and gender equality, and public knowledge for responsible fish production.

Dr Beth Fulton, Principal Research Scientist with CSIRO Oceans and Atmosphere, focuses on sustainably managing potentially competing uses of marine environments and adaptation to global change, including effective means of conserving and monitoring marine and coastal ecosystems.

Professor Nicholas Mandrak on behalf of Professor Olaf Weyl. Professor Olaf Weyl was a Chair and Chief Scientist at the South African Institute for Aquatic Biodiversity (SAIAB). His research revolved around understanding human impacts on freshwater fish communities and included aspects of conservation, fisheries, and invasion biology. Nicholas Mandrak, a Professor and Director of a professional Master's program in Conservation and Biodiversity at the University of Toronto, will be presenting their joint research on behalf of Olaf. Nick's research is primarily on the biodiversity, biogeography, and conservation of freshwater fishes, with emphasis on Canada.

Professor Ratana Chuenpagdee, Memorial University of Newfoundland, St. John's, Canada, is leading a major global research partnership, 'Too Big To Ignore', which aims to elevate the profile of small-scale fisheries and rectify their marginalization in national and international policies.

Ms Kerstin Forsberg, Founder and Director of Planeta Océano, a Peruvian non-profit organization empowering coastal communities in marine conservation through research, education, policy and sustainable development efforts. Her work includes research and legal protection for giant manta rays and critically endangered sawfish and the consolidation of a Marine Educator's Network in Peru.

Mr Martin Exel, of Austral Fisheries, is also the Managing Director of SeaBOS, a collaborative venture between 10 of the world's largest seafood businesses, and the Stockholm Resilience Centre in Sweden, with an aim to transform wild capture and aquaculture fisheries to sustainable seafood production and promote a healthy ocean, globally.

Mr Matthew Osborne is a Kaurna and Narungga man and has extensive experience in Indigenous fisheries. He is the Program Leader, Aquaculture and Regional Development in Northern Territory Fisheries overseeing a range of Aboriginal and industry development programs including supporting small scale fishing and aquaculture operations in remote Aboriginal communities.

Program key

	Live streamed hybrid sessions
	In-person sessions
	In-person events
	Breaks

Please note that in-person presentations will not be live streamed, however presenters will be asked to provide a pre-recorded presentation to be made available in the virtual platform as an on-demand presentation.

Friday 17 September

UTC/GMT	ACST	Friday 17 September
23:30 – 07:30	09:00 - 17:00	Virtual workshop **Electrofishing Principles and Safety Certification Course**

Day 1: Monday 20 September 2021

UTC/GMT	ACST	Monday 20 September
23:30 – 08:00	09:00 - 17:30	Concurrent session 1: In-person meeting (Room 1) **Australian Society for Fisheries Biology (ASFB) Fisheries Management meeting**
		Concurrent session 2: virtual workshop **Current approaches to species modelling (R based workshop).** Contact: Chris Brown (Griffith University)
01:00 – 03:00	10:30 - 12:30	Concurrent session 3: In-person meeting (Room 2) **ASFB Education and training meeting**
03:30 – 07:00	13:00- 16:30	Concurrent session 4: In-person meeting (Room 2) **ASFB Executive meeting**
04:00 – 08:00	13:30- 17:30	Concurrent session 5: virtual workshop **Graphical and video abstracts for research impact**. Contact: Tullio Rossi (Animate your science)
08:30 – 11:00	18:00- 20:30	In-person event **Welcome reception**

Day 2: Tuesday 21 September 2021

UTC/GMT	ACST	Tuesday 21 September
23:00 – 23:45	08:30 - 09:15	Live streamed hybrid event (Halls C&D) **Welcome to Country**
23:45 – 00:30	09:15 - 10:00	Opening Address - Live streamed hybrid presentation (Halls C&D) **Ambassador Peter Thomson (United Nations Secretary-General's Special Envoy for the Ocean)**
00:30 – 01:00	10:00 - 10:30	**MORNING TEA**
01:00 – 02:30	10:30- 12:00	Concurrent session 1: live streamed hybrid presentations (Halls C&D) **Sustainable Development Goals** Macfarlane, Alastair (Ministry for Primary Industries). Meeting Sustainable Development Goal Target 14.6 – Agreement in the World Trade Organization to prohibit harmful fisheries subsidies. McNeill, Asha (Minderoo Foundation). Drawing a global roadmap to sustainable fisheries. Phang, Sui (University of Portsmouth). Circular governance' for holistic freshwater use: using the SDGs to integrate policy, ecosystems and ecosystem services. 45-minute Q&A panel discussion.
		Concurrent session 2: live streamed hybrid presentations (Hall A) **Global challenges - social licence, pollution, and international fisheries** Brown, Culum (Macquarie University). Sharks are not mindless killing machines. Scheufele, Gabriela (Commonwealth Scientific and Industrial Research Organisation (CSIRO)). Availability of Non-Market Values to Inform Decision-Making in Australian Fisheries and Aquaculture: An Audit and Gap Analysis. Wootton, Nina (The University of Adelaide). Occurrence of microplastic in fish: awareness, knowledge, and solutions. Zeller, Dirk (University of Western Australia). Baseline of fisheries catches in African Large Marine Ecosystems. 30-minute Q&A panel discussion.
		Concurrent session 3: live streamed hybrid presentations (Hall B) **Monitoring and management of freshwater-dependent fish and fisheries** Cooke, Steven (Carleton University). What can systematic reviews tell us about the failures of freshwater interventions? A critical yet forward-looking perspective.

UTC/GMT	ACST	Tuesday 21 September
		King, Alison (Charles Darwin University). Environmental water requirements for fishes in northern Australia: The Daly River, Northern Territory. Wilke, Nathan (United States Fish and Wildlife Service). Measuring effectives in restoration fisheries – Part II: Overcoming challenges in large scale, multi-species propagation and supplementation programs. Zampatti, Brenton (CSIRO). A local perspective on a global issue: the decline of a mega-fish (Murray cod *Maccullochella peelii*) in the River Murray, Australia. 30-minute Q&A panel discussion.
		Concurrent session 4: In-person presentations (E1) **Ecosystem-based fisheries management** Knott, Nathan (NSW DPI - Fisheries). The quantification of large-scale systematic changes in rocky reef fish assemblages across the NSW Marine Park system. Fletcher, Rick (Department of Primary Industries and Regional Development, Western Australia). How to implement the concepts of ESD, EPBC, IFM, EBFM and MSC into the governance systems of a fisheries agency and not get indigestion? Clark, Simon (Spencer Gulf & West Coast Prawn Fishermen's Association). Competition, collaboration to delegation in fisheries management and science. Bradley, Michael (James Cook University). Constraint Mapping: a vital enabler for ecosystem-based fisheries management. Scheufele, Gabriela (Commonwealth Scientific and Industrial Research Organisation (CSIRO)). The use of non-market values in fisheries management: opportunities and challenges. Drummond, Kim (Te Ohu Kaimoana). Indigenous people's rights to manage, use and conserve marine biodiversity: The Aotearoa New Zealand experience. Souter, Nick (Conservation International). Building fishing community resilience on Cambodia's Tonle Sap Lake.
		Concurrent session 5: In-person presentations (E2) **Fisheries monitoring in support of sustainable fisheries** Markey, Yolande (PIRSA Fisheries & Aquaculture). Quantifying weight of catch for quota purposes in a high volume small Pelagic Fishery. Burch, Paul (CSIRO). Estimating discarded catches when observer coverage varies spatially and temporally – a mixed modelling approach. Sporcic, Miriana (CSIRO). Improving fishery independent surveys using fishery dependent data.

UTC/GMT	ACST	Tuesday 21 September
		Ma, Xingjun (The University of Melbourne). Automated Detection of Anomalous Fishing Activities from Fisheries Catch-and-Effort Data. Hall, Karina (NSW Department of Primary Industries). Application of anomaly detection methods from 'big data' analytics to identify, quantify and assess the influence of errors in fisheries-dependent data. Bailleul, Frederic (PIRSA - SARDI Aquatic Sciences). Spatially explicit data in South-Australian Abalone Fishery: a crucial need for a better understanding of stock dynamics.
		Concurrent session 6: In-person presentations (E3) **Resource allocation and co-management** Clement, George (Deepwater Group Ltd). Being trusted as the best-managed deepwater fisheries in the world. Garcia Garcia, Sonia (University of Technology Sydney). Regulating fish names on seafood labels in Australia. A case study on the importance of deliberative policy analysis for enabling co-governance. Caputi, Nick (Department of Primary Industries & Regional Development, Western Australia). Stakeholder-Government collaboration in developing cost-effective fishery-independent surveys in rights-based and co-managed fisheries. Rowling, Kevin. Does giving stakeholders perpetual and tradeable property rights to natural resources always result in sustainable and well managed fisheries? Smith, David (Centre for Marine Socio-ecology University of Tasmania). Evolution of participatory processes in the management of Australia's fisheries over the last 30 years: drivers and challenges. Leon, Rafael (University of Tasmania). Changes in leasing network of lobster quota in response to stock abundance.
		Concurrent session 7: In-person presentations (Riverbank Room 1) **Integration of genomics in fisheries management and aquaculture** Baylis, Shane (CSIRO). Kin-finding and genotyping for Close-Kin Mark-Recapture. Thompson, Samuel (University of Western Australia). Integration of eDNA metabarcoding data for the monitoring of rare and cryptic fish species associated with subsurface infrastructure. Deagle, Bruce (CSIRO). Using DNA metabarcoding to better understand trophic interactions: case studies relevant to fish and fisheries. Walburn, Jackson Wilkes (New South Wales Department of Primary Industries). FishGen: genomic monitoring of stocking for native fisheries in the Murray-Darling Basin, Australia. Duncan, Meaghan (New South Wales Department of Primary Industries). Estimating the biomass of fish stocks using environmental DNA.

UTC/GMT	ACST	Tuesday 21 September
		Strugnell, Jan (James Cook University; Department of Ecology, Environment & Evolution, La Trobe University). Using genetics and oceanographic modelling to investigate connectivity of rock lobsters across ocean basins.
02:30 – 03:00	12:00-12:30	**LUNCH**
02:45 – 05:00	12:15-14:30	Concurrent session 1: virtual workshop **Identifying successes and next steps in transdisciplinary fisheries research: perspectives from early-career researchers.** Contact: Elizabeth Nyboer (Carleton University)
03:00 – 05:00	12:30-14:30	Concurrent session 2: in-person meeting (Hall B) **Australian Society for Fish Biology (ASFB) Alien and Threatened Species meeting.**
03:00 – 05:15	12:30-14:45	Concurrent session 3: in-person presentations (Halls C&D) **Resource allocation and co-management** Saray, Samadee (Australian National University). Is co-management a better solution to fisheries resources management: case of the Tonle Sap River and Lake. Shanks, Steve (Primary Industries and Regions South Australia). Providing legislative powers to the commercial fishing industry to set management arrangements. Grounds, Girffin (Department of Primary Industries and Regional Development). The slow grind of reform against the tide of dynamic short-lived species and operational exhaustion in Shark Bay's overlapping fisheries. Jones, Annabel (Primary Industries and Regions South Australia). Allocations – friend or foe. Allocation of fisheries resources in South Australia. Hoang, Viet Thang (Minderoo Foundation). The role of international aid in sustainable fisheries in Asia-Pacific. A case study of Vietnam. Penn, James (Western Australian Fisheries and Marine Research Laboratories). A review of the development of Total Allowable Effort Quota management systems with individually transferable units being used on a range of important Western Australian multi-species finfish and invertebrate fisheries to maintain their biological performance, while enhancing economic and social outcomes for fishermen. Mayfield, Stephen (Primary Industries and Regions South Australia – SARDI). An overview of the abalone fishery of South Australia: history, current status and future direction. Abernethy, Kirsten (Sea Change). Can Victorian small-scale fisheries secure their future? Chen, Yi-Yang (The Australian National University). Trophic cascades in tropical seascapes: Reef fishes can access and affect epifaunal production by performing divergent microhabitat preferences while foraging.

UTC/GMT	ACST	Tuesday 21 September
		Concurrent session 4: In-person presentations (E1) **Ecosystem-based fisheries management** Datta, Samik (NIWA). A size-structured approach to modelling species in the Chatham Rise ecosystem. Pascoe, Sean (CSIRO Oceans and Atmosphere). Use of Data Envelopment Analysis (DEA) to assess fisheries management alternatives in the presence of multiple objectives. Hutton, Trevor (CSIRO). A revision of the grand Northern Prawn Fishery bio-economic model: including every prawn stock. Holmes, Lauren (Primary Industries and Regions South Australia, Fisheries and Aquaculture). Utilising integrated management during the assessment of applications for aquaculture development in South Australian State waters. Morison, Julian (BDO EconSearch). Having a crack at MEY when time, money and data are short. Cannard, Toni (CSIRO Oceans & Atmosphere). Stretching fisheries harvest strategies across the triple bottom line: a deep dive review. Ogier, Emily (Institute for Marine and Antarctic Studies). Reconciling conflict between "triple bottom line" objectives for fisheries management. Novaglio, Camilla (IMAS). Exploring trade-offs in mixed fisheries by integrating fleet dynamics into multispecies size-spectrum models. Rogers, Alice (Victoria University of Wellington). The use of size-based models in Ecosystem Based Fisheries Management.
		Concurrent session 5: In-person presentations (E2) **Fisheries monitoring in support of sustainable fisheries** Phillips, Genevieve (Australian Antarctic Division). Prioritising clean, accessible data as a means to improving fisheries management. Hoenner, Xavier (CSIRO). Spatio-temporal patterns of fishing activity for three Commonwealth fisheries in relation to Australian marine reserves. Evans, Karen (CSIRO). Connectivity of tuna and billfish species targeted by the Australian Eastern Tuna and Billfish Fishery with the broader Western Pacific Ocean. Clarke, Thomas (Flinders University). Revealing the spawning behaviour and activity of Yellowtail Kingfish from accelerometer loggers. Mundy, Craig (University of Tasmania). Using spatial performance measures to assess a spatially structured dive fishery. Rogers, Troy (SARDI Aquatic Sciences). Quantifying post-release survival of snapper (*Chrysophrys auratus*; Sparidae) using acoustic telemetry and estimating fishing mortality in a multi-sector fishery. Parsons, Miles (Australian Institute of Marine Science). Spatial calling patterns of a Sciaenid in a southwest Australian estuary.

UTC/GMT	ACST	Tuesday 21 September
		Smith, Mick (Fisheries Queensland). Developing a data validation program for Queensland's commercial fisheries. Takahashi, Miwa (Curtin University). Modelling of length-specific essential fish habitat for fishery important tropical red snappers along the tropical coast of Australia.
		Concurrent session 6: In-person presentations (E3) **Monitoring and management of freshwater-dependent fish and fisheries** Leahy, Susannah (Queensland Department of Agriculture and Fisheries). Using otolith chronology to quantify the effects of freshwater flow on growth rates of juvenile barramundi and inform water resource development in the Gulf of Carpentaria, Australia. Fredberg, Josh (SARDI Aquatic Sciences). River regulation influences habitat use and movement of Murray cod (*Maccullochella peelii*) in a large, lowland river. Thiem, Jason (Department of Primary Industries). Exploration of freshwater fish movement responses to environmental flow delivery: disentangling an ecological response to a management action. Broadley, Andrew (Griffith University). Flow regulation and its predicted impact on a commercially important marine fishery. Bice, Chris (South Australian Research and Development Institute). Connectivity and migration of a recreationally important riverine fish in hydrologically distinct regions of its range. Cheshire, Katherine (Department of Primary Industries, Fisheries NSW). Fish functional guilds for water management strategies: can grouping species enhance water efficiency planning? Tonkin, Zeb (Arthur Rylah Institute, Department of Environment, Land, Water and Planning). Quantifying links between river discharge and recruitment dynamics of Murray cod to inform flow management in the southern Murray-Darling Basin. Ye, Qifeng (South Australian Research and Development Institute). Flow influence on salt wedge dynamics and black bream (*Acanthopagrus butcheri*) recruitment in the Coorong estuary, Australia.
		Concurrent session 7: In-person presentations (Riverbank Room 1) **Integration of genomics in fisheries management and aquaculture** Devloo-Delva, Floriaan (University of Tasmania). Genetic sex identification in elasmobranchs. Moore, Andy (ABARES). A perfect storm of genetic drift and divergence may prevent the rebuilding of the gemfish (*Rexea solandri*) stock on the east Australian coast. Grewe, Peter M. (CSIRO Oceans & Atmosphere). Global SNPshot Contrasting Population Structure and Connectivity of Four Key Tuna species (Albacore, Bigeye, Skipjack, and Yellowfin) fished in the Atlantic, Indian and Pacific Oceans.

UTC/GMT	ACST	Tuesday 21 September
		Morgan, Jess (Queensland Government). The jig is up for Aussie squid fisheries; DNA reveals the truth about Uroteuthis. Bertram, Andrea (Flinders University). A genomic analysis of stock structure in the iconic marine teleost snapper (*Chrysophrys auratus*) across Australia. Miller, Allison (University of Otago). Population genomics of the pouched lamprey (*Geotria australis*). Goh, William (University of Adelaide). Uncovering fish population structure and connectivity: A genomic foundation for a multi-method approach. Green, Madeline (University of Tasmania). Using environmental DNA to reconstruct target and by-product catch composition for fisheries vessels.
05:15 – 05:30	14:45-15:00	**AFTERNOON TEA**
05:30 – 06:15	15:00 – 15:45	Plenary speaker – live streamed hybrid presentation (Hall C&D) **Professor Manuel Barange (FAO)**
06:30 – 08:30	16:00 – 18:00	Concurrent session 1: live streamed hybrid presentations (Halls C&D) **Climate Change** Eddy, Tyler (Memorial University of Newfoundland). Newfoundland fisheries & ecosystems in the 21st century – highly dynamic & highly uncertain. Kleisner, Kristin (Environmental Defense Fund). Identifying pathways to building resilience in marine fisheries with differing capacities and contexts. Rogers, Mark (U.S. Geological Survey). Effects of climate and land-use changes on fish catches across lakes at a global scale. Sauer, Warwick (Rhodes University, South Africa). Enhancing climate change resilience in the Benguela Current Large Marine Ecosystem: a case study of the small pelagic fisheries. 1-hour Q&A panel discussion.
		Concurrent session 2 - live streamed hybrid presentations (Hall A) **COVID – impacts on fisheries** Cottrell, Richard (National Center for Ecological Analysis and Synthesis, UCSB). Emerging COVID-19 impacts, responses, and lessons for building resilience in the seafood system. Midway, Steve (Louisiana State University). COVID-19 influences on US recreational angler behavior. Ogier, Emily (Institute for Marine and Antarctic Studies). Impacts of COVID19 on Australian fisheries production and assessment: shock transmission pathways, innovations and implications for decision support. Sánchez Daroqui, Rubén (Food and Agriculture Organization (FAO)). Increasing Resilience in the Context of the COVID-19 Pandemic: a

UTC/GMT	ACST	Tuesday 21 September
		Review of Coping and Adaptation Strategies by the Small-scale Fisheries Sector. Smith, Sarah (Rutgers University). Understanding individual- and fisheries-level factors predicting fishermen's responses to the COVID-19 pandemic in the Northeast United States. 45-minute Q&A panel discussion.
		Concurrent session 3: live streamed hybrid presentations (Hall B) **Sustainable fisheries – recovering and overfished stocks** Boenish, Robert (Environmental Defense Fund). The global rise of crustacean fisheries. Friedman, Kim (Food and Agriculture Organization of the United Nations). Characterization of extinction concern for life below water as compared to life on land. Hazen, Elliott (NOAA Fisheries). Assessing bycatch in U.S. fisheries to aid management prioritization. Lees, Samantha (Marine Stewardship Council). Bycatch, endangered species interactions, and habitat impacts improvements in MSC certified fisheries. 1-hour Q&A panel discussion.
		Concurrent session 4: In-person presentations (E1) **Ecosystem-based fisheries management** Klein, Carissa (University of Queensland). Global fishing and seafood trade burdens places with ineffective fisheries management. Astles, Karen (NSW Department of Primary Industries). Using ecological risk assessment to contribute to harvest strategy development. McWhinnie, Stephanie (University of Adelaide). Measuring, Interpreting and Monitoring Economic Productivity in an Input-Controlled Fishery. Hamre, Nicole (University of Western Australia). Informing ecosystem-based fisheries management through bio-economic modelling. Beese, Chelsey (Victoria University of Wellington). Refuge and the Reef: The importance of refuge for coral reef predators. Delisle, Aurelie (University of Wollongong). Nei Tengarengare - Building support at the institutional, provincial and community level for sustainable fisheries management in the Republic of Kiribati. Voyer, Michelle (University of Wollongong). Showcasing local fishing stories as a pathway to revitalising primary production in regional communities. Sbrocchi, Carla (University of Technology Sydney). Case study research can improve design of fisheries management interventions.

UTC/GMT	ACST	Tuesday 21 September
		Concurrent session 5: In-person presentations (E2) **Fisheries monitoring in support of sustainable fisheries** Petrolo, Emma (Macquarie University). Stock structure and effective population size of the commercially exploited Gummy shark. Whiterod, Nick (Aquasave-NGT). Fisheries-independent surveys to provide assessment of an important surf clam recreational fishery. Scoulding, Ben (CSIRO). Evaluating active-acoustic methods for assessing snapper (*Chrysophrys auratus*) aggregations in Western Australia. Grammer, Gretchen (SARDI Aquatic Sciences). Broad-scale egg surveys help to refine stock structures of small pelagic fishes off south-eastern Australia. Willington, Sarah (The University of Melbourne). Does size diversity matter? Exploring the portfolio effect in size-at-age data in commercially fished species. Stacy, Brett (University of Tasmania, CSIRO, Australian Antarctic Division). Detecting the presence of mis-reported catch through stock assessment diagnostics. Rogers, Paul (SARDI Aquatic Sciences). On-site recreational survey of mulloway *Argyrosomus japonicus*: A case study in the Yalata Indigenous Protected Area combining fisheries research, coastal management and capacity building. Hinchliffe, Charles (University of New South Wales). A novel approach for estimating growth and mortality of fish larvae across fine scales.
		Concurrent session 6: In-person presentations (E3) **Monitoring and management of freshwater-dependent fish and fisheries** Jones, Matthew (Arthur Rylah Institute for Environmental Research). Improving fish movement through culverts by understanding optical physiology and behaviour. Sahoo, Amiya (ICAR-Central Inland Fisheries Research Institute, Barrackpore). Determination of Environmental Flows for Teesta-IV Hydropower Project, Sikkim, India for sustainable fisheries during dry period. Farzadkhoo, Maryam (UNSW). Attracting juvenile Australian bass and silver perch into Tube Fishway. Little, Stuart (Murray-darling Basin Authority). Bringing together environmental flows, threat mitigation and habitat restoration in Australia's Murray-Darling Basin. Ling, Nicholas (Waikato University). Sniffing out aliens: using scent detection dogs to detect aquatic invasive species. Yick, Jonah (Inland Fisheries Service). European carp in Tasmania: The final stages towards achieving a statewide eradication. Haddon, Malcolm (CSIRO & IMAS - UTAS). Bias in tagging studies of abalone growth.

UTC/GMT	ACST	Tuesday 21 September
		Marsden, Tim (AFPS). Fish passage through a cone fishway on the Stung Pusat river a major tributary of the Tonlé Sap lake, Cambodia.
		Concurrent session 7: In-person presentations (Riverbank Room 1) **Feeding the world - food nutrition, safety and waste** Howieson, Janet (Curtin University). Developing Circular Economies for Australian Seafood: Barriers and Opportunities. Lapidge, Steven (Fight Food Wastet Cooperative Research Centre). Fight Food Waste Cooperative Research Centre – an industry-led research centre to reduce food loss and waste in Australia. Chung, (Alexis) Wing Huen (Curtin University). Novel Snack-Food Products using Australian Finfish Waste: Development, Validation, Viability. Nash, Kirsty. Trade and foreign fishing mediate global marine nutrient supply. Farmery, Anna (University of Wollongong). Identifying policy best-practice for linking aquatic food and food and nutrition security. Gibson, Emily (Charles Darwin University). Assessment of Indonesia's policy framework to support gender responsive and nutrition-sensitive small-scale fisheries. Gibson, Emily (Charles Darwin University). Coping or adapting? Experiences of food and nutritional insecurity in specialised fishing households in Komodo District, eastern Indonesia. Shalders, Tanika (National Marine Science Centre). Effects of climate change on seafood nutritional and sensory quality.
09:00 – 12:30	18:30 – 22:00	In-person event **Australian Society for Fish Biology 50th Celebration and Student Mixer** The Strathmore Hotel (129 North Terrace, Adelaide, South Australia)

Day 3: Wednesday 22 September 2021

UTC/GMT	ACST	Wednesday 22 September
21:30 – 22:10	07:00- 07:40	Plenary speaker – live streamed hybrid presentation (Hall C&D) **Martin Exel (SeaBOS)**
22:10 – 22:50	07:40- 08:20	Plenary speaker – live streamed hybrid presentation (Hall C&D) **Professor Ratana Chupenagdee (Memorial University of Newfoundland)**
23:00 – 01:00	08:30- 10:30	Concurrent session 1: live streamed hybrid presentations (Halls C&D) **Resource allocation & co-management** Calderwood, Julia (Marine Institute). Bridging the gap: Analysing stakeholder perceptions of management in Irish demersal fisheries to determine how successful co-management could be achieved. McIlgorm, Alistair (University of Wollongong). Australian fishing rights development – assumptions, experiences and the reality. Poissant, David (McGill University). The right conditions for community participation in fishing management; evidence from a large-scale survey in the Peruvian Amazon. Sen, Sevaly (Oceanomics). Who gets what and how? Intersectoral resource sharing in Australia. 1-hour Q&A panel discussion.
		Concurrent session 2: live streamed hybrid presentations (Hall A) **Integration of genomics in fisheries management and aquaculture** Miller, Adam (Deakin University). Using genomics to gain insights into fisheries resilience in rapidly changing environments: Australian blacklip abalone as a case study. Primmer, Craig (University of Helsinki). Rapid evolution in salmon life-history induced by direct and indirect effects of fishing. Rodriguez-Ezpeleta, Naiara (AZTI). Fisheries management in the genomics era: what have we learned so far? Walter, John (US NOAA NMFS). Close-kin mark recapture for estimating Western Atlantic Bluefin tuna population size. 1-hour Q&A panel discussion.
		Concurrent session 3: live streamed hybrid presentations (Hall B) **Small scale fisheries** Arias Schreiber, Milena (University of Gothenburg). Small-scale fisheries in three Nordic countries: struggles in a sea of developmentalist, environmentalist and scientific discourses. Bresson, Clement (Australian National University). Indigenous peoples, social enterprise and small-scale fisheries - the case of inshore fisheries in Northern Territory, Australia.

UTC/GMT	ACST	Wednesday 22 September
		Nakamura, Julia (University of Strathclyde). Legal reflections on the Small-Scale Fisheries Guidelines: building a global safety net for small-scale fisheries. Pita, Cristina (Centre for Environmental and Marine Studies (CESAM), University of Aveiro, Portugal Cesam, University of Aveiro). Small-scale fisheries in Europe: status, challenges and opportunities. 1-hour Q&A panel discussion.
		Concurrent session 4: In-person presentations (E1) **Sustainable fisheries – recovering and overfished stocks** Hunt, Taylor (Victorian Fisheries Authority). The partnership approach road to recovery of an Australian threatened native freshwater fish species - Macquarie perch. Russell, Angela (University of Adelaide). Determining spatial distribution and migration to support management of an exploited species in NSW: an otolith chemistry study. Ebner, Brendan (Tropwater, James Cook University). How do you do? - Context and frequency for grunters flipping objects to access benthic prey. Woolford, Jonas (Abalone - Wild). High production wild abalone fisheries utilizing stock enhancement. Observations from a Nuffield Scholarship. Brooker, Rohan (Deakin University). Human proximity can affect fish recruitment by altering mangrove-associated settlement cues. Zhou, Shijie (CSIRO). Sustainable fisheries with sustainable biodiversity. Smith, Kimberley (Department of Primary Industries and Regional Development). Demographic changes in western Australian salmon after a major reduction in exploitation. Elsdon, Travis (Chevron Energy Technology Company). Role of oil and gas structures in supporting fish and fisheries: are these 'skyscrapers of the sea' playing a habitat enhancement role.
		Concurrent session 5: In-person presentations (E2) **By-catch, habitat and depredation** Roberson, Leslie (University of Queensland). Not all boats are equal: Understanding variations in catch and by catch among individual operators to improve environmental performance of fisheries. Norris, Jeffrey (Department of Primary Industries and Regional Development). Seabird bycatch in a sardine purse seine fishery. Scales, Kylie (University of The Sunshine Coast). Fisheries bycatch risk is intensified in Lagrangian coherent structures: new insight from a high-resolution, data-assimilative Regional Ocean Modeling System. Carmody, Harrison (BMT Western Australia). Shark depredation in a commercial trolling fishery in sub-tropical Australia.

UTC/GMT	ACST	Wednesday 22 September
		Johnson, Grant (Department of Primary Industry and Resources). Assessing sustainability of data deficient by-product and by-catch species in a north Australian trawl fishery. Ryan, Karina (Department of Primary Industries and Regional Development, Western Australia). Improved understanding of shark depredation and mitigation methods from surveys of commercial, charter and recreational fishers in Western Australia. Edwards, Charles. Integrated estimation of the exploitation rate using swept-area methods. Barnes, Thomas (NSW Department of Primary Industries - Fisheries). Characterising seabird vessel attendance and interactions associated with demersal ocean finfish trawling.
		Concurrent session 6: In-person presentations (E3) **Global challenges - social licence, pollution, and international fisheries** Palermo, Cindy (Murdoch University). Molecular characterisation and prevalence of the enteric parasite Cryptosporidium in the invasive fish species Carassius auratus (goldfish), *Cyprinus carpio* (common carp), and *Gambusia holbrooki* (mosquito fish) in Western Australia. Phillipov, Michelle (University of Adelaide). Messages about sustainable seafood: Does media influence consumer attitudes? Hale, Benjamin (Adpower). Methods to profile and connect the provenance of wild caught prawn fisheries and their values to the community (FRDC 2018-172). Magnusson, Anders (BDO Econsearch). The link between economic contribution and social licence evidenced by economic data collection in South Australia's commercial fisheries. Clifton, Julian (University of Western Australia). Social values of man-made marine structures: empirical research from Western Australia. Zimmerhackel, Johanna (University of Western Australia). The economic value of man-made marine structures for fisheries. Threlfall, Siobhan (Oceanwatch Australia). Tide to Tip - An oyster industry waterway clean-up initiative. Leyland, Guy (WA Fishing Industry Council). WA Government/WAFIC MSC Initiative.
		Concurrent session 7: In-person presentations (Riverbank Room 1) **People - women in fisheries, workforce, investment, safety and building capacity** Anderson, Mark (Torres Strait Regional Authority). Multi-stakeholder Indigenous partnerships: Towards regional economic independence through commercial fisheries ownership in the Torres Strait. Steenbergen, Dirk (University of Wollongong). Strengthening the 'in-betweeners': enabling sub-national governance to support community-based fisheries management in Vanuatu.

UTC/GMT	ACST	Wednesday 22 September
		Song, Andrew (University of Technology Sydney). Fishers' capacity to cope with maritime security entanglement. House, Jenny (Charles Darwin University). Gendered participation in community-based fisheries management in Timor-Leste. Hill, Nicholas (Coast 4c). Coast 4C: an inclusive approach to securing sustainable small-scale fisheries. Harrington, Julian (Tasmanian Seafood Industry Council). Stay Afloat: Drowning the stigma of mental health in the Tasmanian seafood industry. Nelson, Clayton (Austral Fisheries Pty Ltd). The Fishing Industry- Is it Maritime Safety's last frontier? Adams, Tanya (Taylored Health and Safety Pty Ltd). National Seafood Industry Workplace Safety Toolkit.
23:30 – 00:15	09:00-10:15	Virtual meeting **World Council of Fisheries Societies meeting**
00:30 – 01:30	10:30-11:00	**MORNING TEA**
01:30 – 03:00	11:00 – 12:30	Concurrent session 1: live streamed hybrid presentations (Halls C&D) **Supply chains, traceability and marketing** Cusa, Marine (Liverpool John Moores University). Where did my seafood come from? A point-of-origin framework for using DNA fingerprinting and stable isotopes to verify provenance claims. De Sousa, Emily (University of Guelph). Alternative seafood networks during COVID-19: Implications for resilience and sustainability. Lindley, Jade (The University of Western Australia). Seafood fraud: regulation and responses. Pascoe, Sean (CSIRO Oceans and Atmosphere). Impact of imports and farmed salmon on domestic wild caught fish species in Australia. 30-minute Q&A panel discussion.
		Concurrent session 2: live streamed hybrid presentations (Hall A) **Environment and fisheries / Climate change** TBC
		Concurrent session 3: live streamed hybrid presentations (Hall B) **Coastal fisheries** Gorelli, Giulia (FAO). How vulnerable are small-scale fisheries? An analysis of the small-scale fisheries catch portfolio diversity at a global scale. Mizrahi, Meira (Wildlife Conservation Society). Opportunities for Co-Management of Coastal Fisheries in Myanmar's Rakhine Seascape. Prince, Jeremy (Biospheric Pty Ltd). Spawning Potential Surveys: A recipe for informing and motivating management reform in coastal fisheries.

UTC/GMT	ACST	Wednesday 22 September
		Ruano-chamorro, Cristina (Arc Centre of Excellence for Coral Reef Studies, James Cook University). Disparities in fishers' livelihood impacts from coral reef co-management. 30-minute Q&A panel discussion.
		Concurrent session 4: In-person presentations (E1) **Sustainable fisheries – recovering and overfished stocks** Ferguson, Greg (South Australian Research and Development Institute). From boom to bust and back again – recovery of the South Australian surf clam (*Donax deltoides*) fishery and the contribution from collaborative, fishery-independent, spatially explicit monitoring. Smith, David (Centre for Marine Socio-ecology University of Tasmania). What could Australia's total sustainable wild fisheries production be? Becker, Alistair (NSW Department of Primary Industries). Synthesising aquaculture-based and habitat-based enhancement of iconic sportfish within NSW estuaries: optimising release strategies. Raoult, Vincent (University of Newcastle). Towards a continent-scale framework for estimating the contribution and value of any estuary habitat to commercial fisheries from stable isotopes. Walters, Shane (Department of Primary Industries and Regional Development, Western Australia). Roadmap to recovery for an iconic Western Australian snapper fishery. Martinez Baena, Francisco (Macquarie University). Remnant Oyster Reefs as Fish Habitat in New South Wales, Australia: A Seascape Perspective. Oliver, Rebecca (NT Fisheries, Department of Primary Industry and Resources). Challenges in quantifying the success of recovery strategies in WA scallop fisheries in a dynamic environment.
		Concurrent session 5: In-person presentations (E2) **By-catch, habitat and depredation** Dennis, Joshua (Flinders University). Assessing the effects of non-lethal consumptive activities on a non-target species. Pini-fitzsimmons, Joni (Macquarie University). Space use of smooth stingrays in response to food provisioning. Evans, Scott (Department of Primary Industries and Regional Development, Western Australia). Quantifying demersal trawl footprints for improved reporting of fishery and seabed interactions; a Western Australian third-party certification case study. Pitcher, C. Roland (CSIRO Oceans & Atmosphere). Assessing seabed status in 24 trawled regions of the world. Noell, Craig (South Australian Research and Development Institute - Aquatic Sciences). Quantifying the footprint of an Australian penaeid-

UTC/GMT	ACST	Wednesday 22 September
		trawl fishery to support ecological sustainability and eco-certification requirements. Mitchell, Jonathan (Queensland Government, Department of Agriculture and Fisheries). A global perspective on shark depredation: future research priorities and lessons learnt from research in Western Australian fisheries. Bromhead, Don (Australian Fisheries Management Authority). Modern tools for an old challenge - The evolution of seabird management in Australia's Longline Fisheries.
		Concurrent session 6: In-person presentations (E3) **Global challenges – social licence, pollution, and international fisheries** Datta, Samik (NIWA). Predicting and comparing future epidemics of invasive marine species in New Zealand. Camilieri-Asch, Victoria (Queensland University of Technology). Nociception in cartilaginous fishes: are we missing a link? Current knowledge and future research priorities. Magnusson, Anders (BDO Econsearch). Maximising the value of administrative data for modelling the economic contribution of commercial fishing. Rowe, Simon (Oceanwatch Australia). Source reduction of Professional fishing debris. Dolling, Sophie (The University of Adelaide). Chemical pollution in microplastics: Are plastics a vector for the translocation of pollutants through marine food webs? Preece, Ann (CSIRO). An innovative recruitment monitoring program that provides absolute abundance data for assessment and management: the southern bluefin tuna genetic-tagging program. Shamsi, Shokoofeh (Charles Sturt University). Climate change: parasite interactions with fish and what can it mean for the world fisheries?
		Concurrent session 7: In-person presentations (Riverbank Room 1) **People – women in fisheries, workforce, investment, safety and building capacity** Eayrs, Stephen (Smart Fishing Consulting). The SeSAFE learning management system: delivery of cost-effective and flexible safety training to the fishing and aquaculture industry. Grech, Michelle (Australian Maritime Safety Authority). Study examing fatigue as a safety hazard in domestic commercial fishing vessels in Australia. Dyer, Greg (Sydney Fish Market). Sydney Fish Market Redevelopment: A New Frontier for the Australian Seafood Industry.

UTC/GMT	ACST	Wednesday 22 September
		Kandulu, John (BDO Econsearch). Improving economic viability by developing effective organisational structures: A case study in Australia's exported live-fish fisheries. Grantham, Ruby (ARC CoE Coral Reef Studies, James Cook University). The seasonal dynamics of gleaning in coastal livelihoods and wellbeing. Heskins, John (Spatial Vision). Discovering the value of seafood industry data. Thomas, Alexandra (Alex Thomas Pty Ltd). #PlantASeedForSafety (...and #SaveALifeListenToYourWife!).
	12:30 – 13:00	LUNCH
03:30 – 05:00	13:00 to 14:30	Concurrent session 1: virtual workshop (Hall A) **On getting published – insights from journal editors.** Contact: Steven Cooke (Carleton University)
		Concurrent session 2: In-person presentations (Hall C&D) **Stock assessment and modelling** Leigh, George (Queensland Department of Agriculture and Fisheries). The quasi-negative-binomial generalized linear model for catch rates of tailor (Pomatomus saltatrix) in Queensland. Day, Jemery (CSIRO). Development of a tag-based spatial model for Patagonian toothfish at Macquarie Island. McKenzie, Jeremy (NIWA). Use of agent-based operating models in a New Zealand snapper (*Pagrus auratus*) stock assessment to evaluate estimator model resilience to spatiotemporal complexity. Martinho, Filipe (Centre for Functional Ecology, Department of Life Sciences, University of Coimbra). Influence of climate variations on the Portuguese local and coastal fish landings over the last 20 years. Koh, Patricia (University of Melbourne). Fish in hot water: how do warmer and drier conditions impact trout growth and productivity?
		Concurrent session 3: In-person presentations (Hall B) **Future of fisheries** Thomas Travaille, Kendra (Minderoo Foundation). Transforming fisheries through market-based interventions. Disspain, Morgan (Niche Environment and Heritage). Djenj Mankarre: Bininj Fishing Past, Present and Future. Hawes, Katherine (Aquarius Lawyers). The 'Blue space: future law and diplomacy. Obregón, Clara (Murdoch University). Understanding information-sharing behaviour in a crab fishery using social network analysis. Leeworthy, Grant (Fishermen Direct Pty Ltd). Advances in spatially relevant fisheries assessments emerging from the Great Barrier Reef Beche-de-mer Fishery research program 2004-present. Cummins, Gabrielle (UWA). Ocean Accounts; their use, advantages, disadvantages and real-world application.

UTC/GMT	ACST	Wednesday 22 September
		Concurrent session 4: In-person presentations (E1)
		Sustainable fisheries – recovering and overfished stocks
		Nedosyko, Anita (The Nature Conservancy). Restoring shellfish reefs for fish habitat.
		Ayres, Renae (Arthur Rylah Institute). The Angler Riparian Partnerships Program.
		Smith, Jennifer (University of Tasmania). Can we trust Southern Rock Lobsters to control range-expanding, habitat-destroying Longspined Sea Urchins in Tasmania?
		Ferretto, Giulia (UNSW). Understanding the factors that promote healthy ecosystem functions of the endangered seagrass *Posidonia australis*.
		Smart, Jonathan (SARDI Aquatic Sciences). Conceptual development of a decision making framework to determine a tiered management approach for a multi-species fishery.
		Mundy, Craig (University of Tasmania). Implementing an Empirical Harvest Strategy in a spatially structured invertebrate fishery: Lessons from the first three years.
		Concurrent session 5: In-person presentations (E2)
		By-catch, habitat and depredation
		Mattone, Carlo (Marine Data Technology Hub, Colllege of Science and Engineering, James Cook University). Using automated electronic observers to quantify catch and by-catch in the Great Barrier Reef coral trout fishery.
		Earl, Jason (South Australian Research and Development Institute (Aquatic Sciences)). Assessing the effectiveness of underwater crackers for reducing the impacts of fur seals on South Australia's Lakes and Coorong Fishery.
		Molony, Brett (CSIRO). Addressing the Challenges of Depredation.
		Cleeland, Jaimie (University of Tasmania). Combined risk and quantitative assessment approach to Southern Ocean fisheries bycatch: Deep water skates (Bathyraja spp.) in the Patagonian toothfish fishery as a case study.
		Elliott, Scott. Restoring Corner Inlet's seagrass meadows - a case study for ecosystem regeneration globally.
		Harvey, Euan (Curtin University). Understanding the Value of Man-made Marine Structures.
		Concurrent session 6: In-person presentations (E3)
		Global challenges – social licence, pollution, and international fisheries
		Fletcher, Rick (UN- Food and Agriculture Organisation). Measuring implementation of the Ecosystem Approach to Fisheries (EAF) management using case studies completed for African and deepsea ABNJ fisheries.

UTC/GMT	ACST	Wednesday 22 September
		Rivas, Priscilla (University of New South Wales). The Agreement on Port State Measures: Pacific Islands Perspective. Barclay, Kate (University of Technology Sydney). Social & economic monitoring for fisheries: tracking wellbeing from Western and Central Pacific tuna industries. Ogunola, Solomon (University of Adelaide, 5005, Adelaide, Australia). Microplastics in commercial decapod crustaceans from Australian coastal waters. Magnusson, Anders (BDO Econsearch). Economic rent as a measure of value creation by commercial fisheries: 20 years of data visualised for South Australia.
		Concurrent session 7: In-person session (Riverbank Room 1) **People – women in fisheries, workforce, investment, safety and building capacity** Denny, Lisa (Workforce Demography). Preparing the Tasmanian seafood industry for the new work order. Shaw, Jenny (Western Australian Marine Science Institution). Australian Fishing Women: where are they? Drummond, Lauren (Marketing and Communications Manager). Sydney Fish Market Redevelopment: A New Frontier for the Australian Seafood Industry. Marshall, Jo (Seafood Industry Australia). Stay Afloat - Addressing the challenge of mental health in the commercial fishing and aquaculture sector. Pearce, Janine (University of South Australia). Are workers being protected? COVID-19 impact on small scale fisheries and aquaculture. Rabbitt, Sheridan (University of Queensland). A framework for assessing women's engagement in community-based fisheries management in the Pacific using a case study from Marovo Lagoon, Solomon Islands.
05:00 – 05:30	14:30-15:00	**AFTERNOON TEA**
05:30 – 06:15	15:00-15:45	Plenary speaker – live streamed hybrid presentation (Hall C&D) **Ms Kerstin Forsberg (Founder and Director of Planeta Océano)**
06:30 – 08:30	16:00 – 18:00	Concurrent session 1 - live streamed hybrid presentations (Halls C&D) **Advances in fishing vessels and fishing gear** Chin, Andrew (James Cook University). A better way to fish? Trialing tunnel net fish 'traps' to improve bycatch outcomes and fisher's social license in the Great Barrier Reef. Haasnoot, Tim (Prosea Marine Education). Success and failure in fishing gear innovation pathways: the case of the pulse trawl. Laird, Adrianne (NPF Industry Pty Ltd). Industry gear innovations achieve bycatch reduction target in the Northern Prawn Fishery.

UTC/GMT	ACST	Wednesday 22 September
		Melli, Valentina (DTU Aqua, National Institute of Aquatic Resources). Flexible anterior gear modifications to reduce fish bycatch in crustacean trawl fisheries. Rousseau, Yannick (University of Tasmania). Technological creep in world fisheries and its impact. 45-minute Q&A panel discussion.
		Concurrent session 2 - live streamed hybrid presentations (Hall A) **Biomarkers** Chung, Ming-Tsung (The University of Tokyo). Thermal sensitivity of field metabolic rates in aquatic ectotherms: implications for fish and fisheries in future oceans. Darnaude, Audrey (Marbec (CNRS)). Multidisciplinary approaches to elucidate lifetime connectivity and its impact for fisheries production in coastal marine fishes: the case study of the sequential hermaphrodite *Sparus aurata* in the Mediterranean. Doubleday, Zoe (University of South Australia). Same but different: how otolith-like structures can help us to reconstruct stories of marine life. Lueders-Dumont, Jessica (Smithsonian Institution, Smithsonian Tropical Research Institute). An ear to the past: reconstructing past food web structure using nitrogen isotopes in fossil otoliths. Willmes, Malte (University of California, Santa Cruz). Looking at the past to predict the future: Using isotope tools to compare historical and contemporary salmon populations in a heavily altered landscape. 45-minute Q&A panel discussion.
		Concurrent session 3 - live streamed hybrid presentations (Hall B) **Conservation** Lintermans, Mark (Centre for Applied Water Science, University of Canberra). The conservation status of Australian freshwater fish: what are the threats and where to from here? Lutz, Maiko (Monash University). Assessing recovery and conservation success using the IUCN Green Status of Species in a workshop setting: a case study for Australian freshwater fish. Panero, Marta (James Cook University). Gorgonian corals and their significance as ecological engineers for marine fishes and invertebrates. 75 – minute Q&A panel discussion.
		Concurrent session 4 – in-person presentations (E1) **Sustainable fisheries – recovering and overfished stocks**

UTC/GMT	ACST	Wednesday 22 September
		Wilcox, Chris (CSIRO Australia). Estimating illegal fishing from enforcement officers. Acharya, Debaditya (CSIRO). Fishing for anomalies: Machine learning approaches to detect anomalous behaviour by fishing vessels. Todd, Charles (Department of Environment, Land, Water and Planning: Arthur Rylah Institute for Environmental Research). How to rebuild estuarine fish stocks: a population model to assess flow-driven recruitment. Cresswell, Katie (University of Tasmania). Testing depletion targets for an urchin fishery in Tasmania. Rossetto, Isaac (University of Adelaide). Assessing the Sustainability of Sea Snake Harvest in Southeast Asia. Keane, John. Fishing for Climate: the rollercoaster of antagonistic fisheries and socio-economic issues in the establishment of a harvest industry for a range-extending species. Tremblay-boyer, Laura (Dragonfly Data Science). Changes in the distribution of highly mobile marine pelagics follow long-term population declines. Durante, Leonardo (University of Otago Department of Marine Sciences). Shifting trophic architecture of marine fisheries in New Zealand: implications for guiding effective ecosystem-based management.
		Concurrent session 5 – in-person presentations (E2) **By-catch, habitat and depredation** Coulson, Peter (Department of Primary Industries and Regional Development). Effectiveness of deterrents in reducing shark depredation with recreational line fishing. Hughes, Julian (NSW Department of Primary Industries). Interaction without bycatch: factors affecting seabird abundance and interaction with the nearshore hook-and-line charter fishery in New South Wales, Australia. Hoel, Kristin (James Cook University). The social dimensions of shark depredation on Queensland fisheries. Carrington, Victoria (Victoria University of Wellington). Assessing the impact of fisheries bycatch on the southern lanternshark, *Etmopterus granulosus*, an abundant deep-sea shark. Lear, Karissa (Murdoch University). Post-release mortality and physiological stress response of large coastal sharks in a commercial longline fishery. Wong, Darren (Deakin University). Age, growth and maturity of Southern Ocean skates (Bathyraja spp.) from the Kerguelen Plateau. Nankivell, James (University of Adelaide). Sea snakes in by-catch of Western Australian prawn trawl fisheries. Deng, Roy (CSIRO). Standardizing catch rates for rare black tiger prawns in the NPF.

UTC/GMT	ACST	Wednesday 22 September
		Concurrent session 6 – in-person presentations (E3) **Global challenges - social licence, pollution, and international fisheries** Pring, Nikita (The University of Adelaide). Plastic Pollution in Mangroves. Mccall, Emma (BMT). Numerical modelling as a risk management toolto aid in reducing risk of aquaculture on wild fish stocks resulting from lice infestation and treatment. Bornt, Katrina (The University of Western Australia). An undocumented impact of fishing. Gardner, Caleb (Institute for Marine and Antarctic Studies, University Of Tasmania). Would we really be starving without aquaculture? Jones, Alice (The University of Adelaide). Climate-smart marine aquaculture: identifying vulnerabilities, leverage points and opportunities for emissions reduction and sequestration. Heldsinger, Michael (University of Otago). Investigating shark distribution within Southern NZ marine reserves. Oakley, Martin (Black Stump Technologies). Solar Powered Cold Chains for Community Development. Mellin, Camille (University of Adelaide). Direct and indirect impacts of marine heatwaves on a coral reef fishery. Moniruzzaman, Sheik Md (Tokyo University of Marine Science and Technology). Properties of lizardfish scale collagen films incorporated with pyrogallol and curcumin.
		Concurrent session 7 – in-person presentations (Riverbank Room 1) **People - women in fisheries, workforce, investment, safety and building capacity / COVID – impact on fisheries** Grech, Michelle (Australian Maritime Safety Authority). A data driven approach to sustainable fishing safety: A Case study focusing on improving safety in Dory Operations. Schirmer, Jacki (University of Canberra). When, why and how does going fishing support the wellbeing of fishers? King, Tanya (Deakin University / Women in Seafood Australasia). End of an Era - The Last Ten Gippsland Lakes Fishermen. Rust, Steven (Institute for Marine and Antarctic Studies). Responding to unintended consequences - evaluating ITQs during the COVID-19 pandemic. Moore, Andy (ABARES). Impact of Covid-19 on Recreational Fishing activity in Australia. Dorji, Namgay (University of Tasmania). Coping with a bolt from the blue: Small-scale Bhutanese fish farmers' response to COVID-19 countermeasures.

UTC/GMT	ACST	Wednesday 22 September
		Ryan, Karina (Department of Primary Industries and Regional Development). Initial insights on the impact of COVID-19 on boat-based recreational fishing in Western Australia.
09:00 – 13:00	18:30 – 22:30	**In-person event** Celebration of Great Australian Seafood

Day 4: Thursday 23 September 2021

UTC/GMT	ACST	Thursday 23 September
21:30 – 23:00	07:00 – 08:30	**In-person event** International Power Up Breakfast
23:00 – 23:45	08:30 - 09:15	Plenary speaker – live streamed hybrid presentation (Hall C&D) **Ms Meryl Williams**
00:00 – 02:15	09:30 - 11:45	Concurrent session 1 – Live streamed hybrid presentations (Halls C&D) **People - women in fisheries, workforce, investment, safety and building capacity** Abernethy, Kirsten (Sea Change Consulting). Understanding the levels of women's involvement in the seafood sector and barriers to increased participation. Robinson, Tom (Goolwa PipiCo). 10,000 years of catch history. The story of Goolwa PipiCo and their indigenous commercial partners, the Ngarrindjeri people. Wichmann, Niels (Danish Fishermen's Association). The Danish Story – Education, Safety, Recruitment in the Fisheries Sector. Li, Yinji (Tokai University). Big questions in the era of big change: Examining sustainability and viability in Shizuoka small-scale fisheries through a transdisciplinary approach. 1-hour Q&A panel discussion. Concurrent session 2 – Live streamed hybrid presentations (Hall B) **Illegal fishing** Cote, David (Fisheries and Oceans Canada). Social-ecological management results in sustained recovery of an imperiled salmon population. Hamukuaya, Hashali (Nelson Mandela University). Corruption as a Fisheries Crime in Namibia. Mackay, Mary (CSIRO). The Intersection Between Illegal Fishing, Crimes at Sea, and Social Well-Being. Oyanedel, Rodrigo (University of Oxford). Motivations for (non-) compliance with rules and regulations by small-scale fishers. 1-hour Q&A panel discussion. Concurrent session 3 – Live streamed hybrid presentations (Hall C) **Stock assessment and modelling** Punt, Andre (University of Washington). Can Stock Assessment Science Support Ecosystem Based Fisheries Management?

UTC/GMT	ACST	Thursday 23 September
		Chaloupka, Milani (The University of Queensland). Inferring causal impact of policy interventions using Bayesian state-space structural time series modelling of counterfactual predictions. Longo, Catherine (Marine Stewardship Council) and Natalie Dowling (CSIRO). The fishery improvement toolbox: are digital tools making management science more accessible? 75-minute Q&A panel discussion.
		Concurrent session 4 – In-person presentations (E1) **Biology and ecology** Guillemin, Tristan (Macquarie University). Deciphering the trophic ecology of marlin using stable isotope analysis. Tosetto, Louise (Macquarie University). Could bluelined goatfish be using dynamic colour change as a signalling tool? Nesa, Nur Un (Gamete and Embryology Laboratory, College of Public Health, Medical and Veterinary Sciences, James Cook University). Developing biomarkers for fertility in female redclaw crayfish to boost commercial production. Hua, Qiaz Q.H. (University of Adelaide). Advancing techniques in proteomics to understand species response to environmental change: a case study with octopus. Hall, Karina (NSW Department of Primary Industries). Stock status assessments of octopuses harvested by commercial fisheries in eastern Australia. Day, Ryan (University of Tasmania). The impact of exposure to a seismic survey on juvenile and puerulus Southern Rock Lobster *Jasus edwardsii* (Decapoda:Palinuridae). Hanamseth, Roshan (University of New South Wales). Environmental factors influencing variation in Blue Swimmer Crab in south eastern Australia. Kolbusz, Jessica (University of Western Australia). Changes in *Panulirus cygnus* settlement along Western Australia using a long time series. McAllister, Jaime (CSIRO). Abalone catch size - composition as a performance indicator in empirical harvest strategies.
		Concurrent session 5 – In-person presentations (E2) **Sharks and rays** Finucci, Brit (NIWA). Marine oils and fermented delicacies: the global status of deepwater elasmobranchs. Smart, Jonathan (SARDI Aquatic Sciences). Can multi-species shark longline fisheries be managed sustainably using size limits? Theoretically, yes. Realistically, No. Huveneers, Charlie (Flinders University). Can sawfish bycatch within the Northern Prawn Fishery (NPF) be mitigated using an electric field?

UTC/GMT	ACST	Thursday 23 September
		Harry, Alastair (Department of Primary Industries and Regional Development WA). Quantifying maternal reproductive output of chondrichthyan fishes.
		Barton, Diane (Charles Sturt University). Parasites of hammerhead sharks in the waters off Australia: what can they tell us about their hosts?
		Kanno, Shiori (James Cook University). Habitat use and movement of blacktip reef sharks *Carcharhinus melanopterus* in a mangrove system.
		Gooden, Adrienne (Flinders University). Assessing the effects of non-lethal consumptive use of marine resources on the energy budget of a top predator.
		Braccini, Matias (Department of Primary Industries and Regional Development of Western Australia). Heaven or hell: Is the west coast of Australia a global shark risk hotspot or an example of sustainable management?
		Birkmanis, Charlotte (The University of Western Australia). Pelagic shark occurrence and distribution around Australia.
		Concurrent session 6 – In-person presentations (E3) **Climate change** Spillman, Claire (Bureau of Meteorology). Seasonal forecasting for decision support in marine fisheries and aquaculture in Australia under a changing climate.
		Hartog, Jason (CSIRO Oceans and Atmosphere). Application of Species Distribution Models for management of tuna species using real time data and seasonal and decadal forecasts.
		Smith, Shannen (University of New South Wales). Coastal tropicalisation shifts trophic composition and leads to more winners than losers for fish communities.
		Sgarlatta, Maria Paula (UNSW). Similar changes in fish functional diversity through space and time in temperate reefs undergoing tropicalisation.
		Matis, Paloma (Sydney Institute of Marine Science). Long term monitoring of larval fishes around Australia; trends, highlights and opportunities.
		Crook, David (La Trobe University). Environmental drivers of recruitment in a tropical estuarine fishery: monsoonal effects and vulnerability to water resource development.
		Randall, Jo (Charles Darwin University). Drivers of productivity in blackspotted croaker (*Protonibea diacanthus*) populations of the Northern Territory.
		Roberts, Brien (Charles Darwin University). Influence of climate on catadromous migration in juvenile barramundi.
		Concurrent session 7 – In-person presentations (Riverbank Room 1)

UTC/GMT	ACST	Thursday 23 September
		Recreational fisheries Tracey, Sean (Institute for Marine and Antarctic Studies - IMAS). A national survey to understand the nature and scale of Australia's recreational Southern Bluefin Tuna fishery. Lindley, Jade (The University of Western Australia). Optimising compliance outcomes in recreational fisheries. Navarro, Matthew (The University of Western Australia). Incorporating fisher behaviour and social objectives into recreational fisheries management using random utility models. Jeavons, Toby (Victorian Fisheries Authority). Mandatory and voluntary approaches utilising digital technology and citizen science for better recreational fishery monitoring – GoFishVic and Vic RL Tagging apps. Crisafulli, Brett (Edith Cowan University). Refining harvest estimation for recreational fisheries. Smallwood, Claire (Department of Primary Industries and Regional Development). Disaggregating statewide recreational fishing surveys to estimate effort and catch at small spatial scales. Lai, Eva (Department of Primary Industries and Regional Development). Re-constructing a time series of catch for a recreational boat-based, multi-species fishery. Desfosses, Cameron (Department of Primary Industries and Regional Development). Supplemented roving survey to quantify spatio-temporal recreational fishing effort in an estuarine Ramsar wetland. West, Phil (Siren Cameras Pty Ltd). Siren Fishing Camera. Providing groundbreaking visuals of Recreational Fishing experiences, and Big Data insights of Fishery Health within Coastal Waters.
02:15 – 02:30	11:45 - 12:00	MORNING TEA
02:30 – 04:00	12:00- 13:30	Concurrent session 1: live streamed hybrid presentations (Halls C&D) **Feeding the world - food nutrition, safety and waste** TBC
		Concurrent session 2: live streamed hybrid presentations (Hall A) **Communications** Fausch, Kurt (Colorado State University). For the love of rivers: crossing boundaries to reach diverse audiences through narrative non-fiction linked with video. Pecl, Gretta (Centre for Marine Socioecology). Reflections on a decade of climate change communication and engagement using a wide range of approaches with different marine stakeholder groups. Rasoloniriana, Rindra (Blue Ventures Conservation). An innovative, integrated loop involving small-scale fishers at each stage of governance, from data collection to restitution to choosing the best next action - Case of Madagascar LMMAs. Rayner, Tom (NSW DPI Fisheries). Human voices for fish.

UTC/GMT	ACST	Thursday 23 September
		30-minute Q&A panel discussion.
		Concurrent session 3: live streamed hybrid presentations (Hall B) **Data poor fisheries** Bessell-Browne, Pia (CSIRO). Overfished stocks: how to assess population status with limited data? Castello, Leandro (Virginia Tech). A method to estimate past fisheries catch-rates based on fishers' recall. Dougherty, Dawn (The Nature Conservancy). FishPath: An Engagement Process, Decision-Support Tool, and Network of Practitioners for Harvest Strategy Development in Data- and Capacity-Limited Fisheries. Ovando, Dan (University of Washington). Future Directions for Global Fishery Assessments. 30-minute Q&A panel discussion.
		Concurrent session 4: live streamed hybrid presentations (E1) **Biology and ecology** Hewitt, Daniel (University of New South Wales). What makes a Giant Mud Crab run? Watson, Maggie (Charles Sturt University). Stop stressing me out! Measuring stress and health in the Murray crayfish. Taylor, Matthew (NSW Department of Primary Industries - Fisheries). Evaluating the role of spatial closures in a multi-jurisdictional penaeid (shrimp) trawl fishery. Beckmann, Crystal (SARDI). ENSO driven fluctuations in a small-scale South Australian prawn trawl fishery. Tuffley, Emma-Jade (The University of Western Australia). Not putting all your eggs in one basket: catchability is affected by the reproductive cycle in female western rock lobsters. Koefoed, Inigo (WA Department of Primary Industries and Regional Development). Variation in the catchability of penaeid prawns (shrimps) in sub-tropical embayments.
		Concurrent session 5: in-person presentations (E2) **Sharks and rays** Burke, Patrick (Macquarie University). Struggling with age: Common sawsharks (*Pristiophorus cirratus*) defy age determination using a range of traditional methods. D'Alberto, Brooke (James Cook University). The extinction risk for rhino rays (Order Rhinopristiformes) – what we know and what we can do next. Dudgeon, Christine (University of Queensland). Uncovering cryptic chondrichthyan species with genomics.

UTC/GMT	ACST	Thursday 23 September
		Garces, Karla (University of Melbourne). Is the Mexican elasmobranch fishery at rising risk? Observed and projected oceanographic changes in the Gulf of California and adjacent Mexican Pacific waters. Raoult, Vincent (University of Newcastle). Predicting habitat range of shark populations from stable isotopes: a case study with great hammerhead sharks (*Sphyrna mokarran*). Simpfendorfer, Colin (James Cook University). Shark conservation in a sea of people: a multidisciplinary approach to designing MPAs that address overfishing.
		Concurrent session 6: in-person presentations (E3) **Climate change** Bolin, Jessica (University of The Sunshine Coast). Forecasting swordfish quality in a climate-change hotspot: a tool for dynamic industry adaptation. Pratchett, Morgan (Arc Centre of Excellence for Coral Reef Studies, James Cook University). Effects of climate change on coral trout and associated fisheries. Hobday, Alistair (CSIRO Oceans and Atmosphere). Preparing fisheries for the critical decade. Mayne, Benjamin (CSIRO). Non-lethal age estimation of three threatened fish species using DNA methylation: Australian lungfish, Murray cod, and Mary River cod. Plaganyi, Eva (CSIRO). Extreme science: when variable fisheries become even more variable.
		Concurrent session 7: in-person presentations (Riverbank Room 1) **Recreational fisheries** Taylor, Stephen (Department of Primary Industries and Regional Development). Integrating survey methods for the ongoing monitoring of a remote, iconic Australian recreational fishery. Tate, Alissa (Department of Primary Industries and Regional Development Western Australia). Validation of species identification between off-site and on-site recreational fishing surveys. Frijlink, Sven (Wild Fisheries Management Branch Tasmania). Reconceptualising recreational fisheries management in Tasmania: attending to the needs of a changing fishery. Miles, Nathan (NSW DPI (Fisheries)). Reeling in fish numbers: Use of hydroacoustic techniques to provide biomass estimates and improve angler engagement in reservoir based fisheries in NSW.
04:00 – 04:30	13:30-2:00	**LUNCH**
04:30 – 06:00	13:30-15:30	**Workshop (live streamed – hybrid) (Hall A)** Stay afloat – increasing resilience and wellbeing in the seafood sector; a new approach to mental healthiness. Jo Marshall (Culturise)

UTC/GMT	ACST	Thursday 23 September
04:30 – 06:15	14:00-15:45	**In-person meeting (Hall C&D)** Australian Society for Fisheries Biology (ASFB) Annual General Meeting
06:00 – 06:30	15:30 - 16:00	**AFTERNOON TEA**
06:30 – 07:10	16:00-16:40	Plenary speaker – live streamed hybrid presentation (Hall C&D) **Prof Kaneko on behalf of Prof Tsukamoto (University of Tokyo)**
07:10 – 07:50	16:40-17:20	Plenary speaker – live streamed hybrid presentation (Hall C&D) **Mr Matt Osborne (Northern Territory Department of Primary Industries)**
08:30 – 10:30	18:30-20:00	Concurrent session 1: live streamed hybrid presentations (Halls C&D) **Anguillid eels** Potaka, Ben (Te Wai Māori Trust). Te Mana o Ngā Tuna – enhancing tuna through an indigenous world view that prioritises the aspirations of the environment and our tuna. Hanzen, Céline (University of Kwazulu-natal). Slippery customers for conservation: diversity, distribution and spatial ecology of freshwater eels (Anguilla spp.) in South Africa. Koster, Wayne (Arthur Rylah Institute). Tracking Australian eels to crack the mystery of their oceanic migration. Rohtla, Mehis (Norwegian Institute of Marine Research). Seasonal movements of yellow eels along salinity gradients in Norwegian fjords: The overlooked role of marine habitat in European eel continental life-history. 1-hour Q&A panel discussion. Concurrent session 2: live streamed hybrid presentations (Hall A) **Indigenous fisheries** De Sousa, Emily (University of Guelph). Values, challenges, and opportunities for resilience presented by alternative seafood networks. Kitolelei, Salanieta (University of The South Pacific). Gems of time – Tales of fisherwomen and their local ecological knowledge – Fiji. Miller, Delahay (Primary Industries and Regions South Australia, PIRSA). Recognising Aboriginal Fishing Rights in South Australian Fisheries Policy and Management. Reid, Andrea (University of British Columbia). "Two-Eyed Seeing": An Indigenous framework to transform fisheries research and management. 1-hour Q&A panel discussion. Concurrent session 3: live streamed hybrid presentations (Hall B) **Fisheries monitoring in support of sustainable fisheries**

UTC/GMT	ACST	Thursday 23 September
		Alger, Brett (NOAA Fisheries). 21st Century Fisheries Monitoring: Expanding emerging data collection tools and analytics to support next-generation stock assessments and real-time management. Antelo, Luis T. (Marine Research Institute (IIM-CSIC)). Artificial intelligence techniques for real-time monitoring of fishing catches: The iOBSERVER. Benoît, Hugues (Fisheries and Oceans Canada). A unified framework for the development and statistical assessment of catch monitoring programs. Pastoors, Martin (Pelagic Freezer-trawler Association). Opportunities and challenges in making fisheries responsible for monitoring: comparing self-sampling approaches in pelagic fisheries. 1-hour Q&A panel discussion.
		Concurrent session 4: in-person presentations (E1) **Biology and ecology** Durante, Erica (University of South Australia). Growth and age of octopus in Australasia. Day, Jeremy (UON/UOW). Dietary analysis and mesocosm feeding trials confirm the Eastern Rock Lobster, *Sagmariasus verreauxi* as a generalist predator which can avoid ingesting urchin spines during feeding. Ahamed, Ferdous (Patuakhali Science and Technology University). Morphological and genetic differences between landlocked and migratory common smelt populations on Chatham Island. Blaha, Stephen (SARDI). Diving into fisher experience: Do new entrants and fleet turnover depress catch rates in abalone (*Haliotis laevigata* and *H. rubra*) fisheries. Scoulding, Ben (CSIRO). Survey design and assessment considerations for deep, aggregating snappers in reef environments. Ward, Tim (SARDI). Improving the precision of the Daily Egg Production Method; lessons learned from sardine surveys conducted off South Australia since 1995. Ikedife, David (Hydro Tasmania). Development of downstream passage options for short-finned eels; the Trevallyn dam downstream eel bypass. Beentjes, Mike (National Institute of Water and Atmospheric Research Ltd (NIWA)). Tools for monitoring the commercial longfin eel (*Anguilla dieffenbachii*) fishery in New Zealand.
		Concurrent session 5: in-person presentations (E2) **Sharks and rays** Kirke, Amy (Charles Darwin University). Reproductive biology of two bycatch shark species in the Northern Territory.

UTC/GMT	ACST	Thursday 23 September
		Mitchell, Jonathan (Queensland Government, Department of Agriculture and Fisheries). Galapagos shark movement patterns, residency and interactions with fishing vessels at Lord Howe Island, Australia. Huveneers, Charlie (Flinders University). Cross-jurisdictional movement patterns of sympatric temperate whaler sharks: implication for fisheries management. Hyde, Ciaran (Griffith University). Global research effort for batoids indicates bias and imbalances in conservation efforts. Jewell, Oliver (Murdoch University). Circadian rhythms are conserved across populations and life stages of a globally distributed marine predator.
		Concurrent session 6: in-person presentations (E3) **Climate change** Ogier, Emily (Centre for Marine Socioecology; Institute of Marine and Antarctic Studies, University of Tasmania). Adaptation of fisheries management to climate change. Koehn, John (Arthur Rylah Institue For Environmental Research). Climate change, droughts, fires and fish kills: the future for freshwater fish in Australia? Fowler, Anthony (South Australian Research and Development Institute). Recruitment variability for Snapper in South Australia - complications for population dynamics and fishery management. Holland, Owen (Deakin University). Ocean warming threatens key biotic interactions supporting a commercial fishery in a climate change hotspot. Morrongiello, John (University of Melbourne). Marine extremes: assessing the impact of marine heatwaves on the growth and behaviour of coastal fishes. Fawcett, Nicholas (University of Melbourne). How hot is too hot? Seasonal occurrence and magnitude of marine heatwaves determine their effects on coastal fish species. Cathro, Lou (AFMA). Industry participation in environmental data collection to adapt to the impacts of climate change on fisheries: Is it possible? Cresswell, Katie (University of Tasmania). Bioeconomic model of fishing for a range-extending sea urchin in Tasmania.
		Concurrent session 7: in-person presentations (Halls C&D) **Recreational fisheries** Ryan, Karina (Department of Primary Industries and Regional Development). Exploring the effect of fisher demographics and fishing behaviour on recreational fishing participation. Conron, Simon (Victorian Fisheries Authority). Assessing status and valuing benefits of Victoria's recreational fisheries in the 21st century.

UTC/GMT	ACST	Thursday 23 September
		Chong Montenegro, Carolina (The University of Queensland). Beyond the catch, a modelling framework to reconstruct fishing dynamics. Mendiolar, Manuela (The University of Queensland). Estimating recreational catch. Beckmann, Crystal (SARDI). Understanding how apps can be used as a tool for estimating recreational fishing catch and effort. Aston, Charlotte (University of Western Australia). Recreational fishing impacts in an offshore and deep-water marine park: establishing robust benchmarks of fished species using hybrid frequentist model selection and Bayesian inference. Tracey, Sean (Institute for Marine and Antarctic Studies - IMAS). Tuna Champions - an Education and Communications Program to Improve Responsible Fishing Practices on Southern Bluefin Tuna in Australia. Hill, Nicholas (Institute for Marine and Antarctic Studies, University of Tasmania). A snapshot of fisheries and their management in Australia.
10:45 – 12:30	20:15 - 22:00	Concurrent session 1: live streamed hybrid presentations (Halls C&D) **Non-native species - impact and management** Millington, Mariah (Australian Rivers Institute- Griffith University). Fishing the deep web- illegal trade in an unregulated industry. Bartley, Devin (Michigan State University). Non-native species: framework for responsible use and control. Mair, Graham (Food and Agriculture Organisation of the UN). The importance of non-native species in global aquaculture. Leonard, Nancy (Michigan State University, Pacific States Marine Fisheries Commission, PSMFC). The Importance of Collaborative Regional Data Exchanges in Supporting Fisheries Sustainability and Aquatic Invasive Species Prevention. 1-hour Q&A panel discussion.
		Concurrent session 2: live streamed hybrid presentations (Hall A) **Recreational fisheries** Arlinghaus, Robert (Leibniz-Institute of Freshwater Ecology and Inland Fisheries). Five steps for policy reform in recreational fisheries. Beard, Doug (United States Geological Survey). Investigating inland recreational fish harvest contributions to food supply in the United States. Fowler, Ashley (NSW Department of Primary Industries, Fisheries). Recreational fishing objectives and their inclusion in harvest strategies. Hall, April (James Cook University). Contribution of partially protected areas to recreational fisheries management. Jeanson, Amanda (Carleton University). Perceived threats to personal wellbeing drive pro-environmental behaviours among recreationists: The case of a recreational fishery in Western Canada.

UTC/GMT	ACST	Thursday 23 September
		45-minute panel discussion.
		Concurrent session 3: live streamed hybrid presentations (Hall B) **Management strategy and evaluation and harvest strategies** Butterworth, Doug (University of Cape Town). Management Procedures - why has implementation been so slow? De Oliveira, Jose (Cefas). Conducting Management Strategy Evaluations in Europe. Hillary, Rich (CSIRO). A revised rebuilding strategy for Southern bluefin tuna: integrating fishery, gene tagging, and close-kin mark-recapture data into a hybrid empirical and model-based Management Procedure. Punt, Andre (University of Washington). Management Strategy Evaluation –what is next? 75 – minute Q&A panel discussion.
13:00 – 14:30	22:30 – 00:00	Concurrent session 1: live streamed hybrid presentations (Halls C&D) **Communications in fisheries** TBC

Day 5: Friday 24 September 2021

UTC/GMT	ACST	Friday 24 September
23:30 – 22:10	07:00 - 07:40	Plenary speaker – live streamed hybrid presentation (Hall C&D) **Dr Elizabeth Fulton (CSIRO)**
22:10 – 22:50	07:40 - 08:20	Plenary speaker – live streamed hybrid presentation (Hall C&D) **Professor Nicholas Mandrak (University of Toronto) on behalf of Professor Olaf Weyl (South African Institute for Aquatic Biodiversity)**
23:00 – 01:00	08:30 - 10:30	Concurrent session 1: live streamed hybrid presentations (Halls C&D) **Ecosystem-based fisheries management** Burnett, Matthew (University of Kwazulu-natal). FISHTRAC: A tool to monitor the ecological consequences of multiple stressors to fisheries remotely and in real-time. Elliott, Vittoria (World Fish Center). Can EBFM be applied through Community Lead co-management? Karp, Melissa (ECS Tech, in support of NOAA Fisheries). Global examination of successes, challenges, and lessons learned in the application of multispecies models in fisheries management. Ye, Yimin (FAO of The United Nations). Contrasting fisheries management and resource status between the developed and developing countries. 1-hour Q&A panel discussion.
		Concurrent session 2: live streamed presentations (Hall A) **Emerging technologies, machine learning and big data** Berges, Benoit (Wageningen Marine Research). Fish species recognition using broadband acoustics for improved fishing selectivity of pelagic fishing vessels in the North Sea. Jackett, Christopher (CSIRO). Deep learning classification of deep-sea coral reefs. Sauger, Carine (IFREMER). Turning a time-consuming process into a few coded lines: How deep learning can shorten histology slide readings for maturity staging. Weir, Jessica (Ball State University). Invasion Superhighways: How lake tourism paves the way for aquatic invasions. 75-minute panel discussion.
		Concurrent session 3: live-streamed hybrid session (Hall C) **Sharks and rays** Bravington, Mark (CSIRO). Close-Kin Mark-Recapture and the stock assessment of sharks. Cortes, Enric (NOAA). Identifying biological reference points and determining stock status for sharks and rays with data-limited methods.

UTC/GMT	ACST	Friday 24 September
		Green, Madeline (University of Tasmania). Trends in stock-structure identification for sharks and rays. Jabado, Rima (Elasmo Project). Rhino rays – uncovering the drivers behind their exploitation in data-poor areas. 1-hour Q&A panel discussion.
		Concurrent session 4: in-person presentations (E1) **Conservation** Boys, Craig (NSW Department of Primary Industries). Evaluation of Vertical and Cylindrical Wedgewire Screens for the Protection of Early Life Stage Fish at Water Diversions in the Murray-Darling Basin. Allan, Hugh (Centre for Applied Water Science, University Of Canberra). Remote sensing for freshwater conservation - it makes sense! Zukowski, Sylvia (Aqua Save - Nature Glenelg Trust). Ten years gone: Assessing the long-term recovery in a large freshwater crayfish impacted by significant population loss. Boys, Craig (NSW Department of Primary Industries). Fish Screens Australia – A Catalyst for Improving the Way Water is Diverted in Australia for the Benefit or Fish and Farmers. Berghuis, Andrew (Aquatic Biopassage Services). Refining fish passage objectives for more effective fishway designs. Lear, Karissa (Murdoch University). Sawfish lifeboat springing a leak? Harnessing twenty years of ecological research to guide sustainable water resource management. Leigh, Sandra (University of Adelaide). Spatial ecology of an imperilled freshwater megafish over scales appropriate to life history and longevity. Shelley, James (Arthur Rylah Institute). Landscape context and dispersal capacity as determinants of population genetic structure in freshwater fishes.
		Concurrent session 5: in-person presentations (E2) **Small scale fisheries** Ogier, Emily (IMAS University of Tasmania). Basket case or benefit basket? Small-scale fisheries in the developed economies of Australia and Canada. Klein Lankhorst, Mariëlle (UTS). More to Sea - Portraits of Europe's and Australia's small-scale fishers. Fox, Craig (Western Zone Abalone Divers Association). A pathway to restoration of a devastated small-scale fishery through collaboration, data, technology and clear decision making. Sbrocchi, Carla (University of Technology Sydney). 21st-century ITQ: Modifying the design of ITQs to address future needs of the industry.

UTC/GMT	ACST	Friday 24 September
		Krueck, Nils (Institute for Marine and Antarctic Studies, University Of Tasmania). Characterizing fishing activities and development opportunities in small-scale fisheries.
		Mcneill, Asha (NSW Fisheries). Stakeholder experiences of fisheries restructuring: the burdens and benefits of market-based approaches to management.
		Smart, Jonathan (SARDI Aquatic Sciences). Informing the structural reform of the South Australian Marine Scalefish Fishery.
		Barclay, Kate (University of Technology Sydney). Can food localism save small scale fisheries in wealthy economies? Obstacles to sourcing local seafood in Australia.
		Concurrent session 6: in-person presentations (E3)
		Stock assessment and modelling
		Kirby, David (NSW Department of Primary Industries). Developing a harvest strategy framework for coastal fisheries in New South Wales, Australia.
		Blamey, Laura (CSIRO). Robust revision of the redleg banana prawn (*Penaeus indicus*) harvest strategy under increasing environmental uncertainty.
		Little, Rich (CSIRO). Development and evaluation of a multi-species harvest strategy in the Australian Southern and Eastern Scalefish and Shark Fishery.
		Linnane, Adrian (SARDI Aquatic Sciences). 25 years of quota management in a spiny lobster fishery: lessons learned from a harvest strategy perspective.
		McGarvey, Richard (SARDI). Fishery quota setting made easier.
		Zhou, Shijie (CSIRO). Estimating spawning potential ratio reference points from life-history parameters.
		A'mar, Teresa (NIWA). A comparison of the Management Strategy Evaluation approach and the "short-cut" approach for Aotearoa New Zealand scampi stocks.
		Dowling, Natalie (CSIRO Oceans and Atmosphere). Stock Assessment Toolbox: Collating stock assessment packages in one place.
		Concurrent session 7: in-person presentations (Riverbank Room 1)
		Biomarkers
		Leahy, Susannah (Queensland Department of Agriculture and Fisheries). Using otolith biomarkers to develop robust spectral discrimination of wild- versus hatchery-origin individuals in a marine fishery.
		Reis-Santos, Patrick (University of Adelaide). Using otoliths to unlock movement and life history characteristics of long-lived predator fishes.
		Barrow, Joshua (The University of Melbourne). Moving matters: Growth implications of movement and environmental variation for a potamodromous fish.

UTC/GMT	ACST	Friday 24 September
		Sarakinis, Koster (The University of Adelaide). Combining natural fish markers to investigate population structure and connectivity. Sih, Tiffany (James Cook University). Evidence for Indo-Pacific stock structure of deepwater snappers from otolith chemistry. Flint, Nicole (CQUniversity Australia). Sex ratios of giant mud crabs (Scylla serrata) in fished and unfished estuaries of central Queensland. Phillips, Genevieve (Australian Antarctic Division). Evaluating growth and estimation of growth parameters in Patagonian toothfish at Heard and McDonald Islands. Nicolle, Patrick (University of New South Wales). Environmental drivers of growth in an estuarine top predator: a 39-year biochronological study.
01:00 – 01:30	10:30-11:00	**MORNING TEA**
01:30 – 03:00	11:00-12:30	Concurrent session 1: live streamed hybrid presentations (Halls C&D) **Ecosystem-based and integrated ocean management** Ngor, Peng Bun (Inland Fisheries Research and Development Institute). Fish functional trait assessment determines vulnerability and resilience of freshwater fishes to environmental change in one of the world largest inland fisheries. Piermarini, Raffaella (ISPRA). Fishing for litter - a case study: the Italian law for the implementation of the European Marine Strategy Framework Directive. Stockbridge, Jackson (The University of Adelaide). Evaluation of a popular spatial cumulative impact assessment method for marine systems: a seagrass case study. Vigier, Audric (Queen's Univeristy Belfast). A fisheries simulation model for the Celtic Sea mixed fishery to assess Real-Time Incentives, an innovative Ecosystem-Based Fisheries-Management approach. 30-minute Q&A panel discussion.
		Concurrent session 2: live-streamed hybrid presentations (Hall A) **Future of fisheries** Francis, Tessa (University of Washington Tacoma). Rapid Adaptive Management: A Vision for Fisheries Science and Management in 2050. Longo, Catherine (Marine Stewardship Council). Are market incentives changing fisheries around the world? Lessons from field-testing the Marine Stewardship Council program. Siple, Margaret (University of California, Santa Barbara). The mundane and the magical: how will we approach fisheries science differently in 2050?

UTC/GMT	ACST	Friday 24 September
		Stephenson, Robert (Fisheries and Oceans and University of New Brunswick, Canada). Auditing human activities in the ocean: how will fisheries be managed in 2050? 30-minute panel discussion.
		Concurrent session 3: live-streamed hybrid presentations (Hall B) **By-catch, habitat and depredation** Jones, Colin (International Pacific Halibut Commission). Impact of depredation on the International Pacific Halibut Commission fishery-independent setline survey. McConnaughey, Bob (NOAA Alaska Fisheries Science Center). Choosing best practices for managing impacts of bottom trawling on seabed habitats and biota. Tremblay-boyer, Laura (Dragonfly Data Science). Accounting for discard mortality from non-retention measures when reconstructing catches for oceanic whitetip shark in the Pacific Ocean. 45-minute Q&A panel discussion.
		Concurrent session 4: in-person presentations (E1) **Conservation** Newton, Dr Gina (MDBA). Freshwater Fish of the Lower Murray: Conservation Status and the Role of Invasive Species. Kolodzey, Stina (University of Otago). Maternal age, length, and weight influence larval traits and viability in the viviparous temperate reef fish *Helicolenus percoides*. Armstrong, Asia (University of Queensland). The food environment at the largest *Mobula alfredi* aggregation site of Hanifaru Bay, Maldives. Hoyle, Simon (NIWA). Spatiotemporal models of longfin eel populations in New Zealand: working towards estimates of long-term trends in spawning escapement. Marks, Rachel (Murdoch University). Key factors influencing the dynamics of a collapsed blue swimmer crab (*Portunus armatus*) population and its lack of recovery. Mohamadi Darestani, Mitra (Otago University). Implications of landlocking for genetic diversity and whitebait species.
		Concurrent session 5: in-person session (E2) **Emerging technologies, machine learning and big data** Wang, Dadong (CSIRO). Boat to Plate: Automated fish species identification and tagging for seafood provenance and traceability. Tuck, Geoff (CSIRO Oceans and Atmosphere). Automated identification of seabird bycatch events from on-vessel electronic monitoring cameras.

UTC/GMT	ACST	Friday 24 September
		Lopez-Marcano, Sebastian (Australian Rivers Institute). Computer vision techniques in fish population connectivity. Skea, Gretchen (MPI). Development of automated imaging analysis techniques to determine ages from otoliths. Jaine, Fabrice (Sydney Institute of Marine Science). Monitoring stocks beyond borders: optimisation of a continental telemetry network to inform cross-jurisdictional movements of important Australian fish and shark species. O'Neill, Helen (CSIRO). fishIDER – A bilingual, web-based fish identification tool for market fish in Indonesia.
		Concurrent session 6: in-person presentations (E3) **Stock assessment and modelling** Qazi, Imran (Spatial Vision). Digital transformation of commercial fishing. Parsa, Mahdi (Australian Bureau of Agricultural and Resource Economics and Sciences). Developing a new non-hierarchical clustering framework for defining fishing practices within commercial fisheries. Emery, Timothy (Australian Bureau of Agricultural and Resource Economics and Sciences). Developing a typology of fishing practices and operations within an Australian pelagic longline fishery. Curin Osorio, Sandra (CSIRO). Accounting for uncertainty in key parameters in fisheries harvest control rules. McGarvey, Richard (SARDI). Don't just weigh 'em, count 'em. Neubauer, Philipp (Dragonfly Data Science). Scaling physiological impacts from climate variability to populations: Consequences for stock assessments.
		Concurrent session 7: in-person presentations (Riverbank Room 1) **Supply chains, traceability and marketing** Martino, Jasmin (ANSTO - Australia's Nuclear Science and Technology Organisation). Harnessing natural biomarkers in octopus to trace geographical provenance. Arnett, Emma (University of Queensland). Social, environmental, and economic implications of two-way global trade of functionally identical seafood species. Mutz, Markus (OpenSC). Rolling out technology at scale - to create value, transparency, and incentives for responsible production. Scadding, Cameron (Source Certain International). Does Provenance Matter? Moving Seafood Supply Chains Toward Transparency. Gopi, Karthik (University of New South Wales). Ensuring compliance using isotopic-elemental fingerprinting of barramundi (*Lates calcarifer*) to determine provenance.
03:15 – 05:00	12:45 - 14:30	Concurrent session 1: hybrid workshop (Hall A)

UTC/GMT	ACST	Friday 24 September
		Standard freshwater fish sampling workshop. Scott Bonar (The University of Arizona)
03:15 – 06:30	12:45 - 16:15	Concurrent session 2: hybrid workshop (Hall B) **Adapting fisheries management to change**. Dr Elizabeth Fulton (CSIRO)
03:30 – 05:00	13:00 - 14:30	Concurrent session 3: in-person presentations (Halls C&D) **Indigenous fisheries** Loban, Frank (CSIRO). Adoption of a new community-endorsed harvest strategy for the Torres Strait bêche de mer fishery. Nowland, Samantha (Northern Territory Government). From wild harvest fishery to aquaculture: Community-driven tropical rock oyster aquaculture for Aboriginal economic development. Ogier, Emily (Institute for Marine and Antarctic Studies). Social impacts through cultural fishing rights and economies. Stacey, Natasha (Research Institute for The Environment and Livelihoods, Charles Darwin University). Realising the livelihood benefits of a culturally aligned Indigenous commercial fishing enterprise in the Northern Territory, Australia. Williams, Leweena (Tweed Byron Local Aboriginal Land Council). Forging our seat at the table in fisheries management. Murphy, Nicole (CSIRO). Torres Strait futures, adapting modern management to traditional fishing and community values.
		Concurrent session 4: in-person presentations (E1) **Ecosystem-based and integrated ocean management** Davison, Jade (PIRSA Fisheries and Aquaculture). Utilising aquaculture zone policies for the integrated management of South Australian marine aquaculture development. Bierwagen, Stacy (Australian Institute of Marine Science). Expanding Queensland's coastal acoustic telemetry array to track broad-scale movements of priority species. Rees, Matthew (NSW Fisheries). Habitat and humans predict the distribution of juvenile and adult snapper (*Chrysophrys auratus*) along Australia's most populated coastline. Turschwell, Mischa (Griffith University). Anthropogenic threats and life-history predicts trajectories of seagrass extent. Goldsworthy, Simon (South Australian Research and Development Institute). The impacts of seal populations on the seafood industry in South Australia. Yang, Wen-Hsi (The University of Queensland). Environmental-Based Quantitative Assessments: A Case Study of the East Coast Spanner Crab and Snapper Fisheries.
		Concurrent session 5: in-person presentations (E2) **Emerging technologies, machine learning and big data / Advances in fishing vessels and fishing gear**
		Concurrent session 6: in-person presentations (E3)

UTC/GMT	ACST	Friday 24 September
		Stock assessment and modelling Neubauer, Philipp (Dragonfly Data Science). Avoiding prior misinformation in Bayesian stock assessments. Thomson, Robin (CSIRO). Close kin mark recapture for school shark in southern Australia. Bravington, Mark (CSIRO). Close-Kin Mark-Recapture, reference points, and management strategy. Ziegler, Philippe (Australian Antarctic Division). Spatial explorations of the stock assessment model for Patagonian toothfish (*Dissostichus eleginoides*) at Heard Island and McDonald Islands in the Southern Indian Ocean. Hillary, Rich (CSIRO). Incorporating Close-Kin Mark-Recapture data in stock assessment models: the southern bluefin tuna experience. Dichmont, Catherine (Cathy Dichmont Consulting). Stock assessment and statistics: Where to next?
		Concurrent session 7: in-person presentations (Riverbank Room 1) **Climate change** Wolfe, Barrett (University of Tasmania Institute for Marine and Antarctic Studies). Mechanisms underpinning the climate-driven range extension of snapper (*Chrysophrys auratus*) into southeast Tasmania. Lyon, Jarod (Arthur Rylah Institute). Smoke on the Water: Emergency Management and Recovery of Aquatic Species during Australia's bushfire Crisis. Ng, Zhong Wang Clement (University of Melbourne). Drivers of latitudinal variation in snapper growth along the east and west coasts of Australia. Skeeles, Michael (Deakin University). Exploitation may reduce the ability of fish to remain active at temperature extremes. Scales, Kylie (University of The Sunshine Coast). Sub-surface ocean variables from multi-decade coupled climate reanalysis enable skilful forecasting of tuna and billfish distributions over seasonal to inter-annual timescales. Sasaki, Minami (University of Adelaide). Modelling the future distribution range and growth performance of coral reef fishes in the context of climate change and species interactions using a Dynamic Energy Budget approach.
05:00 – 05:30	14:30 - 15:00	**AFTERNOON TEA**
05:30 – 06:30	15:00 - 16:30	Concurrent session 1: in-person presentations (Halls C&D) **Sustainable Development Goals** Turner, Jemma (Minderoo Foundation). Global fisheries governance: bright spots and leverage points for progressing sustainability goals. Jeanson, Amanda (Carleton University). Caught in the middle - the story of Canadas' wild Pacific steelhead.

UTC/GMT	ACST	Friday 24 September
		McNeill, Asha (Minderoo Foundation). Global fisheries governance: informing action to progress fisheries sustainability goals. Ullah, Md Hadayet (University of Adelaide). Climate change negates positive CO2 effects on species biomass and productivity by altering the magnitude of direct vs indirect effects. Wootton, Henry (The University of Melbourne). Fishing and climate synergies drive rapid and varied trait change in fish populations: a multigenerational experimental approach.
		Concurrent session 2: in-person presentations (Hall A) **Communications** Laubenstein, Taryn (Future Earth Australia). Swimming the Gap: Using a National Consultation to Inform a Ten-Year Strategy for Sustainable Oceans and Coasts in Australia. Manning, Toni (PIRSA Fisheries). Fishcare Volunteers: Educating the public in Fisheries regulations. O'Connell, Matthew. Fish voices from the past: the sourcing, curation and scientific potential of taxidermy fish. Cubillo, Beau (Monash University). An Aboriginal perspective of the nutritional health and wellbeing benefits of seafood. Pearce, Janine (University of South Australia). Capturing community stories in fishing an aquaculture: Photovoice method.
		Concurrent session 3: in-person presentations (Hall B) **Ecosystem-based and integrated ocean management** Plaganyi, Eva (CSIRO). Using MICE to quantify trade-offs between fisheries, agriculture production and biodiversity objectives. Llewellyn, Ghislaine (WWF International). Reframing fish: taking a social, economic and environmental value-based approach to ocean resources. Spillias, Scott (University of Queensland). Modelling the Trade-Offs Between Habitat, Food, Carbon and Profits in an Offshore Seaweed Farm. O'Mara, Kaitlyn (Australian Rivers Institute, Griffith University). Movement of fish communities in the Mitchell River catchment and predicted impacts of potential dams. Blanchard, Julia (Institute for Marine & Antarctic Studies, University of Tasmania). Early warning signals of fisheries collapse and recovery. Holden, Matt (University of Queensland). Reducing economic and ecological risks caused by harvest decisions based on single-species models.
		Concurrent session 4: in-person presentations (E1) **Biology and ecology** Kingsford, Michael (James Cook University). Coral reef-based clupeids grow fast and die young. Hartog-Burnett, Kynan (James Cook University). Ecology of reef based clupeiform affects stock structure.

UTC/GMT	ACST	Friday 24 September
		Burnell, Owen (South Australian Research and Development Institute). Is it really that hard to count snails? Quantifying abalone abundance using GPS data at one of Australia's most productive reefs. O'Hare, Jessica (Macquarie University). Sydney rock oyster genomics: stock structure, disease resistance and selective breeding. Armstrong, Helen (Victoria University, Wellington). Habitat use by deep sea chondrichthyans. Bice, Chris (South Australian Research and Development Institute). SARFIIP Pike Floodplain, Pike River and Tanyaca Creek Fishways: Comparing Fishway Hydraulic and Biological Designs against Site Sampled Fish Data.
		Concurrent session 5: in-person presentations (E2) **Data poor fisheries** Prince, Jeremy (Biospheric Pty Ltd). Back to the Future for the Data-Poor Integration of Everything: Operationalizing Beverton and Holt's misunderstood concept of Life History Ratios. Haddon, Malcolm (CSIRO & IMA-UTAS). Using catch-MSY as a data-poor assessment in Australia; Some advantages and limitations. Chick, Rowan (NSW Dept. Primary Industries - Fisheries). Strategic planning for fisheries resource monitoring, assessment and management in New South Wales, Australia – Utilising the decision support tool FishPath. Holmes, Steven (NIWA). Constructing density surfaces of New Zealand inshore stocks. Pascoe, Sean (CSIRO Oceans and Atmosphere). Relationship between efficiency, capacity utilisation and economic performance of vessels and fleets. Vianna, Gabriel (University of Western Australia). Always evolving: Recent advances in the CMSY stock assessment method and comparison with traditional assessments.
		Concurrent session 6: in-person presentations (Riverbank Room 1) **Environment and fisheries** Schilling, Hayden (Sydney Institute of Marine Science). Coastal winds drive a recruitment mechanism for estuarine fisheries. Redondo Rodriguez, Ana (South Australian Research and Development Institute). Oceanographic modelling of South Australian King George Whiting larval pathways. Broadley, Andrew (Griffith University). Impact of river flows and coastal currents on larval supply to coastal nursery habitats. James, Charles (SARDI). Pacific Oyster Mortality Syndrome (POMS): Oceanographic tools to improve disease surveillance and emergency response. Parsons, Miles (Australian Institute of Marine Science). The effect of marine seismic surveys on the movement, abundance and community structure of demersal fish assemblages on the North West Shelf.

UTC/GMT	ACST	Friday 24 September
		Moore, Thomas (CSIRO). Large-scale drivers and variability of oceanographic conditions relevant to tuna and billfish fisheries off eastern Australia.
07:00 – 08:00	16:30 - 17:30	Live streamed session (Halls C&D) **Speed talk competition**
09:00 – 14:00	18:30 - 23:00	In-person event **Congress Gala Dinner**

On-demand presentations

On-demand presentations will be available in the WFC2021 virtual platform one week prior to the start of the Congress and for 6 months post congress.

Theme 1 - Sustainable fisheries (assessment, regulation, enforcement)

Coastal fisheries

A, Suresh (ICAR- Central Institute of Fisheries Technology, Cochin, India). Fisheries in India: Evolving policies and prospects for sustainable development.

Casauay, Robert Bryan (University of The Philippines Marine Science Institute). Contrasting population patterns of the leopard coral trout, *Plectropomus leopardus* in two Live-Reef-Fish-for-Food-Trade sites in the Philippines.

Church, Gabriella (Fauna & Flora International). Strengthening small-scale fisheries supply chains through Participatory Market Systems Development.

Cuetos-bueno, Javier (The Nature Conservancy). Consequences of fisheries development projects for coral-reef fish stocks.

Estevão, Virgilio (National Fisheries and Marine Research Institute). Swept-area estimates of abundance of deep-water shrimp off Angola: To tickle or not to tickle?

Fernandez, Perry Neil (University of The Philippines Visayas). Total Suspended Solids (TSS) Measurement in Coastal Water at Marine Protected Area of Panay Island Using Low-Cost Light Emitting Diode (LED). Poster presentation.

Herdiana, Yudi (Wildlife Conservation Society). Variation of biological reference points of grouper stocks as impacts from fisheries management in Saleh Bay-Sumbawa, Indonesia - What improvements are needed?

Hernández Padilla, Juan Carlos (FAO, Mexico). Adaptative Management of exploited aquatics ecosystem based on self-organization: The case study of the southeastern Gulf of California ecosystem. Poster presentation.

Honig, Maria (WWF International). Accelerating community-led conservation through a global movement.

Jauharee, Ahmed (Ministry of Fisheries, Marine Resources and Agriculture, Maldives). The Maldives tuna fishery – an example of a 'clean' fishery that has operated in the Indian Ocean over a millennium.

Jimenez, Erica (Institute of Extension, Assistance and Rural Development of Amapá). Value chain dynamics and the socioeconomic drivers of small-scale fisheries on the Amazon coast. Poster presentation.

Jimenez, Erica (Institute of Extension, Assistance and Rural Development of Amapá). Sustainability indicators for the integrated assessment of coastal small-scale fisheries in the Brazilian Amazon. Poster presentation.

Karnad, Divya (Ashoka University). Scale dependent sustainability in India's marine fisheries: the role of customary fishing institutions.

Kurniawati, Vita Rumanti (IPB University). Fuel consumption analysis in small vessels as a preliminary model for an energy audit in small-scale fisheries in Indonesia.

Liu, Changdong (Ocean University of China). Size selectivity of escape vents mounted on the accord-shaped trap net for *Hexagrammos otakii* in a typical artificial reef area in Shandong, China.

Longo, Catherine (Marine Stewardship Council). Bringing stakeholders together: impacts of MSC pre-assessment initiatives in Mexico and South Africa.

Maliao, Ronald (Aklan State University). Gender dimension in the perceived efficacy of fisheries governance in the province of Antique, Philippines.

Mozumder, Mohammad (University of Helsinki). Sustainable utilization of fishery bycatch products and fish processing wastes in Bangladesh- A case study.

Mozumder, Mohammad (University of Helsinki). Transboundary Small-Scale Fishery Governance in the Bay of Bengal – The Hilsa (*Tenualosa Ilisha*) Fishery as a Case Study.

Pe, Jeyya Jeyanthi (ICAR - Central Institute of Fisheries Technology). Performance appraisal and economic benchmarking of trawl fishing in East Coast of India.

Prasetyo, Andhika (The University of Salford). Development of DNA monitoring procedures for shark and ray trade products in Indonesia.

Randrianjafimanana, Nambinintsoa Tahiry (Blue Ventures Conservation). Developing innovative, integrated and consensual conservation models for engaging people and removing barriers to participating in small scale fisheries management in Madagascar.

Tomas, Acacio (Instituto de Pesca (APTA/SAA-SP)). Traditional communities and artisanal fisheries in protected areas: an assessment within three reserves from an estuarine complex of the Western South Atlantic. Poster presentation.

Viet Nguyen, Thanh (University of Akureyri). Productivity, technical efficiency and technological change toward sustainable development for oceanic tuna fisheries in Vietnam.

Yulianto, Irfan (Wildlife Conservation Society Indonesia Program). Groupers in Indonesia; Biology, Threat, and Management.

COVID – impact on fisheries

Barboza, Roberta (UFPA). COVID-19 in Brazilian Amazon: challenges and coping strategies of artisanal fishermen communities.

Bouch, Paul (Marine Institute). Comparative performance of data-poor CMSY and data-moderate SPICT stock assessment methods when applied to data-rich, real world stocks.

Caillaux, Matias (The Nature Conservancy). Design and implementation of science-based assessments and management measures for data limited small scale fisheries in Peru: the case of Chita (*Anisotremus scapularis*).

Calò, Antonio (University of Palermo). Mediterranean small-scale fisheries: regional commonalities ground on multiple local facets.

Carella, Ernesto (University of Oxford). Data poor agent-based modelling: the case of the Indonesian deep-water snapper grouper complex.

Church, Gabriella (Fauna & Flora International). Tracking the impacts of COVID-19 on small-scale fishing communities globally.

Cope, Jason (NOAA Fisheries). No limitations: confronting data and resource challenges with sound science for improved fisheries management.

Natalie, Dowling (CSIRO). The effects of FishPath, a multi-stakeholder decision-support tool, on stakeholder buy-in to management in data-limited fisheries.

Danby, Rufus (University of Aberdeen). Estimating and accounting for fish losses under the footrope of a survey trawl: the case of northern shelf anglerfish.

Phillips, Genevieve (Australian Antarctic Division). Facilitating fisheries collaboration during a pandemic: software for automated random coffee pairings. Poster presentation.

Data poor fisheries

Aramburu, Mercedes (Universidad de Cádiz). Exploratory implementation of the surplus production model in continuous time (SPiCT) for common dolphinfish in the Indian Ocean. Poster presentation.

Baillargeon, Gabrielle (Roger Williams University). Improving the Productivity-Susceptibility Analysis to Assess Data-Limited Fisheries. Poster presentation.

Elliott, Vittoria (World Fish Center). The pros and cons of citizen-science in data-poor fisheries. Poster presentation.

Estevão, Virgilio (National Fisheries and Marine Research Institute). Length Based Indicators of sustainable fishing for Angola Pelagic Fisheries.

Gharsalli, Manel (Tokyo University of Marine Science and Technology). Stock assessment for the data-limited common spiny lobster (*Palinurus elephas*) fishery in Tunisia. Poster presentation.

Larivain-Sarraj, Angela (Université De Caen, France). Stochastic production model in a continuous time (SPiCT) applied to non-quota species in the English Channel (divisions 7.de): cephalopod insights.

Medeiros Leal, Wendell (IMAR Institute of Marine Research). A guidance for stock assessment in the Azores based on the ICES MSY framework. Poster presentation.

Naretto, Javier (Costa Humboldt). Traditional ecological knowledge in population in field sample design of small-scale coastal data-poor fisheries.

Nowlis, Josh (Independent Contractor in Service of National Oceanic and Atmospheric Administration). Application of Harvest Control Rule Theory to Indicator-Based Frameworks, with Case Studies from Indonesia and Colombia.

Omori, Kristen (Virginia Institute of Marine Science, William & Mary). Assessment and management of species complexes in the United States.

Ovando, Dan (University of Washington). Improving Fisheries Stock Assessment through Economics.

Paramo, Jorge (Universidad Del Magdalena). Using morphometric characteristics in *Nephropsis aculeata* (Smith, 1881) to estimate size at sexual maturity: A data-poor fisheries approach.

Paz, Anxo (Universidade de Santiago de Compostela). Testing Surplus production models sensitivity: a case study for ASPIC and SPiCT.

Posadas, Benedict (Mississippi State University). Economic recovery paths of Gulf of Mexico shrimp fisheries.

Ramírez Téllez, John Gabriel (Galway-Mayo Institute of Technology). Exploring uncertainty in life-history parameters when applying data-limited methods for stock assessment.

Reid, Kevin (Anishinabek/ontario Fisheries Resource Centre). Assessment of population dynamics and fishery status for Lake Winnipeg Walleye, Sauger, and Lake Whitefish.

Rodriguez Jimenez, Alfredo (Universidad Del Magdalena). Reference points estimation in the Colombian Pacific deep-sea shrimp fishery: A data-poor fisheries approach.

Stokes, Gretchen L. (University of Florida). COVID-19 pandemic impacts on global inland fisheries.

Sugimoto, Aoi (Japan Fisheries Research and Education Agency). How has the 'customary nature' of Japanese fisheries reacted to Covid-19? An interdisciplinary approach.

Tallman, Ross (Fisheries and Oceans Canada). Many stocks – few data: Data poor methods deployed to assess Canadian Arctic stocks.

Tomas, Acacio (Instituto de Pesca (APTA/SAA-SP)). The hidden value of data from unreported catches: Southeast coast of Brazil as a case study.
Walker, Nicholas (EelTown.org). Evaluating the Impacts of Climate Change on American Eel (Anguilla rostrata) in streams of the north-eastern United States.

Fisheries monitoring in support of sustainable fisheries

Tilley, Alex (Worldfish). Big data for small-scale fisheries.
Sobrino, Ignacio (Instituto Español De Oceanografía). The Clay pots octopus fishery in the Gulf of Cadiz (SW Spain): fishing effort, LPUE and spatial distribution derived from a small-scale GPRS/GSM based fisheries vessel monitoring system.
Otterå, Håkon (Institute of Marine Research). The Norwegian catch-sampling lottery – probabilistic catch sampling in pelagic fisheries using electronic logbook and self-sampling.
Miller, Ian (National Marine Fisheries Service). Electronic Technologies in the United States Atlantic Pelagic Longline Fishery.
Torgerson, Eric (Chordata LLC). Examining Electronic Monitoring Data Quality, Integration, and Cost Trade-offs for Alaska's Fixed Gear Fleet.
Wouters, Julia Magdalena (University of Aberdeen). Electronic Monitoring as a low-cost scientific asset for fisheries management.
Brigden, Katie (NAFC Marine Centre - University of the Highlands and Islands). How fisher self-sampling can enhance pelagic fisheries data collection.
Gaspar, Miguel (Portuguese Institute for the Sea and Atmosphere). Innovative monitoring strategies to obtain fishing effort data on the Portuguese small-scale fisheries and harvesting activities.
Catchpole, Thomas (Cefas). An English fisheries data enhancement project - Applying electronic monitoring to improve estimates of commercial catches.
Mugerza, Estanis (AZTI). Strengthening regional cooperation in small scale fisheries (SSF) monitoring and data collection under the European Union (EU) Data Collection Framework Regulation.
Bonar, Scott (American Fisheries Society). The American Fisheries Society Standard Methods for Sampling North American Freshwater Fishes Project: Overview, Design and Use.
Vidal, Tiffany (SPC). Monitoring abundance trends in skipjack tuna from the tropical purse seine fishery using observer reports and FAD buoy data.
Faunce, Craig (National Marine Fisheries Service (USA)). Better faster cheaper? Real lessons from replacing fishery observers with technology in the North Pacific.
Escalle, Lauriane (Pacific Community (SPC)). Can echo-sounder data from drifting Fish Aggregating Devices (dFADs) help manage the largest fishery in the world?
Van Helmond, Aloysius (Wageningen Marine Research). Fully Documented Fisheries – Can we create an autonomous catch recording system?
Coetzee, Vivienne (University of Cape Town). Morphological and ethological discrimination among functional stocks of spotted grunter, an estuarine-dependent fish.
Faunce, Craig (National Marine Fisheries Service (USA)). Identifying periods of potential scale tampering aboard at-sea catcher processors in the North Pacific (Alaska).
Cross, Tiffanie (Florida Fish and Wildlife Conservation Commission). Evaluating the Reliability of Recreational Catch and Effort Estimates Provided by a Specialized Reef Fish Survey in Florida, U.S.A.

Sauls, Beverly (Florida Fish and Wildlife Conservation Commission). Meeting Evolving Data Needs for Assessment and Management of Offshore Recreational Fisheries: Case Studies in Florida, U.S.A.

Clegg, Thomas (Institute of Marine Research). A simulation approach to assessing bias in a fisheries self-sampling programme.

Barkai, Amos (OLSPS). Olrac Integrated Electronic Monitoring and Reporting solution: A novel, affordable and effective approach to the Monitoring, Control, and Surveillance of commercial fishing operations.

Morrow, Ben (University of Victoria). Supplementing aerial-roving surveys with autonomous optical cameras: a high temporal resolution approach to monitoring and estimating effort within a recreational salmon fishery in British Columbia, Canada.

Han, Deok (Mississippi State University). System Design Considerations for a Robust Marine Electronic Monitoring (EM) System.

Faunce, Craig (National Marine Fisheries Service (USA)). Forecasting fisheries monitoring efficiency and effectiveness in Alaska.

Donaldson, William (National Marine Fisheries Service). Catch Management and Control Plans (CMCP's) and Dockside Monitoring in the Gulf of Alaska Rockfish Fishery. Poster presentation.

Miller, Margaret (CSIRO). Tangled data linkages in a complex multi-species prawn fishery managed to maximise economic yield. Poster presentation.

Illegal fishing

Dankel, Dorothy Jane (University of Bergen). To nudge or not to nudge; is nudging in fisheries management necessarily libertarian paternalism?

Di Franco, Antonio (Stazione Zoologica Anton Dohrn). Poaching in coastal Marine Protected Areas: observations, perceptions, and effects on voluntary surveillance.

Hamukuaya, Hashali (Nelson Mandela University). Drug trafficking as a fisheries crime.

James, Mark (University of St. Andrews). Developing a low-cost open source data collection system for small scale fisheries – principles and practice.

K, Rejula (ICAR CIFT). Thematic analysis of dimensions of responsible fishing as perceived by fishers in Kerala.

Lee, Yi Jou (Department of Environmental Biology and Fisheries Science, National Taiwan Ocean University). The catch compositions of trawler in coastal and offshore waters off Taiwan inferred from data mining analysis.

Lee, Yi Jou (Department of Environmental Biology and Fisheries Science, National Taiwan Ocean University). Dynamic of gillnet fishing strategy in Miaoli, Taiwan: integrating Voyage Data Recorder data and logbooks. Poster presentation.

Mendo, Tania (University of St. Andrews). Progress, challenges, and data gaps: towards standardisation of electronic reporting in small scale fisheries in Europe.

Mkuchu, Jovice (Fisheries Division). Trade measures to deter entry of illegally caught fisheries products into markets in Tanzania.

Oyanedel, Rodrigo (University of Oxford). Evaluating the trade of legal and illegal fish.

Pormon, Miah Maye (Up Visayas). Challenges and Social Acceptance on the Adoption of the Raft Method Technology among Oyster Farmers in Western Visayas.

Purbayanto, Ph.D., Ari (Bogor Agricultural University (IPB University)). Sinking of Foreign Fishing Boats Perpetrators of IUU Fishing: Rules and Weak Prevention Measures.

Saucier, Taylor (Ball State University). Angler compliance with Rockfish Conservation Areas in British Columbia, Canada, in response to awareness efforts and COVID-19.

Welch, Heather (NOAA and UCSC). A dynamic prediction system for Illegal, Unreported, and Unregulated fishing activities across the North Pacific.

Indigenous fisheries

Chang, Shui-kai (National Sun Yat-sen University). Taboos/norms and modern Science, and possible integration for sustainable management of the flyingfish resource of Orchid Island, Taiwan.

Kim, Milena Kiatkoski (University of Western Australia). Incentives to mariculture development in Brazil: new economic frontier and threats to traditional fishing communities.

Labatt, Chepkemboi K. (Ulster University). Traditional Heritage Knowledge (THeK) enhances sea turtle conservation in Pemba Island, Tanzania and Kwale County, Kenya.

Naretto, Javier (Costa Humboldt). Multispecific fisheries management strategy for fisheries under a model of territorial use rights in indigenous communities in southern Chile, the MCAIP Caulín case study.

Reid, Andrea (University of British Columbia). Indigenous Knowledge of Leading Threats to Wild Pacific Salmon and Aquatic Health.

Santos Lobato Martins, Mariana (Oceanographic Institute, University of São Paulo). Traditional fishing territories encompassed by a mosaic of coastal protected areas: the case of Barra do Una community in the Brazilian Atlantic forest.

Silva, Ana T. (NINA). International Western and Indigenous Science Hub for Fish (IWISH for Fish).

Silvano, Renato (Universidade Federal Do Rio Grande Do Sul (ufrgs)). 'Putting knowledge on the map': fishers' mapping indicates potential hotspots for fish reproduction, migration and fisheries in two tropical rivers.

Steel, Jade (University of Akureyri). Understanding barriers, access, and management of marine mixed-stock fisheries in an era of reconciliation: Indigenous-led salmon monitoring in British Columbia.

Tallman, Ross (Fisheries and Oceans Canada). Merging quantitative scientific and indigenous traditional ecological knowledge in the assessment of small data limited community-based fisheries.

Villamil, Carlos (GIZ Colombia). Agreements for sustainable use and exploitation between ethnic communities and authorities in Colombia's Caribbean marine protected areas through good fishing practices within the framework of Integrated Coastal Zone Management. Poster presentation.

Monitoring and management of freshwater-dependent fish and fisheries

Bailey, Michael (U.S. Fish and Wildlife Service). Measuring effectiveness in restoration fisheries – Part I: Habitat restoration in a complex world with American Shad (*Alosa sapidissima*) as a model.

Dassow, Colin (University of Missouri). Experimental demonstration of catch hyperstability from habitat aggregation, not effort sorting, in a recreational fishery.

Elliott, Vittoria (World Fish Center). Measuring the impact of fisheries management and conservation actions in a biodiverse and productive inland fishery.

Mercado-Silva, Norman (Universidad Autonoma Del Estado De Morelos). An update on international efforts for freshwater fish sampling method standardization.

Paukert, Craig (Mo Cooperative Fish and Wildlife Research Unit). Developing a riverine sampling protocol to meet stakeholder needs: a critical first step in monitoring restoration efforts.

Sahoo, Amiya (ICAR-Central Inland Fisheries Research Institute, Barrackpore). Determination of Environmental Flows for Teesta-IV Hydropower Project, Sikkim, India for sustainable fisheries during dry period.

Smith, Thomas (The University of British Columbia). The role of turbulence and velocity gradients in drift-foraging microhabitat selection by juvenile salmonids.

Swanepoel, Pieter Johannes (Free State Department of Agriculture and Rural Development). Biological characteristics of the African sharptooth catfish, *Clarias gariepinus*, in South Africa's largest impoundment.

Taylor, William (Michigan State University). The "good, bad and ugly" of invasive species on the production dynamics and harvest of Laurentian Great Lakes fishes and the vitality of coastal communities.

Whittier, Joanna (Univ of Missouri). Quantifying the effectiveness of current and targeted land conservation practices to improve water quality.

Arya, Mukul (ICAR-DCFR). An insight to ecological study of river Yamuna at Vyasi Hydroelectric Project site, Dakpatthar, Dehradun, Uttarakhand India. Poster presentation.

Sena, Tainá (Universidade Federal Do Amazonas). Analysis of the fishing production of *Brachyplatystoma flavicans* (Castelnau, 1855), in the Purus-Madeira interfluvium. Poster presentation.

Prestes Valtierre, Thaisa (Universidade Federal Do Amazonas). Productive analysis of two species of jaraquis, *Semaprochilodus brama* (Valenciennes, 1850) and *Semaprochilodus insignis* (Jardine, 1841), in the middle Madeira River. Poster presentation.

Management strategy evaluation and harvest strategies

Coates, Julia (California Department of Fish & Wildlife). Incorporating management strategy evaluation in California's state-managed fisheries: challenges faced, lessons learned, and prospects for the future.

Damiano, Matthew (North Carolina State University). When one size does not fit all: A management strategy evaluation tool for examining the trade-offs between commercial and recreational fishing objectives.

de Moor, Carryn (University of Cape Town). Thirty years on: Is MSE worth it? Learning from the South African story.

Doering, Kathryn (Caelum Research Corporation). Management strategy evaluation made operational with Stock Synthesis.

Fay, Gavin (University of Massachusetts Dartmouth). Policy testing with constraints: representing implementation error in mixed fishery management strategy evaluations.

Hart, Amanda (University of Massachusetts Dartmouth (SMAST)). Keeping up with the fish: Using MSE to adapt recreational fishery management to climate-driven population movements for a U.S. flounder fishery.

Hart, Deborah (NOAA/northeast Fisheries Science Center). The Relationship Between Fishing Mortality and Selectivity, and its Implications for Reference Points.

Heller-Shipley, Madison (Natural Resources Consultants Inc. & University of Washington). Should harvest control rules for male-only fisheries include reproductive buffers? A Bering Sea Tanner crab (*Chionoecetes bairdi*) case study.

Mazur, Mackenzie (Gulf of Maine Research Institute). Using Management Strategy Evaluation to Understand the Effects of Climate Change and Stock Assessment Misspecifications on Gulf of Maine Cod.

Nowlis, Josh (Independent Contractor in Service Of National Oceanic and Atmospheric Administration). Harvest Control Rule Performance Theory: A Rosetta Stone Translating Stock Assessments into Management Advice.

Peterson, Cassidy (Southeast Fisheries Science Center, National Marine Fisheries Service). Management strategy evaluation of the internationally exploited coastal sandbar shark within the United States.

Scott, Robert (SPC). Developing and conditioning spatially structured operating models within an MSE framework for widely dispersed tuna stocks in the Western and Central Pacific Ocean.

Scott, Robert (SPC). Developing harvest strategies for tuna stocks and fisheries in the Western and Central Pacific Ocean.

Tengvall, Jessica (University of Bergen). How natural mortality shapes fisheries reference points: inference from an age-structured population model.

Tommasi, Desiree (UCSC Institute of Marine Sciences, NOAA SWFSC). Deriving climate informed, management relevant port-level economic performance metrics for a management strategy evaluation of North Pacific albacore tuna.

Recreational fisheries

Arlinghaus, Robert (Leibniz-Institute of Freshwater Ecology and Inland Fisheries). The battle of natural and recreational fisheries selection creates small and shy fish.

Birdsong, Max (IGB Berlin). Recreational angler satisfaction: what drives it?

Bohaboy, Erin (NOAA Fisheries). A Decision Support Tool to Assess Recreational Harvest Slots, Discard Mortality, and Bycatch Accountability in a Multi-Sector Fishery.

Cambra, Eléonore (Centre De Formation Et De Recherche Sur Les Environnements Méditerranéens, UMR 5110, Université de Perpignan Via Domitia). Socio-ecological analysis of drivers of CPUE variation related to recreational fishing strategies in support of Marine Protected Areas management.

Chong, Lisa (University of Florida). Spatial considerations can determine net socioecological effects of artificial reefs on recreational fisheries and their management.

Embke, Holly (University of Wisconsin - Madison). Fishing for Food: Quantifying Recreational Fisheries Harvest in Wisconsin Lakes.

Fisher, Adam (University of Gloucestershire). Values, motivation and satisfaction among recreational sea anglers in England and Wales.

Haase, Kevin (Thünen Institute of Baltic Sea Fisheries). Modelling angler behaviour using agent-based models to improve recreational fisheries management.

Hyder, Kieran (Cefas). Allocating catches between marine recreational and commercial fisheries.

Hyder, Kieran (Cefas). Marine recreational fishing in Europe needs to be fully integrated in policy to generate a positive future for the sector.

Kaemingk, Mark (Nebraska Cooperative Fish and Wildlife Research Unit, School of Natural Resources, University of Nebraska). Valuing recreational fisheries according to waterbody size.

Kahn, James (Washington And Lee University and Universidade Federal do Amazonas). Sport fishing and sustainable development in remote communities: Insights from a choice modeling approach in the Brazilian Amazon.

Kuroda, Mitsuki (Graduate School of Environmental Science, Hokkaido University). A Collaboration between Bio-logging and Recreational Anglers revealed a Novel Migratory Pattern of Anadromous salmonids White-Spotted Charr (*Salvelinus leucomaenis*).

Lynch, Abigail J. (U.S. Geological Survey, National Climate Adaptation Science Center). The U.S. Inland Creel and Angler Survey Catalog (CreelCat): Development, Applications and Opportunities.

Nyboer, Elizabeth (Carleton University). Global assessment of marine and freshwater recreational fish reveals mismatch in climate change vulnerability and conservation effort.

Olesen, Hans Jakob (DTU Aqua). Inclusion of recreational catch data in stock assessment – a case study with western Baltic cod.

Olesen, Hans Jakob (DTU Aqua). Sampling the Danish recreational eel fishery. Poster presentation.

Paramo, Jorge (Universidad del Magdalena). Marine recreational fishing as alternative for the development of ecological tourism in Magdalena region, Colombian Caribbean.

Pope, Kevin (U.S. Geological Survey). Catch and Harvest of Fish by Recreational Anglers in Nebraska: The Value of a Fishing License.

Radford, Zachary (Cefas). Combining biological, environmental and socioeconomic variables to hindcast marine recreational fishing effort.

Rogers, Mark (U.S. Geological Survey). Synchrony in angler fishing success across a landscape.

Sande, Hege (SLU Aqua, Sweden). Frameless – finding and refining a sampling frame for estimating recreational fisheries.

Sartwell, Tim (NOAA Fisheries). Building Conservation Partnerships with the United States Recreational Fishing Community.

Skov, Christian (DTU Aqua). Recreational angling for coastal Danish seatrout: understanding motives, catch and harvest orientation and angler heterogeneity among locals and tourists.

Strehlow, Harry (Thünen Institut Of Baltic Sea Fisheries). A simple approach for including angler heterogeneity in surveys and management of recreational fisheries.

Thorpe, Andy (University of Portsmouth). Valuing the World's Inland Recreational Fisheries.

Tracy, Erin (University of Arizona). AFS Standard Sampling Online Fisheries Database Version 2: Lessons learned and applied to increase use of a simple and effective comparison tool.

Trudeau, Ashley (Rutgers University). Optimizing Management Measures for Marine Recreational Fisheries in the U.S Mid-Atlantic Region.

Vehanen, Teppo (Natural Resources Institute Finland). Methodologies of data collection in inland fisheries in Europe.

Verdoit-Jarraya, Marion (Centre De Formation Et De Recherche Sur Les Environnements Méditerranéens, UMR 5110, Université de Perpignan Via Domitia). Characterizing the spatio-temporal variability, selectivity and economic aspects of bait usage to support management actions in a north western Mediterranean marine protected area.

Resource allocation and co-management

Birkenbach, Anna (University of Delaware). Another Plaice and Time: The Effects of Catch Shares on Targeting and Timing Decisions in the New England Groundfish Fishery.

De Alessi, Michael (The University of Washington). Who's onboard? A predictive analysis of cooperative formation in commercial fisheries.

Ishihara, Hiroe (The University of Tokyo). Incorporating science to fisheries management system: Key to success from the case study of Wagu Lobster fisheries, Japan.

Mackinson, Steven (Scottish Pelagic Fishermen's Association). Paving the yellow-brick road to co-management.

Mugerza, Estanis (AZTI). A participatory-based mapping of the small-scale inshore fisheries: Towards a holistic co-management in the Bay of Biscay (North Atlantic).

Quezada, Felipe (Umass Amherst). Public co-enforcement and the success of collective property rights regimes.

Szynaka, Monika (Centro De Ciências Do Mar Do Algarve). Fishers tell us what you're working with!

Tsujita, Takahiro (University of Tokyo). Does the unique Catch Limit system in Japan have an effect on mackerel price?

Yagi, Nobuyuki (The University of Tokyo). Recalculation of catch statistics for Japanese coastal fisheries and its implications for quota allocation policy.

Mbabazi, Stella (Directorate of Fisheries Resources, Uganda). The paradigm of fisheries Co-Management: A current status review on Lake Victoria, Uganda. Poster presentation.

Small scale fisheries

Cardoso, Renato (IFAM). The technical efficiency of the fishing fleet of the Middle Madeira River region, Brazil. Poster presentation.

Da Silva Matos, Gabriane (Universidade Federal Do Amazonas). Analysis of the annual production of the species *Brycon amazonicus* (SPIX & AGASSIZ, 1829), in the purus-madeira interfluge region. Poster presentation.

Delaney, Alyne (CNEAS, Tohoku University). A Sea Change in Japanese Small-scale Coastal Fisheries.

Dos Anjos, Marcelo Rodrigues (Federal University of Amazonas/universidade Federal Do Amazonas - UFAM). The fishing of the Surubim (*Pseudoplatystoma fasciatum*, Castelnau,1855) (*Siluriformes, Pimelodidae*), at the Middle Madeira Basin, Southwest Amazon. Poster presentation.

Duque, Guillermo (Universidad Nacional De Colombia). Influence of the water level on artisanal fishing production in the Ciénaga Grande de Santa Marta, Colombian Caribbean. Poster presentation.

Franco Melendez, Milagros (Universidad de Concepción). Fishers' perceptions and participation in the co-management experience: The case of Biobio Region, Chile.

Mendonça, Rakcelainy (Universidade Federal Do Amazonas). Analysis of fishery production of *Prochilodus nigricans* (Spix & Agassiz, 1829), Southwest Amazon. Poster presentation.

Respondek, Georg (University Hamburg). Self-management in developed countries small scale fisheries - a way forward?

Stock assessment and modelling

Adams, Grant (University of Washington). Is ignoring predation mortality leading to an inability to achieve management goals in Alaska?

Barber, Betsy (INRAE). Projecting shifts for European diadromous species based on climate change scenarios and dispersal dynamics.

Barceló, Caren (NOAA-OST). Projecting the timescale of initial increase in fishery yield after implementation of marine protected areas.

Bassin, Corinne (ECS Federal in support of NOAA). The NOAA Fisheries Integrated Toolbox: a portal to streamline shared development and usage of tools used for fisheries management. Poster presentation.

Beckensteiner, Jennifer (IFREMER). (Mal)adapting to climate change: a stylized fishery example.

Berger, Aaron (NOAA/NMFS/NWFSC). Incoherent dimensionality in fisheries management: consequences of misaligned stock assessment and ecological boundaries.

Best, John (University of Washington). An index of abundance combining fishery-independent and -dependent observations allowing for spatially varying catchability.

Bossier, Sieme (DTU Aqua). Integrated ecosystem impacts of climate change and eutrophication on main Baltic fishery resources.

Botsford, Louis (University of California). Effects of the spectrum of environmental variability on fish population dynamics and fishery management.

Brodie, Christopher (Liverpool John Moores University). eDNA approach in pelagic fish monitoring: Have Atlantic Blue Fin Tuna returned to British waters?

Brodziak, Jon (NOAA Fisheries, Pacific Islands Fisheries Science Center). Designing a General Framework for a Movement-Based Metapopulation Assessment System.

Brodziak, Jon (NOAA Fisheries, Pacific Islands Fisheries Science Center). Applying ensemble models for stock assessment and fisheries management.

Carella, Ernesto (University of Oxford). Progress towards integrating spatial social-ecological systems models into developing fishery sustainability goals using the POSEIDON model.

Carleton, Liese (VIMS). A serial depletion estimator to estimate gear catchability and population density in an open system.

Carvalho, Felipe (NOAA Fisheries). A review of the use of diagnostic tests to detect model misspecification in integrated stock assessments.

Castillo-Jordan, Claudio (The Pacific Community - SPC). South Pacific albacore assessment, and collaboration across the Pacific.

Cope, Jason (NOAA Fisheries). Modelling an integrated data-limited to data-rich assessment framework using the Stock Synthesis Data-Limited (SS-DL) tool.

Correa, Giancarlo M. (Oregon State University). Accounting for spatial and temporal variability in somatic growth improves age composition and stock assessment estimates.

Cresci, Alessandro (Institute of Marine Research (IMR)). From behavioral experiments at sea to individual-based and spatial models: can we close the loop?

Cronin-fine, Lee (University of Washington). Comparing a Numerical Integration Method for Constructing Size-Transition Matrices with Other Construction Methods.

Denson, LaTreese (University of Miami - RSMAS). Using spatiotemporal models and sea surface temperature at varying spatiotemporal scales to inform species abundance and spatial distribution trends: A King mackerel case study.

Dougherty, Dawn (The Nature Conservancy). Fishery Stakeholder Engagement and Harvest Strategy Design Through the Application of the FishPath Tool.

Elliott, Vittoria (World Fish Center). Freshwater Protected Areas: One tool in the box. Poster presentation.

Fisch, Nicholas (University of Florida). Assessing Alternatives to the Multinomial for Fitting Composition Data within Stock Assessment using a Spatially Explicit Simulation Operating Model.

Gilman, Eric (Pelagic Ecosystems Research Group). Do area-based management tools for pelagic fisheries achieve ecological objectives?

Goethel, Daniel (NOAA). Where do you think you're going? Accounting for age- and time-varying movement in spatially explicit tag-integrated stock assessment models.

Gross, Julie (Virginia Institute of Marine Science). Semiparametric modeling of environmental effects on recruitment.

Hampton, John (Pacific Community). The use of spatial models in fishery stock assessment – historical development and future needs.

Hidalgo, Manuel (Spanish Institute of Oceanography (IEO)). Inter-stock vs Intra-stock complexity: when misleading the right spatial scale of scientific challenges preclude an efficient and realistic management.

Huynh, Quang (Blue Matter Science). Method Evaluation and Risk Assessment (MERA): an accessible Management Strategy Evaluation tool for improving fisheries management.

Hyder, Kieran (Cefas). A spatially explicit individual-based model to support management of commercial and recreational fisheries for European sea bass *Dicentrarchus labrax*.

Hyun, Saang-Yoon (Pukyong National University). A state-space length-based assessment model.

Izquierdo, Francisco (Instituto Español de Oceanografía (IEO - C.O. , Vigo)). Life history parameter correlations and its impact on stock assessment. Poster presentation.

Kapur, Maia Sosa (School of Aquatic and Fisheries Sciences). A Transboundary Operating Model for Northeast Pacific Sablefish.

Kenyon, Rob (CSIRO). Fishery-independent indices of prawn recruitment and adult abundance inform stock assessment in a MSC certified prawn fishery. Poster presentation.

Kerametsidis, Georgios (Uppsala University). The trade-off between condition and growth shapes juveniles' survival of two fish stocks in the Western Mediterranean Sea.

Khan, Salman (Aligarh Muslim University, Aligarh). Multivariate generalised linear models as a method of analysing otolith shape and chemistry data, demonstrated with Striped Snakehead, *Channa striata*, stock delineation.

Kienzle, Marco (NIWA). Inferring the dynamics of exploited fish populations using hazard functions. Poster presentation.

Kitakado, Toshihide (Tokyo University of Marine Science and Technology). A hindcasting approach for evaluating prediction skills in the fishery stock assessment.

Kuriyama, Peter (NOAA, SWFSC). Density-dependent and cohort-specific growth in Pacific sardine (*Sardinops sagax*) estimated through a stock assessment approach.

Liljestrand, Emily (Michigan State University). How Data Quality Influences Model Accuracy in State Space Stock Assessment Modeling.

Marshall, Tara (University of Aberdeen). Climate change impacts recruitment rates of North Sea and Irish Sea cod by widening the phenological mismatch.

Maunder, Mark (Inter-American Tropical Tuna Commission). Progress on the Center for the Advancement of Population Assessment Methodology's stock assessment best practices program.

Medeiros Leal, Wendell (IMAR Institute of Marine Research). Small-scale fishing in the Azores: Fleet operation regime and catch composition from 1980 to 2018.

Methot, Richard (US/DOC/NOAA Fisheries). Addressing seasonality when using length data in fish assessment models.

Minte-Vera, Carolina (Inter-American Tropical Tuna Commission). Lessons learn from developing a new assessment for yellowfin tuna in the eastern Pacific Ocean.

Ng, Elizabeth (University of Washington). Ecological drivers of patterns in diet data.

Nowlis, Josh (Independent Contractor in Service of National Oceanic And Atmospheric Administration). The HCR Design Tool, a Decision-Support Tool for Harvest Control Rule Design and Function.

Olmos, Maxime (School of Aquatic and Fishery Science (University of Washington) and Alaska Fisheries Science Center (NOAA)). Mapping a fishery: a fully spatial stock assessment for snow crab in the Bering Sea.

Ortega, Kelly (Rhodes University). Exploring the impact of future environmental scenarios on the South African sardine and anchovy fishery, using a model of intermediate complexity for ecosystems.

Peterson, Katie (National Socio-environmental Synthesis Center). Impacts of temperature variability on marine fisheries in the Northeast Shelf Regional Ecosystem.

Poulet, Camille (French National Institute for Agriculture, Food, and Environment (INRAE)). Exploring the effect of dispersal capacities and reproductive strategies on the structure of American shad populations across its native range: an approach based on a mechanistic species distribution model.

Privitera-Johnson, Kristin (University of Washington School of Aquatic & Fishery Sciences). A review of approaches to quantifying uncertainty in fisheries stock assessments.

Ramos Vásquez, Enrique Manuel (Instituto Del Mar Del Peru). Relationships between changes in productivity of Jack Mackerel off Peru and environmental variables.

Reum, Jonathan (NOAA). Regional variation in community interactions and trophic structure influence impacts of global warming on food web and fisheries productivity.

Santos, Régis (University of The Azores). Life-history parameters as possible discriminators of commercial fish and shellfish populations in Azorean waters.

Siple, Margaret (University of California, Santa Barbara). Ensuring clarity, transparency, and continuity for a web-based app about marine mammal bycatch.

Smith, James (UCSC / NOAA). Sardine in the California Current: spatially explicit models exploring impacts of climate change.

Stawitz, Christine (NOAA Fisheries). The Fisheries Integrated Modeling System, a new modular paradigm for fisheries stock assessment software.

Taylor, Blake (Department of Primary Industry and Resources). A visual dashboard approach to simplify fisheries management.

Teears, Thomas (North Carolina State University). Estimation of recruitment variation using cohort-specific von Bertalanffy growth coefficients: stock assessment implications.

Thorson, James (Alaska Fisheries Science Center). Predicting recruitment density dependence and intrinsic growth rate for all fishes worldwide using a data-integrated life-history model.

Tifoura Mouzai, Amina (Alicante University (UA)). Impact of Natural mortality assumptions on the assessment model performance.

Townsend, Howard (NOAA Fisheries). Multi-Species Surplus Production Modeling Software: A Data-Limited Approach for Evaluating Species Interactions.

Uneke, Bilkis (Ebonyi State University, Abakaliki, Nigeria). Biological assessment of target species of artisan fisheries of a tropical inland basin: Implications for sustainable fisheries, management and policy.

Vaughan, Nathan (Vaughan Analytics (in support of NOAA SEFSC)). A decision support tool for evaluating management alternatives in the context of stock assessment projections.

Vestfals, Cathleen (NOAA Fisheries, Northwest Fisheries Science Center). Identifying climate drivers of Pacific hake (Merluccius productus) recruitment in the California Current Ecosystem.

Vincent, Matthew (Pacific Community). Stock assessment of the largest tuna fishery: skipjack tuna in the western central Pacific Ocean.

Wagner, Carolina (Universidade Federal Do Amazonas). Production of Pacu *Mylossoma aureum* (Agassis, 1829) in the Middle River Madeira region. Poster presentation.

Waterhouse, Lynn (John G. Shedd Aquarium). Improving age composition estimates: Evaluating a Bayesian method for estimating ages from spines with vascularized cores.

Wilberg, Michael (University of Maryland Center for Environmental Science). Spatial population dynamics of eastern oyster in the Chesapeake Bay, Maryland.

Xu, Haikun (IATTC). Spatiotemporal modeling of length-specific catch and effort data for yellowfin tuna (*Thunnus albacares*) in the eastern Pacific Ocean.

Zhang, Fan (Fisheries and Marine Institute of Memorial University). An age and length structured statistical catch-at-length model for hard-to-age fisheries stocks.

Zhu, Xinhua (Fisheries and Oceans Canada). Exploration of spatiotemporal growth vulnerability of YOY Ringed Seal using a multiple model approach.

Sustainable Development Goals

Bridgewater, Peter (Copernicus Institute for Sustainable Development; University of Canberra). SDG 14 (life under water) – reality or fantasy for fish, fishers, and hungry people?

Bryndum-Buchholz, Andrea (Dalhousie University). Climate-change adaptation in fisheries management: policy, legislation, and implementation.

Coelhos Dos Santos, Jakeline (UFAM). The production analysis of Pacú (*Mylossoma duriventre - cuvier*, 1818), Southwest Amazon. Poster presentation.

Elliott, Vittoria (World Fish Center). Insertion of inland fish through operationalization of the SDGs.

Govan, Hugh (LMMA Network). Strategies for achieving sustainable coastal fisheries co-management in Pacific Small Island Developing States.

Harrison, Ian (Conservation International). Inland Fisheries in the Post-2020 Global Biodiversity Framework.

Joshi, RINI (ICAR DCFR Bhimtal). Study of postprandial digestive physiological dynamics of chocolate mahseer (*Neolissochilus hexagonolepis*) fingerlings.

Lynch, Abigail J. (U.S. Geological Survey, National Climate Adaptation Science Center). Inland fish and fisheries integral to achieving the Sustainable Development Goals.

Nurani, Tri Wiji (IPB University). Sustainable tuna fisheries management model in the Indian Ocean (FMA 573).

Phang, Sui (University of Portsmouth). Developing a future for the Amazon and its fisheries: Using the Sustainable Development Goals in the Tapajos River Basin Blueprint.

Phang, Sui (University of Portsmouth). The Sustainable Development Goals path towards lake-wide freshwater fishery and freshwater governance of Lake Taganyika.

Reis, Naetê (Pescarte Project). Coloniality and environmental management: institutionalized environmental racism and its impacts on artisanal fisheries.

Robertson, Ashley (George Mason University). A Quantitative Comparison of Public Investment and Economic Impact in Inland and Marine Fisheries in the coastal and Great Lakes U.S.

Santana-Garcon, Julia (Minderoo Foundation). The Global Fishing Index's Sustainability Index: Tracking progress towards achieving SDG 14.4. Poster presentation.

Sierra Castillo, Liliana (University of California Santa Barbara). Community-Based Compliance and Enforcement (CBCE) in Small-Scale Fisheries.

Steadman, Daniel (Fauna & Flora International). What is "destructive fishing"? Using consensus-based expert review to define a key fisheries and conservation policy term.

Stokes, Gretchen L. (University of Florida). Towards a global threat assessment approach for inland fisheries.

Stuijfzand, Julia Lavinia Martina (Marine Stewardship Council). Contributions to reaching the Sustainable Development Goals (SDGs): a case of the Marine Stewardship Council fisheries certification scheme.

Teramoto, Carolina (Instituto Piatam). Decline in fish stocks: relating perceptions to socio-economics variables, sources of decline and river systems in the area of middle Rio Negro, Amazon/Brazil. Poster presentation.

Tuda, Paul (Leibniz Centre For Tropical Marine Research). Racing Against Time: Progress and challenges in Reporting the Sustainable Development Goal Indicator14.4.1 in East Africa.

Sustainable fisheries – recovering and overfished stocks

Adeleke, Babatunde (University of KwaZulu-Natal). Quantitative swot analyses of key aquaculture players in Africa: a case study of Egypt, Nigeria and Uganda vis-à-vis South Africa.

Ahamed, Ferdous (Patuakhali Science and Technology University). Population dynamics of *Fenneropenaeus indicus* (Crustacea: Penaeidae) in a coastal river, southern Bangladesh.

Ahmed, Zoarder (Bangladesh Agricultural University, Mymensingh-2202, Bangladesh). Food electivity and reproduction of hilsa shad Tenualosa ilisha in riverine waters of Bangladesh.

Alexandre Travassos, Fabio (UFPA/NEAP/PPGEAP). Review of strategic planning in aquaculture activity. Poster presentation.

Baba, S. H. (Sher-e-kashmir University of Agricultural Sciences & Technology of Kashmir, J&k, India). Imperatives for enhancing productivity in fish culture under cold water production environment in India.

Baba, S. H. (Sher-e-kashmir University of Agricultural Sciences & Technology of Kashmir, J&k, India). Sustenance of fisheries sector under the cold-water production environment: Imperative for good governance in India.

Baldigo, Barry (U.S. Geological Survey). A Clean Air Act success story: Evidence of biological recovery in previously acidified lakes and streams of New York State, USA.

Basheer, V S (ICAR-NBFGR). Assisted captive breeding make a way for recovery of a critically endangered species *Hemibagrus punctatus* (Jerdon, 1849) endemic to River Cauvery, in the Western Ghats.

Bayen, Supriti (ICAR-central Inland Fisheries Research Institute). Influence of physico-chemical parameters on seasonal fish diversity and abundance of *Chharaganga beel*, an open wetland of River Ganga.

Dufflocq, Pablo (University of Chile). Assessment of food fraud incidents in chondrichthyan-based products commercialized in Northern and Central Chile.

Faruque, Md. Hasan (Yokohama National University). Vulnerability assessment for the Hilsa (*Tenualosa ilisha*) and it's data-limited bycatch species from Hilsa gillnet fishing of Bangladesh.

Gracia, Adolfo (Universidad Nacional Autónoma de México). Gulf of Mexico White and Pink Shrimp Sustainability.

Henriquez-Antipa, Luis (Instutito De Fomento Pesquero). Linking small-scale aquaculture of ecosystem engineers to both habitat restoration and benthic fisheries: a case of study in southern Chile.

Horaud, Mathilde (Norwegian College of Fishery Science, UIT-the Arctic University of Norway). Differential growth rates among offspring of local and translocated cleaner fish raised under a common garden set-up.

Jones, Ieuan (University of Aberdeen). Disentangling the effects of fishing and environmental change on fish species richness in the North Sea.

Kline, Richard (University of Texas Rio Grande Valley). The incorporation of low-profile nursery areas into artificial reef design.

Köster, Fritz W. (DTU Aqua, Denmark). Fall and rise of autumn spawning herring in the Baltic Sea ecosystem.

Ledee, Elodie (Fish Ecology and Conservation Physiology Laboratory, Department of Biology, Carleton University). Multi-year and cross-season telemetry tracking of the spatial ecology of four fish species in a degraded freshwater coastal embayment.

Ledee, Elodie (Fish Ecology and Conservation Physiology Laboratory, Department of Biology, Carleton University). Continental-scale acoustic telemetry and network analysis reveal new insights into stock structure.

Milisenda, Giacomo (Stazione Zoologica Anton Dohrn). Marine protected areas management to recovery small scale fisheries stocks.

Mion, Monica (Swedish University of Agricultural Sciences, Department of aquatic Resources.). Informing stock assessment of Eastern Baltic cod with temporal changes in growth and migration from 70 years of tagging data.

Mortuza, M (University of Rajshahi). The Pollutant Content in the Padma River Water Draining from Rajshahi City and Its impact on fisheries.

Nair, Rekha (Central Marine Fisheries Research Institute). Groupers-An Assessment, perceptions and evaluation of India's prized fishery.

Paramo, Jorge (Universidad del Magdalena). Conservation strategies for potential new deep-sea crustacean fisheries in the Colombian Caribbean under an ecosystem approach.

Paramo, Jorge (Universidad del Magdalena). The recovery of a poor-data fishery without control: the case of shallow water shrimp fishery in the Colombian Caribbean.

PR, Divya (ICAR National Bureau of Fish Genetic Resources). An integrative approach to assess the fish and shellfish diversity in the Ramsar region of Kerala State, India. Poster presentation.

Ramirez, Jorge (Charles Darwin Foundation). Recovery of the sea cucumber fisheries in the GMR: the need for science-based co-management.

Roman, Raphael (IWATE University). Benefits of multi-species fisheries portfolio diversification in northeastern Japan.

Sanjeev Kumar, Murali (ICAR-National Bureau of Fish Genetic Resources). ICAR-NBFGR, National Repository of Fish cell lines: In the service of aquaculture research and development.

Sherman, Samantha (Simon Fraser University). Assessing the Risk of Overexploitation of the Most Traded Species of Sharks and Rays.

Silva Caparro, Luis (Spanish Institute of Oceanography (IEO)). The evolution of the fishery of bivalve striped venus (*Chamelea gallina*) in the Spanish waters of the Gulf of Cádiz (SW Spain): research and management as key drivers to achieve the sustainability. Poster presentation.

Simonin, Paul (Cornell University). Hurricanes, fishing, and Queen Conch sustainability in the Turks and Caicos Islands.

Tayung, Tasso (ICAR-CIFRI, Barrackpore, West Bengal, India). Sustainable fish production through ecological and fisheries management of canals in Indian Sundarbans (West Bengal).

Tian, T (Dalian Ocean University). A simulation study on behaviour of juvenile *Sebaste schlegeli* in different flow fields around artificial reef.

Vigo, Maria (Institute of Marine Sciences). Evaluating the recovery of overexploited demersal resources in a no-take marine reserve with non-invasive remotely operated vehicles.

Witte, Andrew (Rhodes University). Perlemoen abalone ranching and stock enhancement: what is the status?

Woodruff, Patricia (University of British Columbia). Using shared arenas in Ecopath to examine the effect of salmon reintroduction on existing freshwater fisheries.

Yeh, Yun-ting (National Taiwan Ocean University). Age, growth and reproductive biology of the mangrove snapper (*Lutjanus argentimaculatus*) in the waters off Taiwan. Poster presentation.

Yomal, Thilina (University of Ruhuna). Limnology and morphometry of Sri Lankan Reservoirs affect the culture-based fisheries production of riverine Giant Freshwater Prawn *Macrobrachium rosenbergii*.

Theme 2 - Fish and aquatic ecosystems (biodiversity, conservation, ecosystem function, integrated management)

Biology and ecology

Agustina, Siska (Wildlife Conservation Society - Indonesia Program). Length-based assessment of White-edged lyretail grouper (*Variola albimarginata*) in Indonesia's Fisheries Management Area 713.

Alexandre Travassos, Fabio (UFPA/NEAP/PPGEAP). Assessment of fishing stocks of the

Alexandre Travassos, Fabio (UFPA/NEAP/PPGEAP). Performance models for four curimatideos the amount of the Tucuruí Dam, Brazil. Poster presentation.

Aquino, Jon Irish Legaspi (College of Public Health, Medical, and Veterinary Sciences). Intensification of the Redclaw (*Cherax quadricarinatus*) Industry: The Importance of Sperm Quality and Male Fertility to Productivity.

Arkhipkin, Alexander (Fisheries Department, Falkland Islands). 'Achilles heel' within the life cycle: how the high seas fishery contributes to over-exploitation of abundant pelagic squid resources.

Asimi, Oyas Ahmed (Faculty of Fisheries, Skuast-k). Growth response and feed utilization efficiency of Common carp (*Cyprinus carpio* var. communis) fingerlings to aquatic weed Supplemented Diet.

Asimi, Oyas Ahmed (Faculty of Fisheries, Skuast-k). Use of Berberis lyceum extract as growth and antioxidant agent in the diet of Common carp (*Cyprinus carpio* var. communis) fingerlings.

Baker, Krista (Fisheries and Oceans Canada). The difficulties of assessing Northern Short-finned Squid off Newfoundland and Labrador, Canada and ideas for moving forward.

Bangura, Paul (University of Helsinki). Investigating the link between vgll3 genotype and aggressive behaviour in juvenile Atlantic salmon (*Salmo salar*).

BASHEER, V S (ICAR-NBFGR). Breeding culture of indigenous ornamental barbs of the Western Ghats for conservation and trade.

Berg, Florian (Institute of Marine Research). Dynamics of young herring (*Clupea harengus*) and sprat (*Sprattus sprattus*) populations along the coastal Skagerrak margins of the North Sea.

Berg, Florian (Institute of Marine Research). Early life growth is affecting timing of spawning in the semelparous Barents Sea capelin (*Mallotus villosus*).

Bohaboy, Erin (NOAA Fisheries). An Assessment of Sampling Strategies for Estimating Fish Growth from Fishery-dependent Biological Samples.

Caballero-Huertas, Marta (University of Girona). A holistic view of emerging stressors in European sardine's condition and health status.

Carella, Ernesto (University of Oxford). Evaluating Management Strategies for the Indonesian deep-water snapper fishery using fully integrated social-ecological models.

Chakraborty, Hena (Central Inland Fisheries Research Institute, Barrackpore). Growth performance of *Tenualosa ilisha* in pond culture: a preliminary study.

Chan, Zong-han (National Taiwan University). Effects of temperature and body size allometry on larval growth for two subtropical reef fishes.

Chemshirova, Irina (Falkland Islands Fisheries Department). Temperature effects on size, maturity, and abundance of the squid *Illex argentinus* (Cephalopoda, Ommastrephidae) on the Patagonian Shelf.

Chiang, Chun-i (National Taiwan Ocean University). Seasonal movement patterns of the bigfin reef squid *Sepioteuthis lessoniana* predicted using statolith δ18O values.

curimbatá (Actinopterygii), under the influence of hydrological data and Tucuruí Dam, Brazil. Poster presentation.

Daning Tuzan, Audrey (Universiti Malaysia Sabah). Spawning cycle of wild marble goby *Oxyeleotrus marmorata* from Likas Bay, Sabah, Malaysia.

Dankel, Dorothy Jane (University of Bergen). "Doing CRISPR": Genetically modified Norwegian farmed salmon: in the lab AND on the plate?

Dorant, Yann (University Laval). Development and application of advanced genomic tools to the lobster fishery in Canada.

Dos Anjos, Marcelo Rodrigues (Federal University of Amazonas/universidade Federal Do Amazonas - UFAM). The effect of environmental gradients over the fish assemblages in Lower Roosevelt River Sub-basin, Amazon Southwest, Brazil. Poster presentation.

Dubey, Maneesh Kumar (ICAR-directorate Of Coldwater Fisheries Research, Bhimtal, Uttarakhand, India 263136). Early life thermal exposure affects the developmental ontogeny and muscle cellularity of rainbow trout, *Oncorhynchus mykiss*.

Graham, Caroline (North Pacific Anadromous Fish Commission). Effective multi-jurisdictional ocean science collaboration in a rapidly changing world through the International Year of the Salmon initiative.

Hua, Qiaz Q.H. (University of Adelaide). Molecular phylogeny and morphometric analysis of commercially harvested southeast Australian octopuses reveal a distinct genetic population and distinguishing morphometric traits. Poster presentation.

Huntsbegrer, Carl (Commercial Fisheries Research Foundation). Utilizing a Fisheries-Dependent Data Collection Program to Illuminate Spatiotemporal Patterns in the American Lobster (*Homarus americanus*) Population and Fishery.

Ikele, Chika (University of Nigeria). Morphology and Abundance of Crabs (Decapoda) In Opi Aji Lake, Enugu State, Nigeria.

Jayasinghe, Asanka (University of Ruhuna). Consumption of natural food by riverine Giant Freshwater Prawn (*Macrobrachium rosenbergii*) utilized for culture-based fisheries in reservoirs in Sri Lanka.

Kaiser, Michel (Heriot-watt University). TURF management systems reduce swept area ratio and carbon footprint.

Karisa, Juliet (KMFRI). Spatial patterns of Spiny lobster (Panulirus) on coral reefs in Kenya.

Kim, Hee-Jin (Nagasaki University). Effects of light wavelength and intensity on larval settlement in the Pacific oyster *Crassostrea gigas*.

Kumari, suman (ICAR-central Inland Fisheries Research Institute). Business opportunity and challenges of inland ornamental fisheries in India as a promising commodity of Aqua-business.

Kushwaha, Basdeo (ICAR-national Bureau of Fish Genetic Resources, Lucknow-226002, Uttar Pradesh, India). Application of BAC clones as marker for identifying individual chromosome using BAC-FISH and chromosome organization.

Kushwaha, Basdeo (Icar-national Bureau of Fish Genetic Resources, Lucknow-226002, Uttar Pradesh, India). Karyological studies in Puntius chola (Hamilton, 1822) using Giemsa, AgNOR and CMA3 staining.

Labh, Prof. Shyam Narayan (Tribhuvan University, Nepal). LAPSI *Choerospondias axillaris* (ROXB.) Enhances growth and immunity in commercial fisheries.

Laptikhovsky, Vladimir. Mapping and identifying spawning grounds of commercial squids Loligo spp in northern European waters as a tool for sustainable management.

Lloret-Lloret, Elena (Institut De Ciències Del Mar (ICM-CSIC)). Unravelling the relative effects of environmental factors and trophic ecology on the spatio-temporal changes in body condition of two Mediterranean small pelagic fish.

Michael, Pamela E (Clemson University). Flyingfish and feathers: habitat and avifaunal associations of flying-fish in the northern Gulf of Mexico.

Moustahfid, Hassan (NOAA). Ecological-Fishery Forecasting of Squid Stock Dynamics under Climate Variability and Change: Review, Challenges, and Recommendations.

Nigmatullin, Chingiz (Fisheries Department, Falkland Islands). Warning of a possible coming collapse of macro-scale artisanal fishery for jumbo squid in the Eastern Pacific due to transitions in the population structure.

Nilsen, Cecilie Iden (Norwegian Research Center (NORCE) / University of Bergen). Acoustic telemetry reveals differences in migrational patterns of adult wild and hatchery salmon.

Papatheodoulou, Magdalene (University of Glasgow). The effects of stress on adult Atlantic salmon prior to spawning on the viability of their offspring.

Pierce, Graham (Instituto de Investigaciones Marinas, C.S.I.C.). Long-term abundance trends in European cephalopods.

Rajasree S.R., Radhika (Kerala University of Fisheries and Ocean Studies). In vitro assessment of biological lipids and proteins from sea urchins *Stomopneustes variolaris* and *Salmacis bicolor* from East Coast of India.

Randall, Jessica (Memorial University of Newfoundland). Forage fish as a predator: summer and autumn diet of Atlantic herring in Trinity Bay, Newfoundland.

Rhyne, Andrew (Roger Williams University). Cyanide Detection in Marine Fish: Myth or Reality?

Rhyne, Andrew (Roger Williams University). Fisheries and Aquaculture intersect: An overview of the Marine Aquarium Trade with an Eye on Sustainable Trade and Livelihoods.

Robin, Jean-Paul (Université De Caen Normandie). The role of English Channel squid in the ecosystem and the consequences of integrating environmental data in the assessment and management of these stocks.

Roy, Shreya (ICAR-Central Inland Fisheries Research Institute, Barrackpore, West Bengal, India). Identification of macrobenthic species of river Ganga as pollution bioindicator. Poster presentation.

Saul, Steven (Arizona State University). Evaluating the status of Indonesian deepwater snapper and grouper fishery stocks using a model ensemble approach.

Sbeghen Pelegrini, Larissa (Universidade Federal Do Amazonas - UFAM). Metacercariae of Diplostomidae (Platyhelminthes, Digenea) parasitizing Astronotus ocellatus (Agassiz, 1831) in the Southwest Amazon. Poster presentation.

Sedanza, Mary Grace (Nagasaki University). Partial purification of a settlement inducing conspecific cue in adult shells of Pacific Oyster *Crassostrea gigas*.

Sheikh, Maryam (University of Sindh, Jamshoro). Effect of Water Flow on the Morphological Characters of Ichthyofauna at the Indus River Downstream.

Singh, Rajeev (ICAR-NBFGR). Spatial variation in shape morphometry of *Mugil cephalus* Linnaeus 1758 from Indian waters. Poster presentation.

Song, Chao (Freshwater Fisheries Research Center, Chinese Academy of Fishery Sciences). Risk assessment of pesticide use in rice-crab coculture systems in China.

Surma, Szymon (University of Alaska Fairbanks). Norwegian spring-spawning herring: a key forage fish.

Taiwo, Iyabode (Federal University of Agriculture, Abeokuta, Nigeria). Sex Reversal, Growth Performance and Haematological Parameters of Ecotype Cichlid Tilapia 'Wesafu' using *Carica papaya* and *Telfairia occidentalis* Seeds.

Taiwo, Iyabode (Federal University of Agriculture, Abeokuta, Nigeria). Sex Reversal, Growth Performance and Haematological Parameters of *Oreochromis niloticus* using *Carica papaya* and *Telfairia occidentalis* Seeds.

Trobbiani, Gastón Andres (Centro Para El Estudio De Sistemas Marinos (CESIMAR)). Using BRUVS to describe the fish assemblage and its seasonality in two shallow marine inlets within protected areas of Patagonia, Argentina. Poster presentation.

Van Der Velde, Tonya (CSIRO). Seasonal, interannual and spatial variability in reproductive dynamics of *Penaeus merguiensis*. Poster presentation.

Vieira Sardinha, Jessica (Universidade Federal Do Amazonas). First record of fish parasitized by Pentastomida larvae in the middle Madeira River basin, southern Amazonas. Poster presentation.

White, Lydia (University of New Brunswick Saint John). Can we use American lobster settlement density to predict future fishery recruitment in Atlantic Canada?

Willse, Nathaniel (University of Maine). An assessment of vertical line use in the Gulf of Maine region American lobster fishery and resulting conservation benefits for the endangered North Atlantic right whale.

Yang, Jian (Freshwater Fisheries Research Center, Chinese Academy of Fishery Sciences). Multi element/stable Isotope and geometric morphometric profiles of Chinese mitten crab Eriocheir sinensis from different geographical origins.

Zhong, Liqiang (Freshwater Fisheries Research Institute of Jiangsu Province). Impact of fertilization on bacterial community in channel catfish nursery ponds revealed by high-throughput sequencing. Poster presentation.

By-catch, habitat and depredation

Adao, Ana (University of Strathclyde). Estimating quantities of discards – a case study of demersal fish bycatch from the Firth of Clyde prawn fishery (West of Scotland).

Barkai, Amos (OLSPS). A novel, spatially based, real-time software solution for the avoidance of "choke" bycatch species.

Bouch, Paul (Marine Institute). Protecting by proxy – to what extent does managing commercial stocks protect non-target species?

Bromhall, Katrina (DTU Aqua (National Institute for Aquatic Resources)). Quantifying the effects of a 'low impact' fishing gear - the Danish Seine - on seabed macrofauna.

Camilieri-Asch, Victoria (Queensland University of Technology). An integrative approach to understand and manage negative interactions between Galapagos sharks and charter fishers at Lord Howe Island. Poster presentation.

Collie, Jeremy (University of Rhode Island). Modeling the Intensity of Bottom Trawling Footprints.

Demirel, Nazli (Istanbul University). Stock decline of European hake in relation to diet change. Poster presentation.

Drymon, Marcus (Mississippi State University and Ms-al Sea Grant). Descender devices or treat tethers: Does barotrauma mitigation increase opportunities for depredation?

Fennell, Hannah (Heriot Watt University). A systematic review quantifying the global effects of static gear: comparing the environmental impact of mobile and static gear on benthic habitats and wildlife. Poster presentation.

Fennell, Hannah (Heriot Watt University). Understanding and removing the barriers hindering the uptake of ghost-fishing mitigating gear technology: a fisher choice experiment.

Fauconnet, Laurence (IMAR/ University of Azores). Is it possible to avoid deep-water sharks in the Azores hook-and-line fisheries?

Gilman, Eric (Pelagic Ecosystems Research Group). Transitioning from piecemeal to integrated fisheries bycatch management to account for cross-taxa conflicts.

Jabado, Rima (Elasmo Project). Minimizing bycatch of seabirds and sea turtles in West African industrial fisheries.

Jatmiko, Irwan (Research Institute for Tuna Fisheries). Catch composition and fishing strategies of Indonesian longline fishery operated in Eastern Indian Ocean.

Kopp, Dorothée (IFREMER). Impacts of two types of fish traps on the seabed. Poster presentation.

Kopp, Dorothée (IFREMER). Survival of discarded invertebrates from bottom trawling fisheries in the Bay of Biscay.

Kraft, Derek (Hawai'i Institute of Marine Biology). Who bit my fish: Insight to Shark Deprivation Using DNA Barcoding.

Macdonald, Paul (Scottish Fishermen's Organisation). The development and trial of a digital by-catch avoidance tool in the west of Scotland.

Mangano, M Cristina (Stazione Zoologica Anton Dohrn). A socio-ecological approach to depict resilience of accidentally caught benthic species under chronic trawling disturbance.

Mangano, M Cristina (Stazione Zoologica Anton Dohrn). Traits under pressure: an integrated approach to evaluate the effects of fishing activities on fish vulnerability.

Marshall, Tara (University of Aberdeen). Skipper's experiences using a digital bycatch avoidance tool on the west of Scotland.

Mclaverty, Ciaran (DTU Aqua). Size-based indicators of bottom trawling disturbance.

Musyl, Michael (Pelagic Research Group Llc). Meta-analysis to Increase Precision in Effect Sizes for Post-release Mortality and Efficacy of Weak Hooks in Pelagic Fisheries.

Nakiyende, Herbert (National Fisheries Resources Research Institute (NaFIRRI)). Can light fishing co-exist in the Lake Albert multi-species fisheries?

Panduwawala, Pavithra (Pelagikos(pvt)ltd). Bycatch Risk Assessment of Non-Target Marine Species in Small-Scale Fisheries (A Case Study in Gulf of Mannar, Sri Lanka).

Seeger, Olivia (Macquarie University). The impacts of capture and handling on the visual system of fishes.

Shillinger, George (Upwell). South Pacific Turtle Watch: A dynamic management tool to aid in bycatch reduction of critically endangered Eastern Pacific leatherback turtles. Poster presentation.

Tubbs, Sarah (Marine Conservation Cambodia). Using species distribution models to map seasonal habitat preferences and pinpoint fisheries bycatch risk to Irrawaddy dolphins in the Kep Archipelago, Cambodia. Poster presentation.

Vasconcelos, Paulo (Portuguese Institute for Sea and Atmosphere (IPMA)). Testing pingers to reduce interactions between bottlenose dolphins and gillnets in a small-scale fishery in southern Portugal.

Verutes, Gregory (University of Santiago de Compostela). Using GIS and stakeholder involvement to innovate marine mammal by-catch risk assessment in data-limited fisheries.

Climate change

Arnold, Sarah (University of Manitoba). Using Inuit knowledge to explore Arctic Charr migratory habitat in Nunavut.

Bang, Minkyoung (Korea Institute of Ocean Science and Technology). Projecting seasonal changes in habitat suitability of anchovy (*Engraulis japonica)* under global warming in Korean waters with MaxEnt.

Bhakta, Dibakar (ICAR-CIFRI, Barrackpore). Growth, mortality and stock assessment of *Macrobrachium rosenbergii* (De Man, 1879) of a tropical estuary (Narmada estuary), west coast of India.

Brodie, Stephanie (University of California Santa Cruz). Exploring timescales of predictability in species distributions.

Chust, Guillem (AZTI - Marine Research Division). Null models for attribution analysis of fish distribution shifts to climate change.

Cote, David (Fisheries and Oceans Canada). Using movement, diet and genetic analysis to understand Arctic Charr responses to ecosystem change.

Crear, Dan (Virginia Institute of Marine Science, William & Mary). Climate impacts on an important recreational fish species, cobia (Rachycentron canadum), using physiological and habitat modeling approaches.

Darnaude, Audrey (Marbec (CNRS)). Advancing concepts and methods in marine connectivity research to strengthen resource management frameworks: the SEA-UNICORN COST Action.

Das, Basanta (ICAR-Central Inland Fisheries Research Institute, Barrackpore). Prospects of physiological Convergence and transformation of Co-habitation of marine and freshwater in Hilsa shad (*Tenualosa ilisha*) through Biotechnological tool.

Duke, Christopher (Washington State University). Rearing temperature influences body shape and sprint swim speed in clonal rainbow trout. Poster presentation.

Elliott, Vittoria (World Fish Center). Impact of climate change on the Cambodian inland fishery – does the future look bleak?

Erauskin-Extramiana, Maite (Azti Brta). The influence of climate change and fishing pressure in global top predator abundance and body size in the future.

Fabrizio, Mary (Virginia Institute of Marine Science). The extent of seasonally suitable habitats may limit forage fish production in a temperate estuary.

Ferrari Ramalho, Debora Cristina (Fisheries Ecosystems Laboratory - Oceanographic Institute of University Of São Paulo). Governance mapping as a tool to identify paths for fisheries adaptation to climate change: a case-study in the South Brazil Bight.

Feutry, Pierre (CSIRO). Close-kin methods to estimate census and effective population size.

Golden, Abigail (Rutgers University). Indirect effects of extreme storm events on angling catchability of drift feeding salmonids.

Holland, Matthew (University of New South Wales). Dynamic distributions of temperate forage fish at multiple spatio-temporal scales.

Husson, Bérengère (Institute of Marine Research). Successive extreme climatic events build up large scale, immediate and cumulative responses from fish in the Arctic.

Ikpewe, Idongesit (University of Aberdeen). Changes in size at age of commercial fish species provide additional evidence of the effects of global warming.

Jessen, Henrik Høiberg (University of Bergen). Evolutionary responses of Atlantic cod (*Gadus morhua*) to concurrent fisheries and climate stressors.

Kienzle, Marco (NIWA). Rising temperatures increased recruitment of brown tiger prawn (*Penaeus esculentus*) in Moreton Bay (Australia). Poster presentation.

Koenigstein, Stefan (NOAA Fisheries, UC Santa Cruz). Pacific sardine stock projections in the California Current under changing climate and fisheries.

Lamberth, Stephen (Department of Environment, Forestry and Fisheries, South Africa). Freshwater flow influences on river plumes and the distribution and abundance of small-pelagic fish on the South African coast.

Lamberth, Stephen (Department of Environment, Forestry and Fisheries, South Africa). Island or oasis: Population connectivity of yellowtail kingfish *Seriola lalandi* between two shallow seamounts in temperate Atlantic and Indian oceans and Southern Africa.

Lee, Qi (School of Aquatic and Fishery Sciences, University of Washington). A retrospective analysis on mapping spatiotemporal fisher to fish distribution in the Eastern Bering Sea.

Matić-Skoko, Sanja (Institute of Oceanography and Fisheries). Inter-annual variability in juvenile densities and year-class strength for certain economically important and exploited fish species in the Adriatic Sea. Poster presentation.

Mcdermott, Susanne (NOAA NMFS Alaska Fisheries Science Center). Examining distributional shifts of Pacific cod in the Bering Sea with Satellite popup tags.

McNaughton, Lianne (TissueGrab Biopsy Systems, LLC). TISSUEGRAB Biopsy Sampling Device: A New Standardized Methodology for Harvesting Biological Samples in Marine Studies. Poster presentation.

Mei, Jie (University of Washington, Seattle). Video-based Hierarchical Species Classification for Longline Fishing Monitoring.

Morato, Telmo (IMAR - University Azores). Climate-induced changes in the suitable habitat of cold-water corals and commercially important deep-sea fishes in the North Atlantic.

Moullec, Fabien (Institute of Marine Ecosystem and Fishery Science - University of Hamburg). Rebuilding and projecting Mediterranean marine resources under climate change.

Moustahfid, Hassan (NOAA). Advances in Fisheries Science Through Emerging Observing Technologies.

Mozumder, Mohammad (University of Helsinki). Climate change adaptation strategies for Small-scale Hilsa (*Tenualosa ilisha*) fishers in the coastal area of Bangladesh: Social, economic, and ecological perspectives.

Muhling, Barbara (University of California - Santa Cruz / NOAA Fisheries). Predicting species distributions under increasingly novel environmental conditions: a marine heatwave test-case for the California Current System.

Myers, Bonnie (U.S. Geological Survey/NC State). Fish and Climate Change (FiCli) Database: Informing climate change adaptation and management actions for freshwater fishes.

Nyboer, Elizabeth (Carleton University). Social-ecological feedbacks in fishing communities adapting to climate change in the Lake Victoria basin of East Africa.

O'Brien, Kaitlyn (Virginia Institute of Marine Science). Characterizing Changes in Habitat for Large Coastal and Small Coastal Sharks along the Southeastern Atlantic Coast.

Oleynik, Haley (University of Delaware). Long-Term Shifts in the Fish and Macroinvertebrate Community in a North American Estuary.

Ong, Joyce (Nanyang Technological University). Recruitment dynamics among groundfish covary consistently over four decades at multiple timescales.

Peterson-Williams, Megan. The heat is on: Gulf of Alaskan Pacific cod and climate-ready fisheries.

Pringle, Brett (Rhodes University). Physiological winners and losers in an ocean warming hotspot: a case study on *Argyrosomus* off the Namibian coast, with implications for their future management.

Putnis, Ivars (Institute of Food Safety, Animal Health and Environment Bior). Environment and fisheries scenario-based simulation of the future Baltic Sea coastal food web.

Schonfeld, Adena (Virginia Institute of Marine Science). Impact of Shifting Environmental Conditions on Habitat Utilization of Estuarine Fishes.

Shuter, Brian (University of Toronto). Drivers of Fish Life History Dynamics Differ Over Ecological and Evolutionary Time Scales.

Silva, Goncalo (MARE-ISPA). The influence of global changes on the biology and dynamics of small pelagic fishes.

Smith, Laurel (NOAA/NEFSC). Climate change, fish and fisheries: how climate change may be driving regime shifts and fish condition.

Støttrup, Josianne (Danish Technical University). A systems approach for the sustainable management of Atlantic cod fishery under changing climate conditions.

Tan, Melissa (Southern Cross University). Application of otolith oxygen isotope concentrations to investigate thermal preferences and potential climate change impacts for trawl whiting. Poster presentation.

Tidd, Alex (University of Vigo). Food security challenged by declining efficiencies of fishing fleets.

Urrea Mariño, Ulsía (Texas A&M University-Corpus, Harte Research Institute for Gulf of Mexico Studies). Fishermen in Mexico and Cuba, challenges and opportunities in the face of Climate Change.

Vanderzwaag, David (Dalhousie University). Are regional fisheries management organizations in the Northwest Atlantic seaworthy in a changing ocean?

Vaughan, Louise (Marine Institute/GMIT). Impacts of climate change on commercial fish stocks in Irish waters.

Wang, Hui-yu (National Taiwan University). Rising temperature drives divergent effects on life histories and population growth rates for Indo-Pacific fishes.

Werner, Francisco (NOAA National Marine Fisheries Service). Climate and marine ecosystem variability on sub-seasonal to seasonal (S2S) time scales.

Willis-norton, Ellen (University of California Santa Cruz). The Impact of Climate Change on Metabolism, Hatching Success, and Viability of Lingcod Eggs (*Ophiodon elongatus*) in the California Current System.

Wuellner, Melissa (University of Nebraska at Kearney). Changes in Aquatic Communities of Reservoir Coves Following Reconnection due to Flooding.

Conservation

A T, Sangeetha (Centtal Marine Fisheries Research Institute). Valuable-but vulnerable-are we on the right track? -a critical analysis.

A T, Sangeetha (Centtal Marine Fisheries Research Institute). Valuable-but vulnerable-are we on the right track? -a critical analysis. Poster presentation.

Carvalho, Felipe (Virginia Tech). Fishing gear selectivity of fish traits in coral reefs off northeastern Brazil.

Das, Gargee (ICAR Central Institute of Freshwater Aquaculture). Population Genetics of the Deccan mahseer using microsatellite markers.

Deb, Jyotirmoy Shankar (Barasat College). Wetlands loss: A major cause of marine & freshwater fish biodiversity loss.

Di Lorenzo, Manfredi (CNR-IRBIM). Assessing spillover from Marine Protected areas and its drivers: a meta-analytical approach.

Freire Ramos, Keythiane (UFAM). Occurrence of Copepoda (Arthropoda, Crustacea) in fish collected on fishing landings in the middle of the Madeira River, Amazon.

Islam, Gazi (Universiti Tun Abdul Razak). Environmental Pollution and Management Effectiveness of Marine Protected Areas: A case of Perhentian and Kapas Marine Parks in Malaysia.

K M, Vishnupriya (Central Marine Fisheries Research Institute, Kochi). A critical evaluation of the status of the goatfishes and the fishery in India.

Magoro, Mandla Leon (South African Institute for Aquatic Biodiversity). The current distribution of non-native Nile Tilapia (*Oreochromis niloticus*) in the Limpopo and Mpumalanga Provinces - Implications for Mozambique tilapia conservation and South Africa's fish farming industry.
Perry, William (Fisheries Society of The British Isles). Biodiversity monitoring in the Anthropocene: eDNA and freshwater fish.
Ray, Archisman (ICAR-central Inland Fisheries Research Institute). Assessment of economic impact on growth overfishing of Paradise threadfin (*Polynemus paradiseus*) from Hooghly Bhagirthi estuarine system. Poster presentation.
Reizenberg, Jody-lee (University of Cape Town). Fainting fishes: Investigating the effects of climate change on highly endangered freshwater fishes in the Cape Fold Ecoregion using a physiological traits-based approach.
Saha, Atal (Stockholm University). Monitoring genetic diversity in Arctic charr (*Salvelinus alpinus*) using whole genome sequencing.
Simeon, Benaya (Wildlife Conservation Society). Rhino-Ray Fisheries in the Biggest Shark Fishing Nation.

Ecosystem-based fisheries management

Alexandre Travassos, Fabio (UFPA/NEAP/PPGEAP). Fishing management proposal in the mosaic of lake tucuruí, using the swot analysis tool. Poster presentation.
Alizadeh Ashrafi, Tannaz (The Arctic University of Norway, UIT). Intra and inter-temporal effort allocation and profit maximizing strategy of the trawl fishery.
Añasco, Cherry Pilapil (University of The Philippines Visayas). Characterization of coastal and fisheries tourism in small islands as social-ecological systems.
Austin, Deborah (Fisheries and Oceans Canada). Adopting an Ecosystem Approach to Fisheries Management: changing fisheries science and management in Canada one step at a time.
Barkai, Amos (OLSPS). OlracRTI: A complete and novel approach that considers biological, ecological and economic effects in wide-ranging Ecosystem-Based Fisheries Management.
Barrett, Chris (Cefas). Highly Protected Marine Areas and recreational sea angling.
Broadhurst, Ben (Centre for Applied Water Science, University of Canberra). Larval growth patterns of two lowland fish species from the Lachlan River, Murray-Darling Basin, Australia.
Calderón Mayo, Karla Inés (Programa De Las Naciones Unidas, Perú). Current Status and Challenges of Marine Protected Areas in Latin America and the Caribbean. Poster presentation.
Canales Andrades, TMariella (Center of Applied Ecology and Sustainability). A Multi-Species Size Spectrum Model. The case of the Northern Chilean Marine Ecosystem.
Collie, Jeremy (University of Rhode Island). Aligning Seafood Markets with Ecosystem Production.
Cucuzza, Marina (NOAA/NMFS). Evaluating the theoretical and practical linkages between ecosystem-based fisheries management and fisheries co-management.
de Mutsert, Kim (George Mason University). Effects of nutrient loading and hypoxia on shrimp and menhaden in the Northern Gulf of Mexico, USA using an ecosystem model.
Di Cosmo, Anna (Università degli Studi di Napoli Federico II). Octopus vulgaris fishing management in Campania Marine Protected Areas. Poster presentation.

Duffy-Anderson, Janet (NOAA Fisheries / Alaska Fisheries Science Center). Incorporating ecosystem metrics into the regulation of U.S. fisheries stocks: examples from Alaska's Large Marine Ecosystems.

Gamble, Robert (NOAA Fisheries - Northeast Fisheries Science Center). Exploring Portfolio Analysis as a Management Tool in a Coupled Ecological-Economic Model Simulation Framework for Georges Bank in the Northeast US Large Marine Ecosystem.

Gao, Jin (Memorial University of Newfoundland). Balancing economic yield, bycatch limits and changing climate to optimize fishing practices: a case study in the Grand Banks.

Gartland, James (Virginia Institute of Marine Science, William & Mary). Spatiotemporal Coherence of Aggregate Biomass Ecosystem Indicators in the Mid-Atlantic Bight, USA.

Howell, Daniel (Institute of Marine Research, Norway). Combining ecosystem and single-species modelling to provide ecosystem-based fisheries management advice within current management systems.

Kolding, Jeppe (University of Bergen). Is the observed fishing down process compatible with an ecosystem approach to fisheries?

Kulatska, Nataliia (Stockholm University Baltic Sea Centre). Baltic cod predation: mechanisms, impact on prey, implications for fisheries.

Lam, Mimi E. (University of Bergen). Adding Values to Ecosystem-based Fisheries Management.

Leandro, Sergio (Polytechnic Institute of Leiria). Co-Pesca2: Implementation of the co-management committee for barnacle's fisheries in the Berlengas Nature Reserve (Portugal).

Leonard, Philip (WWF International). Forgotten Foods. The critical importance of food from rivers for food security health and sustainable diets.

Lim, Ai Gaik (Department of Fisheries Malaysia). long term monitoring data analysis – a basis for adaptive management: case study for Redang Island Marine Park.

Marshak, Tony (ECS Federal, LLC in Support of NOAA Fisheries). Characterizing and Comparing U.S. Marine Fisheries Ecosystems: Successful Factors in Moving Toward Ecosystem-Based Fisheries Management.

MD Repin, Izarenah (Department of Fisheries). Marine park Malaysia: more than just a fishery tool.

Meharoof, Mohammed (ICAR-Central Institute of Fisheries Education). Ecosystem based fisheries management in tropical Reservoir Fisheries.

Michael, Pamela E (Clemson University). Optimizing enforcement and surveillance with limited resources: a projection-based case-study.

Morato, Telmo (IMAR - University Azores). Exploring ecosystem and fisheries outcomes of deep-sea area-based management scenarios.

Nkalubo, Winnie (National Fisheries Resources Research Institute). Are small pelagic species the future? Unlocking the economic and nutritional potential of *Engraulicypris bredoi* and Brycinus nurse in Lake Albert.

Panikkar, Preetha (ICAR-central Inland Fisheries Research Institute). Characterizing trophic interactions for assessing the ecosystem functioning of a reservoir ecosystem in India.

Pedreschi, Debbi (Marine Institute). Operationalising IEA for EBFM: learning by doing.

Perryman, Holly (Institute of Marine Research). Overcoming EBFM Implementation Challenges: Multi-model Inference of Ecosystem- and Value-based Management Strategy Evaluation.

Pyron, Mark (Ball State University). Food webs of floodplain lakes of the Wabash River, Indiana, USA.

Reid, Dave (Marine Institute, Ireland). WKIRISH: harnessing fisher knowledge. A model route to co-management?

Rogers, Alice (Victoria University of Wellington). The use of size-based models in Ecosystem Based Fisheries Management.

Roman, Raphael (Iwate University). Investigating the patterns, drivers and potential of marine fisheries portfolio diversification across whole Japan.

Roy, Dr. Tamal (Leibniz-Institute of Freshwater Ecology and Inland Fisheries (IGB) Berlin). Size-selective mortality affects collective risk-taking under predation threat in zebrafish, Danio rerio: implications for fisheries-induced evolution.

Surma, Szymon (University of Alaska Fairbanks). The promise of satoumi for Pacific herring management and conservation.

Taiwo, Yetunde (Natural History Museum, Obafemi Awolowo University, Ile - Ife. Nigeria). Museum fishes and fish conservation efforts in Nigeria. Poster presentation.

Townsend, Howard (NOAA Fisheries). System-level thinking for ecosystem-based fisheries management: Evaluating the US fisheries portfolio.

Woodruff, Patricia (University of British Columbia). Reservoir fertilization and fishery response in a highly managed reservoir with uncertain flows: ecosystem-based management using decision analysis.

Ecosystem-based and integrated ocean management

Aguion, Alba (University of Vigo). Does rotational harvest increase the economic performance of territorial use rights for fishing (TURFs)?

Arantes, Caroline (Michigan State University). Dams effects on fisheries in the Amazonian Floodplain of the Madeira River.

Bonar, Scott (American Fisheries Society). Statement of World Aquatic Scientific Societies on the Need to Take Urgent Action against Human-Caused Climate Change, Based on Scientific Evidence.

Bouch, Paul (Marine Institute). Cumulative effects in integrated ecosystem assessments: complexity and uncertainty.

Chan, Andrea (NOAA Fisheries). Incorporating Socioeconomic Information in Fisheries Stock Assessments: Recommended Practices for Increasing Assessment Accuracy and Barriers to Socioeconomic Data Integration.

Condon, Kelsey (National Whistleblower Center). U.S. Whistleblower Law May Be the Key to Fighting International Fisheries Crime. Poster presentation.

Das, Basanta (ICAR-Central Inland Fisheries Research Institute, Barrackpore). Fish diversity in downstream of Sardar Sarovar Dam, river Narmada in India.

Das, Basanta (ICAR-Central Inland Fisheries Research Institute, Barrackpore). First record of Brown trout, Salmo trutta in high altitude river Tons, India, its reproductive and feeding biology.

Estevez, Rodrigo (Universidad Santo Tomas). Structured decision making in artisanal fisheries management: using scenario analysis to evaluate social impacts.

Garren, Melissa (Working Ocean Strategies). Shifting Toward Innovation and Technology Compatible Fisheries Management Policy Frameworks in the U.S.

Gomez Cardona, Santiago (Heidelberg University). Too Far to Profit. Fishing Effort's Spatial Distribution in Lake Victoria's Nile Perch Fishery.

Hallin, Julie Krogh (International Council for The Exploration of The Sea). A systematic review of behavioural economics mechanisms in a fisheries context: Lessons for management.

Kahn, James (Washington And Lee University and Universidade Federal do Amazonas). Fishery Zoning to Minimize Conflict Among Fishing Groups and to Support Sustainable Development in Remote Areas of the Amazon Basin.

Madsen, Jens Koed (University of Oxford). Surveying Indonesian snapper-grouper fisher behaviour.

Marriott, Sara (University of Southern Mississippi). Implications of community-based management of marine reserves in the Philippines for reef fish communities and biodiversity.

Miyan, Kaish (Aligarh Muslim University, India). Spatial population structure of giant river-catfish *Sperata seenghala* (Sykes, 1839) in the Gangetic river system.

Mustafa, M. Golam (Universiti Putra Malaysia). Spatiotemporal Structure of Ichthyofaunal Diversity in a Tropical Deltaic Estuary, Sarawak, Malaysia: Risk and Conservation Status.

Nyameke, Isaac (Ghana Aquaculture and Fish Network). Why African countries marine fisheries production differ from each other?

Oyanedel, Rodrigo (University of Oxford). A framework for assessing and intervening in markets driving unsustainable fisheries.

Pauly, Daniel (Sea Around Us, IOF, University of British Columbia). Documenting and mapping the global expansion of industrial overfishing from 1950 to 2018.

Pedreschi, Debbi (Marine Institute). Mental Modelling with stakeholders to inform Integrated Socio-Ecological Assessment.

Piermarini, Raffaella (ISPRA). Plastic and microplastic ingested by fish a growing worldwide problem. Global policy needs. Poster presentation.

Quiros, T E Angela (Hokkaido University). Blue Carbon and Ecosystem Services: a case of small-scale fisheries in mangroves and seagrasses in the Philippines.

Rehren, Jennifer (Thünen Institute of Sea Fisheries). Evaluating impacts of fishing gear regulations in a small-scale, data-limited fishery using a food web model.

Rubianes-Landázuri, Francisco (Universidad San Francisco de Quito). Elevated Mercury concentrations in Yellowfin tuna (*Thunnus albacares*) from the Galápagos Marine Reserve and Waters off Ecuador.

Stelzenmüller, Vanessa (Thünen Institute of Sea Fisheries). Sustainable co-location solutions for offshore wind farms and fisheries need to account for socio-ecological trade-offs.

Taabu-munyaho, Anthony (Lake Victoria Fisheries Orgaization (LVFO)). BIG is BIG: Small pelagic species overtake large ones in biomass on African Great lakes but remain inferior in economic contribution.

Vert-pre, Katyana (Arizona State University). Exploring FAD Management in the Eastern Pacific Ocean using an Agent-Based Bio-Economic Model: POSEIDON.

Williams, Lindsey (University of New Hampshire). Consideration of Social Information in New England Fisheries Management.

Zhu, Yanhui (Graduate School of Environmental Science Hokkaido University). Evaluation of Set-net location by means of quantitative echo sounder.

Anguillid eels

Amilhat, Elsa (Université De Perpignan). *Anguillicola crassus* infection in different ecosystems of the South West European area. Poster presentation.

Bodnar, Wanda (Thames Estuary Partnership). An integrated GIS-based approach to improve river connectivity within the Greater Thames Estuary?

Chapman, Sam (Environment Agency). A summary of the European eel status in the Severn River Basin District, UK and the actions being taken to protect it.

De Noia, Michele (University of Glasgow). In-situ non-lethal rapid test to accurately detect the presence of the nematode parasite, *Anguillicoloides crassus*, in European eel, *Anguilla anguilla*.

Durif, Caroline (Institute of Marine Research). Fresh- or seawater eels, or mixed life history strategies: what do the parasites tell?

Durif, Caroline (Institute of Marine Research). Understanding the life-history of eels in Norway through combined analyses of fatty acid profiles, stable isotope ratios and otolith microchemistry.

Fachri, Faridz Rizal (WWF Indonesia). A Risk Based Approach for Assessing the Status of Tropical Glass Eel Fishery in The Southern Part of Western Java, Indonesia.

Feunteun, Eric (Muséum National d'Histoire Naturelle). Contamination by organic and inorganic elements skews the life history traits of the endangered European eel.

Freese, Marko (Thuenen Institute of Fisheries Ecology). Impacts of chemical pollution during the continental life of the European eel (*Anguilla anguilla* L.).

Han, Yu-San (National Taiwan University). Resource management of the Japanese glass eel in the East Asian: the current situation and future perspectives.

Hanel, Reinhold (Thünen Institute of Fisheries Ecology). New insights into the larval ecology of the European eel – myths and facts.

Higuchi, Takatoshi (Nihon University). Horizontal and vertical migration behaviors during all phases of the Japanese eel spawning migration revealed by pop-up satellite archival tagging.

Kerr, Andrew (Sustainable Eel Group SEG). From pest to protected – an account of the development of protection policies for the European eel.

Koprivnikar, Janet (Ryerson University). Fresh- or seawater eels, or mixed life history strategies: what do their parasites tell?

Kwak, Tom (NC Cooperative Fish and Wildlife Research Unit). Ecology and Conservation of the American Eel in the Caribbean Region.

Lezama-Ochoa, Nerea (UCSC-NOAA). Using a Bayesian modelling approach (INLA SPDE) to predict the occurrence of the spinetail devil ray (*Mobula mobular*) in unsampled areas: the case of the eastern tropical Atlantic Ocean.

Marohn, Lasse (Thünen Institute of Fisheries Ecology). Swimming behaviour of artificially matured European eels (*Anguilla anguilla*) in the Sargasso Sea – New data from the spawning area obtained by pop-up satellite tagging.

Mateo, María (Azti). First international assessment of silver eel biomass.

Sasal, Pierre (CNRS-CRIOBE). New data on poorly studied eel species in French Polynesia.

Stein, Florian M (Sustainable Eel Group (seg)). Chinese eel products in EU markets show the effectiveness of trade regulations but expose fraudulent labelling.

Stein, Florian M (Sustainable Eel Group (seg)). Chinese eel products in EU markets show the effectiveness of trade regulations but expose fraudulent labelling.

Sugeha, Hagi Yulia (Indonesian Institute of Sciences (LIPI)). Species composition and seasonal abundance of the tropical glass eels genus Anguilla in the Pami Estuary, Western Papua Island, Indonesia.

Takeuchi, Aya (Nihon University). Environmental DNA identifies spawning events of the Japanese eel in the ocean.

Tomkiewicz, Jonna (Technical University of Denmark). Closing the European eel life cycle: An integrated approach to establish hatchery technology for European eel.

Van Wichelen, Jeroen (Research Institute for Nature and Forest (INBO). A small opening for man, a big step forward for European glass eel migration.
Watanabe, Shun (Kindai University). Spawning migration behavior of *Anguilla celebesensis*.
Zaccaroni, Annalisa (University of Bologna). Silvering through biometrics: reproductive potential of different populations of European eel (*Anguilla anguilla*) from Northern Adriatic Sea, Italy.

Environment and fisheries

Brown, Elliot (DTU Aqua, National Institute of Aquatic Resources, The Technical University of Denmark). On the use of hydrographic model output in fish habitat modelling: The comparison of three approaches in the same case.
Chioze, Ceiça (National Institute of Fisheries Research of Mozambique). Zooplankton biomass and biodiversity on the Sofala Bank, Mozambique.
Derhy, Ghoufrane (School of Technology Essaouira, Cadi Ayyad University, Morocco). Assessing external environmental drivers for the Chub Mackerel Moroccan fishery.
Fabré, Nidia Noemi (Universidade Federal De Alagoas). Trophic structure in coastal meta-ecosystems in tropical coastal waters.
Hyder, Kieran (Cefas). Using pelagic drift and statistical models to identify the drivers of abundance and dynamics of young European sea bass (*Dicentrarchus labrax*) as indicators of recruitment.
Kleisner, Kristin (Environmental Defense Fund). A foundation for climate-resilient fisheries in the Humboldt Current: establishing a comprehensive coastal ocean observing system in Chile and Peru.
Smith, Laura (The University of Queensland). Habitat preferences and distribution of sailfish (*Istiophorus platypterus*) in northern Australia. Poster presentation.
Wiryawan, Budy (IPB University, Bogor, Indonesia). Towards the establishment of an Offshore Marine Protected Area in the Sulawesi Sea, Indonesia: Results from initial comprehensive assessment.

Non-native species – impacts and management

Blevins, Torrey (Ball State University). Assemblage structure of the Wabash River: Trophic position and species interactions response to silver carp invasion. Poster presentation.
Carlson, Andrew (Michigan State University). Toward metacoupled fisheries management.
Chapman, Sam (Environment Agency). Practical considerations for a piscicide based eradication programme aimed at eliminating Topmouth Gudgeon.
Dawson, Heather (University of Michigan-Flint). A novel application of Management Strategy Evaluation to optimize management of an invasive parasitic fish in the Laurentian Great Lakes.
Geist, Juergen (Technical University of Munich). Impact and management of non-native fish species in the upper Danube River in Europe.
Hume, John (Michigan State University). Let the right one in: exploiting physical and behavioral attributes of invasive sea lamprey for the benefit of the Laurentian Great Lakes fishery through selective fish passage.
Madzivanzira, Takudzwa Comfort (South African Institute for Aquatic Biodiversity). Potential ecological and socioeconomic impacts of invasive crayfish in Africa.

Mandrak, Nicholas (University of Toronto Scarborough). Brief History of Fish Introductions and Fisheries in the Laurentian Great Lakes of North America.

Norazmi, Lokman (Fisheries and Aquaculture Center, Institute for Marine And Antarctic Studies, University Of Tasmania). Alien Invasive Fish in Malaysia with a special emphasis on Peacock Bass (Cichla sp.).

Pegg, Josephine (South African Institute for Aquatic Biodiversity). Invasive fishes in a protected inland water in South Africa: Conflicts, common ground and challenges for management.

Raj, Smrithy (University of Kerala). Extreme climatic events as an invasion pathway for alien fish in the Western Ghats Biodiversity Hotspot.

Sandodden, Roar (Norwegian Veterinary Institute). It is time to do something. Examples of successful eradications of invasive alien fish in Norway using rotenone.

Smolders, Sander (Office for Risk Assessment and Research, NVWA). Alien species flourish on fisheries all over the world!

South, Josie (The South African Institute for Aquatic Biodiversity). Strategic assessment of the redclaw crayfish (*Cherax quadricarinatus*) invasion in the Upper Zambezi.

Ustups, Didzis (Institute of Food Safety, Animal Health and Environment Bior). Round goby invasion in the Central Baltic Sea: Challenges and Countermeasures.

Wingfield, Jill (Great Lakes Fishery Commission). Focusing Collaborative Fisheries Management Efforts in the Great Lakes on Invasive Species Management.

Woodruff, Patricia (University of British Columbia). Potential effects of invasive Dreissenid mussels on a pelagic freshwater ecosystem: using an ecosystem model to simulate mussel invasion in a sockeye lake.

Youn, So-jung (Michigan State University). Effects of invasive species on the human and ecological value of Lake Whitefish (*Coregonus clupeaformis*) in the North American Laurentian Great Lakes.

Sharks and rays

Amelot, Morgane (IFREMER). Channel and North Sea rays stock assessment in a data limited framework.

Batsleer, Jurgen (Wageningen Marine Research). INNORAYS: Improving our knowledge-base for North Sea rays using 'Electronic Monitoring'.

Braccini, Matias (Department of Primary Industries and Regional Development of Western Australia). The catch of discarded sharks and rays in Western Australia's shark fisheries is negligible compared to the retained catch. Poster presentation.

Briones Mendoza, Jesus (University Eloy Alfaro of Manabi). Aspects biological of the bitter yellowtail shark *Alopias superciliosus* (Lowe, 1841) and the pelagic fox shark *Alopias pelagicus* (nakamura, 1935) (Carcharhiniformes: Alopidae) in the ecuadorian South Pacific.

Briones Mendoza, Jesus (University Eloy Alfaro of Manabi). Aspects biological of the silky shark *Carcharhinus falciformis* (Bibron, 1839) (Carcharhiniformes: Carcharhinidae) in the central ecuadorian Pacific. Poster presentation.

Briones Mendoza, Jesus (University Eloy Alfaro of Manabi). Biological-fishing aspects of the hammerhead shark *Sphyrna lewini* (griffith & smith, 1834) and *Sphyrna zygaena* (linnaeus, 1758) (Carcharhiniformes: Sphyrnidae) in the fishing of the port of Manta, ecuadorian Pacific. Poster presentation.

Briones Mendoza, Jesus (University Eloy Alfaro of Manabi). Size structure and external characteristics of sexual maturity in males of the blue shark *Prionace glauca* (linneaus, 1758) (carcharhiniformes: carcharhinidae) landed in the ecuadorian Pacific. Poster presentation.

Burke, Patrick (Macquarie University). Using cone beam CT-scans to reveal headfirst ingestion and possible prey manipulation tactics in sawsharks. Poster presentation.

Davenport, Danielle (The University of Queensland). Genetic consequences of population decline in the white shark (*Carcharadon carcharias*, L.): a natural history investigation.

Di Lorenzo, Manfredi (CNR-IRBIM). Elasmobranch capture by commercial small-scale fisheries in the Mediterranean Sea.

Dulvy, Nicholas (Simon Fraser University). Hitting the target or missing the point – global trends in population size and extinction risk of sharks and rays.

Fauconnet, Laurence (IMAR / University of Azores). Deep-sea shark identification manual for fishers: a tool to better document biodiversity and bycatch of those data-poor species.

Ichsan, Muhammad (Zsl Edge Fellowship). Thresher Shark Fisheries in Southeast Aceh Indonesia.

Issah, Seidu (Kwame Nkrumah University of Science and Technology (KNUST)). Fishing for survival: importance of shark fisheries for the livelihoods of coastal communities in Western Ghana.

Jatmiko, Irwan (Research Institute for Tuna Fisheries). Population parameters of scalloped hammerhead (*Sphyrna lewini*) in Nusa Tenggara Waters, Indonesia.

Junge, Claudia (Institute of Marine Research, Norway). A feisty shark in Norwegian waters – the tale of the spurdog.

Karnad, Divya (Ashoka University). Beyond fins: Local drivers for declining shark fisheries in India.

Manuzzi, Alice (Dtu Aqua, Technical University of Denmark). Worldwide assessment of genetic diversity and demographic history of tiger sharks (Galeocerdo cuvier) using historical samples.

Payne, Nicholas. A general swimming response in exhausted sharks.

Rigby, Cassandra (James Cook University). Shark and Ray Management Tools. Poster presentation.

Sauger, Carine (IFREMER). Maturity staging through histology of two Rajidae species managed together within the same fishery complex.

Shiffman, David (Marine Stewardship Council). Why do so many people wrongly believe that sustainable shark fisheries can't and don't exist?

Smith, Julia (Griffith University). Trace element concentrations in liver and muscle tissue of white sharks (*Carcharodon carcharias*) caught in New South Wales, Australia. Poster presentation.

Sturrock, Anna (University of California Davis). Tracking the ghosts using otolith reconstructions and repeat sampling through space and time.

Tanna, Akshay (Blue Resources Trust). Sri Lanka: Conserving sharks and rays in a multi-gear fishery.

Theme 3 - Fisheries and society (contributions to sustainable development)

Communications

Andrade Vera, Solange Katherine (Charles Darwin Foundation). Who knows what? Local Ecological Knowledge to understand the effects of climate change on the Galapagos Small-Scale Fisheries.

Batista, Vandick S (Universidade Federal de Alagoas). Driving dimensions on the decision-making in artisanal fisheries at the Brazilian marine coast.

Brady, Margaret M. (Peg) (NOAA Fisheries). Advancing Ecosystem-based Fisheries Management depends on Effective Engagement Strategies.

Catchpole, Tom (Centre for Environment, Fisheries and Aquaculture Science (Cefas)). The twilight zone between science and policy: Decision-making around awarding exemptions from the European Union discard ban.

Cummings, Jonathan (University of Massachusetts - Dartmouth). Advancing the analysis and communication of trade-offs in management strategy evaluation with Shiny applications and multiple criteria decision analysis.

Dankel, Dorothy Jane (University of Bergen). Localizing the SDGs for Sustainable Coastal Development: Andøy municipality in Vesterålen, Norway as a science to policy example from the #LoVeSeSDG transdisciplinary project.

Dankel, Dorothy Jane (University of Bergen). Theme session title: People, models, places, numbers: Case Studies on science and social narratives and communication in fisheries.

Di Franco, Antonio (Stazione Zoologica Anton Dohrn). Improving small scale fisheries governance through collaboration and co-production: examples from Mediterranean marine protected areas.

Diiullo, Dani (Louisiana Sea Grant). Giving Voice to Louisiana's Coastal Fishers: Engagement Programs Create Industry Preparation.

Fuller, Jessica (University of Bergen). Localizing the United Nations Sustainable Development Goals for Norway: telling a story about people and places. Poster presentation.

Fulton, Elizabeth (CSIRO). A picture is worth a thousand words.

Kadykalo, Andrew (Carleton University). Evaluating Evidence-Informed Policy, Practice, and Decision-Making in British Columbia's Rainbow Trout Fisheries.

Kahn, James (Washington And Lee University and Universidade Federal do Amazonas). Implementing survey research in remote, low income and low education subsistence fishing communities. Poster presentation.

Krupa, Meagan (National Center for Ecological Analysis and Synthesis). Who's Winning the Public Process? How to Use Public Documents to Assess the Equity, Efficiency, and Effectiveness of Stakeholder Engagement.

Lozada, Coral (HRI). Livelihoods in Transition Across the Gulf of Mexico: The Yucatan.

Mansfield, Elizabeth (Stanford University). Technology Use, Information Sharing, and Access to Climate Change Knowledge in a Small-Scale Fishery of Baja California.

Moity, Nicolas (Charles Darwin Foundation). Mapping fishing grounds using participatory approaches to enhance small-scale fisheries management in the Galapagos Marine Reserve.

Nayak, Prateep Kumar (University of Waterloo). Vulnerability to Viability: Perspectives on creating strong Small-Scale Fisheries Communities.

Nguyen, Vivian (Carleton University). "When looking for scientific information, where do you turn to first?": 5-year synthesis across multiple fisheries and actors.

Nguyen, Vivian (Carleton University). Evidence is in the expertise of the beholder: a reflection of a Canadian early career researcher.

Pastoors, Martin (Pelagic Freezer-trawler Association). Looking back before looking forward: the benefits of historical retrospective analysis in discussing future management options.

Pope, Kevin (U.S. Geological Survey). Progression of AFS Standard Methods for Sampling Freshwater Fish in North America.

Schadeberg, Amanda (Wageningen University and Research). Storylines and imaginations for the future of the deep sea: A mixed methods narrative analysis of the mesopelagic zone in text.

Scott, Finlay (Pacific Community (SPC)). Effective stakeholder engagement and capacity building for developing tuna harvest strategies in the Western and Central Pacific Ocean.

Sharma, Dr. Arpita (ICAR-Central Institute of Fisheries Education (CIFE)). Constraint Analysis of Fisheries Extension Service Providers of Rajasthan.

Teramoto, Carolina (Instituto Piatam). Community-based fishing tourism in the middle Rio Negro, Amazon – Brazil: a way to the coexistence.

Vieser, Jeffrey (ECS Tech / NOAA Fisheries). Stock SMART: NOAA Fisheries' newest stock assessment communication tool.

Williams, Lindsey (University Of New Hampshire). Cross-sectoral engagement and disputes over science: Management of the Northeast multispecies complex.

Zemeckis, Douglas (Rutgers University). Educating Stakeholders on the Science and Management of Marine Fisheries in the U.S. Mid-Atlantic Region.

Feeding the world - food nutrition, safety and waste

Anil, Aiswarya (Keral University of Fisheries and Ocean Studies). Biodiversity, molecular systematics and biochemical profiling of marine eel (Gymnothorax sp and Muraenesox sp) landings from major harbours of Kerala, India.

Asharaf, Fathima (Kerala University of Fisheries and Ocean Studies, Kochi, Kerala, India). Extraction and characterization of collagen from cannery wastes – skin and bone of Yellow fin tuna (*Thunnus albacares*).

Bennett, Abigail (Michigan State University). Toward a geographically specified analysis of fisheries' contributions to food and nutrition security: Spatial value chain mapping of Lake Malawi fisheries.

Bhomela, B (Walter Sisulu University). Preliminary use of Aspalathus linearis tea extracts on growth performance of *Tilapia mossambicus* (Perciformes: Cichlidae).

Dey, Suman (ICAR- CIFE, MUMBAI). Articulating and Computing the Contribution of Fisheries Towards Food Security: A Mixed-Method Approach.

Driscoll, John (University of British Columbia). Nutrient yields from Northwest Atlantic fisheries, 1950-2014: trends, patterns, and key species.

Farmery, Anna (University of Wollongong). Identifying policy best-practice for linking aquatic food and food and nutrition security.

Freed, Sarah (Worldfish). Integrated fish and agriculture approaches within transforming South and Southeast Asian food systems.

Freed, Sarah (Worldfish). Rice field fisheries: diverse and productive contributors to inland fisheries and food provision services.

Gibson, Emily (Charles Darwin University). Assessment of Indonesia's policy framework to support gender responsive and nutrition-sensitive small-scale fisheries.

Gibson, Emily (Charles Darwin University). Coping or adapting? Experiences of food and nutritional insecurity in specialised fishing households in Komodo District, eastern Indonesia.

Gondwe, Edith (Michigan State University). Setting Small Scale Fisheries in Food and Nutrition Security Themes: Assessing current trends in Sub Saharan Africa.

Haga, Yutaka (Tokyo University of Marine Science and Technology). Development of sustainable aquafeed with microalgae.

Lofstedt, Anneli (University of Aberdeen). Establishing the relationship between fish size and nutritional composition in four commercially important North-east Atlantic species.

Mbilingi, Bwambale (National Fisheries Resources Research Institute (NAFIRRI)). Small Pelagics Fish Consumption in Uganda: Constraints and Drivers.

Mhina, Changoma (The University of Dar Es Salaam). Antioxidant and antimicrobial potentials of Nile perch (*Lates niloticus*) wastewater biodegraded with *Bacillus anthracis* and *Bacillus fusiformis* consortium. Poster presentation.

Mills, David (Worldfish). Illuminating Hidden Harvests – novel approaches to better understanding nutrition contributions from marine and inland small-scale fisheries.

Mozumder, Mohammad (University of Helsinki). Sustainable utilization of fishery by catch products and fish processing wastes in Bangladesh- A case study.

Muhonda, Park (Department of Fisheries and Wildlife, Michigan State University). Who benefits from Usipa fishery? Mapping the distribution of livelihoods, income, and food benefits along the Usipa value chain.

Namwanje, Mary (Makerere University). Iron deficiency in the first 1000 days of life: Exploration of dietary strategies that need to be employed.

Nash, Kirsty. Trade and foreign fishing mediate global marine nutrient supply.

Okuthe, Grace Emily (Walter Sisulu University). Effects of feeding frequency on Mozambique tilapia, *Oreochromis mossambicus* (Perciformes: Cichlidae).

P, Praveenkumar (Kerala University of Fisheries and Ocean Studies, Panangad, Kochi). Effects of Pomelo (*Citrus maxima*) and lemon (*Citrus limon*) peel extract on melanosis and quality changes of *Fenneropenaeus indicus* during ice storage. Poster presentation.

Ponnusamy, Arunachalasivamani (Kerala University of Fisheries and Ocean Studies). Edible – Active packaging film from red seaweed *Gracillaria crassa* (Harvey ex J.Agardh, 1876) for the shelf life extension of tempura shrimp nuggets.

Pradhan, Chiranjiv (Kerala University of Fisheries and Ocean Studies). Effect of dietary L-carnitine/Alpha-Ketoglutarate ratio on growth performance, digestive enzymes, hematological characteristics, antioxidant capacity and innate immunity in Oreochromis niloticus.

Prakash, Amrutha (Kerala University of Fisheries and Ocean Studies, Kochi, Kerala, India). Utilization of discarded deep-sea eels gymnothorax sp. and muraenesox sp. from commercial trawl landings for the extraction and characterization of acid and pepsin soluble collagen.

Rajan, Roopa (Kerala University of Fisheries and Ocean Studies, Kochi, Kerala, India). Seaweed- chitosan/nanoparticle-based edible-active packaging films for the shelf life extension of shrimp nuggets under refrigerated conditions.

Roy, Aparna (ICAR-Central Inland Fisheries Research Institute). Sustainable management of Small-scale wetland fisheries: A Key to combating hidden hunger.

Sanuja, R.G. (University of Ruhuna). Exoskeletons of *Macrobrachium rosenbergii* (de Man, 1879) is a source of commercially important biopolymers, chitin and chitosan.

Shalders, Tanika (National Marine Science Centre). Effects of climate change on seafood nutritional and sensory quality.

Sharma, Dr. Arpita (ICAR-Central Institute of Fisheries Education (CIFE)). Circular Economy in Fisheries and Aquaculture.

Sharma, U. C. (Centre for Natural Resources Management). Fish for livelihood and nutritional security, and gender equity in India: A leap towards satisfying SDG goals.

Sharma, U. C. (Centre for Natural Resources Management). Innovative Method of Fish Production by Apatani Tribe of Northeastern Region of India for Food and Nutrition Security.

Global challenges - social licence, pollution, and international fisheries

Ahmad, Irfan (Sk-university of Agricultural Sciences & Technology of Kashmir). Toxinotyping and phylogenetic analysis of Clostridium perfringens from commercially important ichthyofauna inhabiting a eutrophic Lake of Kashmir Himalaya.

Berlino, Manuel (Stazione Zoologica Anton Dohrn; National Institute of Oceanography and Applied Geophysics). Evidence of microplastic effects on marine life functional traits: a global meta-analysis.

Corsini, Fábio (Instituto Federal Do Sul De Minas Gerais - Campus Machado). Computer vision as a support in identification of pathologies in histological samples of fish gills. Poster presentation.

Dankel, Dorothy Jane (University of Bergen). "Doing CRISPR": Genetically modified Norwegian farmed salmon: in the lab AND on the plate?

Das, Basanta (ICAR-Central Inland Fisheries Research Institute, Barrackpore). State of art on ethno-pharmacological properties of facile extract matrix of Terminalia arjuna against recalcitrant fish pathogens.

Escobar Aucu, Liseth (Universidad Nacional De Colombia). Indigenous peoples and small-scale fisheries in the Colombian Amazon: challenges for fisheries governance in a dual economy system.

Espectato, Liberty (University of the Philippines Visayas). The Role of Collaborative Governance Institution in Coastal Resource Management: Through the Eyes of the Community Members.

Fernandez, Elaine Grace (University of The Philippines Visayas). What matters to people? Identifying priorities of coastal residents using the revised Index of Dissatisfaction (IDS).

Ferreira, Beatriz (Joaquim Nabuco Foundation). The impact of social-technological crimes-disasters and the fishers communities in Brazil.

Gutierrez, Nicolas L (Food and Agricultural Organization of The United Nations). The forgotten tuna: a global review of tuna and tuna-like resources outside principal market species.

Isobe, Atsuhiko (Kyushu University). Monitoring, modeling, and prediction of microplastic abundance in the Pacific Ocean.

Kopp, Dorothée (Ifremer). Fish and click: how participatory science helps to describe the distribution of lost fishing gears.

Lam, Mimi E. (University of Bergen). Managing Ethical Norwegian Seascape Activities (MENSA).

Ledesma, Anne Brigette (University of The Philippines Visayas). Chemotactic behavior of hatchery-reared blue swimming crab *Portunus pelagicus* larvae. Poster presentation.

Lennan, Mitchell (University of Strathclyde). Marine Biodiversity Redistribution under Climate Change: The Role of Regional Fisheries Management Organisations in Addressing the "Governance Gap".

Likins, Robert (Pet Industry Joint Advisory Council). Is being Sustainable Enough? The Fight Over Permitting Hawaii's Aquarium Fishery.

Likins, Robert (Pet Industry Joint Advisory Council). Is being Sustainable Enough? The Fight Over Permitting Hawaii's Aquarium Fishery.

Lumayno, Sanny David (Institute of Aquaculture, College of Fisheries and Ocean Sciences, University of The Philippines Visayas). Primary Pituitary Cell Culture as a Tool to Estimate the Bioactive levels of Luteinizing Hormone and Expression Variation of Gonadotropin Releasing Hormone Receptor at Developing Gonadal Stages of Chub Mackerel.

Oda, Tatsuya (Nagasaki University). Fish-killing mechanism of Chattonella species and a possible mitigation strategy against them. Poster presentation.

Paris, Andrew (University of The South Pacific). Evaluation of the abundance and distribution of microplastics in Fiji surface waters.

Pickerell, Tom (Global Tuna Alliance). The Global Tuna Alliance: leveraging tuna RFMOs through commercial pressure.

Sagawa, Nao (Ehime University). Behaviors of foamed polystyrene microplastics in the surface of Hiroshima Bay, Japan: Numerical model simulation incorporated with the beach process.

Silva, Vinuri (University of Adelaide). First evidence of microplastic presence in Sri Lankan fish and a comparison to the same species in Australia. Poster presentation.

Sood, Neeraj (ICAR-NBFGR). Aquatic Animal Disease Surveillance in India- a Step towards Sustainable Growth of Aquaculture.

Summers, Stephen (Singapore Centre on Environmental Life Sciences Engineering (SCELSE)). Effects of ingested microplastics with sorbed triclosan on fish gut health and assessment of triclosan bioavailability.

Thangaraj, Raja Swaminathan (ICAR National Bureau of Fish Genetic Resources). In vitro and in vivo resistance of rohu, *Labeo rohita* to cyprinid herpesvirus -2 (CyHV-2).

Thangaraj, Raja Swaminathan (ICAR National Bureau of Fish Genetic Resources). Immune gene response and protective efficacy of formalin inactivated whole cell CyHV-2 vaccines. Poster presentation.

Thangaraj, Raja Swaminathan (ICAR National Bureau of Fish Genetic Resources). Fishing for potential vaccine candidates against Cyprinid herpesvirus 2: a reverse vaccinology approach. Poster presentation.

Wilson, David (International Pacific Halibut Commission). The International Pacific Halibut Commission: Approaching 100 years of science-based fishery management decision making.

Wright, Dana (UiT The Arctic University of Norway). Assessing the Economic Impact of Climate-Induced Habitat Shifts on Transboundary Stocks: The Case of the American Lobster (*Homarus americanus*) Fisheries. Poster presentation.

People - women in fisheries, workforce, investment, safety and building capacity

Andrews, Evan (Memorial University). Governing the future: transdisciplinary lessons for small-scale fisheries governance.

Elliott, Vittoria (World Fish Center). Building community capacity for applying fish ecology and research results to small-scale fishery management. Poster presentation.

Fennell, Hannah (Heriot Watt University). Quantifying the hidden financial and legal responsibilities and liabilities of women in the UK's fishing industry.

Ferguson, Caroline (Stanford University). Trade drives gender-based displacement in Palau's beche-de-mer fishery: challenges and solutions.

Franz, Nicole (Food and Agriculture Organization (FAO)). National Plans of Action in Support of the Implementation of the SSF Guidelines (NPOA-SSF).

Hilinganye, Arsenio Boaventura (University of Stirling). Artisanal Sea food in Angola – socio-economic importance.

Islam, Gazi (Universiti Tun Abdul Razak). Community Perspectives of Local Participation and Governance for Management of Marine Protected Areas of Malaysia.

Mancha Cisneros, Maria del Mar (Duke University). Illuminating Hidden Harvests: The Contributions and Impacts of Small-Scale Fisheries to Sustainable Development.

Mbilingi, Bwambale (National Fisheries Resources Research Institute (NAFIRRI)). Women Involvement in the Small Pelagics Fish Value Chain in Uganda: Drivers and Constraints.

Mozumder, Mohammad (University of Helsinki). Understanding Social-Ecological Challenges of a Small-Scale Hilsa (*Tenualosa ilisha*) Fishery in Bangladesh.

Nauen, Cornelia (Mundus Maris ASBL). The Small-Scale Fisheries Academy as a source of innovation and operational support to the SSF Guidelines.

Nisa, Zahidah (Sasakawa Global Ocean Institute, World Maritime University). Advancing social sustainability in dive fishers work below water: SDG 14 and SDG 8 decent work linkages as a tool.

Oloko, Ayodele (University of Bremen, Bremen, Germany). Challenges and the Prospects of Women Fisher Folks in Makoko, Lagos State, Nigeria.

Otumawu-Apreku, Kofi (Kyoto University). Artisanal fisheries in the Solomon Islands: the Wantok paradigm in West Guadalcanal.

Pedroza-Gutiérrez, Carmen (Universidad Nacional Autónoma de México). Women struggle in a sea cucumber fishery. An outcome from an ungovernable fishery.

Perumal Shanmugasundaram, Swathi Lekshmi (Icar-vizhinjam Research Centre of CMFRI). Determinants of Diversified Livelihood security among Marine Fishers of Gujarat, India: A discriminant function analysis for defining coastal livelihood landscapes.

Purwangka, Fis (Dept. Of Fisheries Resources Utilization). Fisherman Work Safety on Boat Operated Lift Nets in Territorial Fishing Port of Karangantu, Serang, Banten.

Rice, Emma (Michigan State University). Improving Livelihoods of Female Fish Traders in Malawi: Analyzing Barriers to Market Access.

Rife, Alexis (Environmental Defense Fund). Developing an interactive resource hub as a platform to foster user-driven, peer-to-peer learning and exchange to scale capacity in small-scale fisheries.

Satumanatpan, Suvaluck (Mahidol University). A rapid appraisal of dried fish value chain in Thailand.

Sharma, Dr. Arpita (ICAR-Central Institute of Fisheries Education (CIFE)). Occupational Hazards in Marine Fisheries Sector, Odisha, India.

Short, Katherine (Terra Moana Ltd). Improving the Conditions of Labour on Board Fishing Vessels.

Silvano, Renato (Universidade Federal Do Rio Grande Do Sul (UFRGS)). Participatory monitoring as a management option for data-poor small-scale freshwater fisheries.

Tayung, Tasso (ICAR-CIFRI, Barrackpore, West Bengal, India). Sustainable fish production through ecological and fisheries management of canals in Indian Sundarbans (West Bengal).

Whippy-morris, Cherie (University of The South Pacific). Upskilling our Pacific Islands fisheries advocators.

Theme 4 - Future of fish and fisheries (innovations in fisheries)

Advances in fishing vessels and fishing gear

Boute, Pim (Wageningen University & Research). Quantifying behavioural and muscle activation thresholds of non-target fishes for pulsed electric fields as used in flatfish electrotrawling.
Cuende De Francisco, Elsa (Azti (brta)). Size selectivity and catch patterns of hake (*Merluccius merluccius*) and blue whiting (*Micromesistius poutassou*) combining different SMP and codend designs.
Eayrs, Stephen (Smart Fishing Consulting). The myth of voluntary uptake of proven fishing gear: investigations into the challenges inspiring change in fisheries.
Feekings, Jordan (DTU Aqua). One gear does not fit all: adding flexible and cost-efficient selectivity devices to existing trawls to help achieve fisheries management objectives.
Krag, Ludvig (Technical University of Denmark). Precision Fishing - using real-time camera observation to optimize economical and biological sustainability in demersal trawl fisheries.
Mehault, Sonia (IFREMER). Using fish behaviour to design a sustainable gear: fish pot case study on the French Atlantic coast.
Ramirez, Art (ORBCOMM). Integrated Satellite Tracking Technology for Sustainable Artisanal Fisheries.
Rijnsdorp, Adriaan (Wageningen Marine Research). Replacing mechanical stimulation by electrical stimulation reduces environmental impact of the flatfish beam trawl fishery.
Riyanto, Mochammad (Bogor Agricultural University). Net illumination approach: An effort to reduce the bycatch of green turtle and mobulids in the gillnet fishery.
Savina, Esther (DTU Aqua). The SMARTFISH system FishFinder: a trawl-independent real-time monitoring system to support decision-making in the commercial demersal trawl fishery.
Susanto, Adi (University of Sultan Ageng Tirtayasa). Design of Eco Smart Fishing Trap: Increasing Productivity and Sustainability for Blue Swimming Crab Fisheries.
Tiano, Justin (Netherlands Institute for Sea Research (NIOZ)). The consequences of electro-trawling on benthic ecosystem functioning.
Veiga-Malta, Tiago (DTU-Aqua, National Institute of Aquatic Resources). Developing and testing a size sorting grid for trawl fisheries targeting small shrimp.
Wisudo, Sugeng Hari (IPB University). Opportunities for the use of seawater batteries as a energy source for fishing lamps in the light fishing.

Biomarkers in calcified structures

Ankita, Ankita (Aligarh Muslim University). Relationship between fish size and otolith size in two freshwater fish species, *Heteropneustes fossilis* and *Channa punctata*.
Artetxe Arrate, Iraide (Azti-tecnalia). Resolving the stock structure of Indian Ocean yellowfin tuna (*Thunnus albacares*); an otolith microchemistry approach.

Barnett, Beverly (National Marine Fisheries Service, Southeast Fisheries Science Center, Panama City Laboratory). Stable and radioisotopes in tissues and otoliths as natural biogeochemical tracers of food web effects from the Deepwater Horizon Oil Spill.

Bourehail, Nadjette (Marine Bioressources Laboratory). Otolith shape analysis as stock discrimination tool for red mullet populations in the Western-Mediterranean Sea.

Chamberlin, Derek (University of Florida). Validating Gray Triggerfish (*Balistes capriscus*) Otolith-Derived Age Estimates via Eye Lens Radiocarbon.

Cordoleani, Flora (UCSC - NOAA). Years in their ears: what do fish earbones tell us about spring-run Chinook salmon success in an increasingly volatile climate?

Coussau, Lola (Université Du Quebec À Rimouski). Population connectivity of redfish (Sebastes sp.) in the Gulf of St. Lawrence, Canada, revealed by otolith elemental fingerprint.

Curtis, Michael (Texas A&m University - Corpus Christi). Habitat Use, Variation, and Trophic Dynamics of Catadromous Fish (*Anguilla rostrata*) in Sub-Tropical Texas.

Fortin, William (Université Du Québec À Chicoutimi). Spatial and interspecies variability of fish otolith elemental fingerprint in a large fluvial ecosystem.

Helser, Thomas (NOAA Fisheries - Seattle). A paleoclimate record of coastal Gulf of Alaska as revealed through in situ $\delta 18O$ and $\delta 13C$ from SIMS and trace elements from LA-ICPMS of ancient Pacific cod otoliths.

Khan, Mohammad Afzal (Aligarh Muslim University, India). Age and growth of stinging catfish, Heteropneustes fossilis (Bloch, 1794).

Lastra Luque, Patricia (AZTI). Discerning false from the true annuli: Exploring fin spine microchemistry as an age-determination tool.

Lastra Luque, Patricia (AZTI). Going beyond the otolith bubble: Insights into early movements of juvenile Atlantic bluefin tuna derived from trace elements and stable isotopes in the dorsal fin spine.

Martinho, Filipe (Centre for Functional Ecology, University Of Coimbra). Squeezing water from a stone: Relating water and otolith chemistry to disclose estuarine nursery habitat use of a juvenile flatfish.

Miyan, Kaish (Aligarh Muslim University, India). Heavy metal pollution in the Gangetic river system evident from elemental fingerprints in Wallago attu otoliths.

Nazir, Aafaq (Aligarh Muslim University, Aligarh, India). Using multiple approaches to discriminate stocks of the long-whiskered catfish, Sperata aor (Hamilton 1822).

Nien, Yu-Ling (National Taiwan Ocean University). Early life history of cryptic mullet species (*Mugil cephalus*) by otolith chemistry analysis. Poster presentation.

Oster, Jacob (Texas A&m University-corpus Christi). Pressed for Space and Time: Elucidating the Long-Term Effect of Sub-Lethal Stressors on Fish Niche Space using Chronological Tissues. Poster presentation.

Oxman, Dion (Alaska Department of Fish and Game). Reconstructing Reproductive Life Histories Using Hormones Recovered from Incrementally Grown Structures in Fish.

Passerotti, Michelle (University Of South Carolina). Exploring the physicochemical context of near infrared spectroscopy (NIRS) applications for fisheries research.

Pérez-Mayol, Sílvia (IMEDEA (CSIC-UIB)). European hake population structure in the Mediterranean Sea: Can it be elucidated by otolith fingerprinting? Poster presentation.

Sanchez, Phillip (Texas A&m University Galveston). Rethinking assessment methods of deepwater fishes: A case study using a novel bomb radiocarbon age validation approach in a deepwater grouper complex.

Varea, Rufino (The University of The South Pacific). Multibiomarker application in marine sentinel fish and gaps in environmental risk assessments in Pacific Island Countries and Territories.

Visconti, Valerio (CEFAS). Lead in the head: elevated Pb concentrations in otoliths of flatfish with liver cancer.

Vrdoljak, Dario (Institute of Oceanography and Fisheries). Connectivity between nursery and adult habitats of *Sparus aurata* through otolith elemental fingerprints in the eastern Adriatic Sea. Poster presentation.

Walther, Benjamin (Texas A&m University - Corpus Christi). Comparing trans-basin responses of different fish species in hypoxic "dead zones": direct evidence from otolith chemistry and growth.

Walther, Benjamin (Texas A&m University - Corpus Christi). Tracking hypoxia exposure and consequences with combined otolith chemistry and tissue isotope analyses.

Emerging technologies, machine learning and big data

Barkai, Amos (OLSPS). Citizen science technology for the collection of observational ocean data.

Barkai, Amos (OLSPS). Olrac Mobile Dynamic Data Logger: A mobile electronic logbook solution.

Barnett, Beverly (National Marine Fisheries Service, Southeast Fisheries Science Center, Panama City Laboratory). Investigating the Utility of Fourier Transform Near Infrared (FT-NIR) Spectroscopy as a Rapid and Transformative Method for Estimating Fish Age.

Boulais, Océane (NOAA). Applications of Machine Learning (ML) for At-Sea Marine Electronic Monitoring (EM) Systems for Reef Fish Assessment.

Butterfield, Tom (NSW DPI (fisheries)). Use of emerging technologies to improve monitoring in the NSW trout fishery: techniques and lessons learnt. Poster presentation.

Cai, Jiarui (University of Washington). Fish Species Identification and Novelty Detection with Imbalanced Datasets.

Cusack, Christopher (Environmental Defense Fund). Bring on the data wave: Catalyzing electronic fisheries monitoring by breaking down barriers to uptake.

Cusack, Christopher (Environmental Defense Fund). SmartPass: estimating fishing effort and catch for small-scale and recreational fisheries worldwide. Poster presentation.

Dick, Simon (Real Time Data). Case Studies in Electronic Reporting with a Focus on Data Standards as a Market Enabler. Poster presentation.

Gallagher, Riley (North Carolina State University). Investigating Atlantic Cobia Stock Structure and Site Fidelity Using Acoustic Telemetry.

Helser, Thomas (NOAA Fisheries - Seattle). Rapid estimation of fish age at the molecular level: Fourier transform near infrared spectroscopy of otoliths.

Izzo, Lisa (Vermont Cooperative Fish and Wildlife Research Unit; University of Vermont). Using Acoustic Technology to Increase Understanding of Endangered Lake Sturgeon.

Le Gall, Franck (EGM). Serving trained models in a data environment for aquaculture.

Martinho, Filipe (Centre for Functional Ecology, University of Coimbra). Using autonomous surface vehicles for unravelling habitat use patterns in a marine flatfish. Poster presentation.

Nguyen, Vivian (Carleton University). A tale of two fisheries: the mobilization of fish telemetry knowledge.

Rakotonaivo, Miarisoa Lalaina (WWF Madagascar Country Office). Improve marine resources management through innovative technologies and advanced data system.

Reghu, Raghu Prakash (Central Institute of Fisheries Technology (ICAR-CIFT)). Evaluation of Bycatch Reduction Devices (BRDs) for reducing bycatch in trawl systems in Bay of Bengal.

Sharma, Dr. Arpita (ICAR-Central Institute of Fisheries Education (CIFE)). Biofloc Technology - Progressive Farmers' Preferred Aquaculture System for IoT Development.

Tanner, Susanne (Mare - Marine and Environmental Sciences Centre). Integrated approach to evaluate movement and population dynamics of meagre (*Argyrosomus regius*).

Uzmanoğlu, Mustafa Selçuk (Marmara University VSTS Fisheries Department). Recognition of fish species using deep learning: a research on 4 different fish species.

Van Broekhoven, Wouter (Visned). Catching Data: an integrated platform for science-industry collaboration on vessel-based data collection, analysis, and application.

Zimmermann, Meryl (University of Perpignan Via Domitia). The RESMED project: from scientific research to local application for sustainable management and fisheries. Poster presentation.

Future of fisheries

Bulatov, Oleg (Russian Federal Research Institute of Fisheries and Oceanography (VNIRO)). Long-range fishery forecasts in Russia: present state and prospects.

Cooney, Patrick (Smith-Root Electrofishing). Reinventing electrofishing through innovation.

Currey, Rohan (Marine Stewardship Council). The evolving role of standards and certification in sustainable fisheries.

Kanongdate, Kamalaporn (Faculty of Environment and Resource Studies, Mahidol University, Thailand). Responsible Consumption and Production embedded in the Thai Marine Shrimp Farming Certification Programs.

Le Gall, Franck (EGM). Cross-domain data capture for decision support in sustainable fisheries management.

Leitao, Pedro (Portuguese Institute for Sea and Atmosphere (IPMA)). Fishing activities in the Gorringe bank, a Portuguese Marine Protected Area.

Nayak, Prateep Kumar (University of Waterloo). "Is Blue Justice a necessary corollary of Blue Economy" in the context of Small-Scale Fisheries?

Rasal, Jennifer (Marine Stewardship Council). Fisheries' journeys to achieve MSC certification: piecing together influencing factors that affect positive certification outcomes.

Rose, Kenneth (Horn Point Lab - UMCES). Trust in Fisheries Science: Hard to Earn, Easy to Lose, Impossible to Regain.

Integration of genomics in fisheries management and aquaculture

Berg, Florian (Institute of Marine Research). How can genetics be used for population discrimination of herring? A comparison of methods to discriminate spring and autumn spawners.

Bernatchez, Louis (Université Laval). Population genomics of the capelin (*Mallotus villosus*) in the Northwest Atlantic: relevance to fisheries.

Brodie, Christopher (Liverpool John Moores University). A Net with No Holes; A novel approach to marine monitoring and ecosystem assessment by combining eDNA with hydroacoustics.

Cordova-Alarcon, Valentina (Universidad de Chile). Genetic structure of the red cusk-eel (*Genypterus chilensis*), a tool for fisheries management in the Chilean coast. Poster presentation.

Cordova-Alarcon, Valentina (Universidad de Chile). Global phylogeographic study of pink ling (*Genypterus blacodes*) from an integrative perspective. Poster presentation.

Cusa, Marine (Liverpool John Moores University). Authentication of Atlantic cod product point-of-origin in the European market.

Dankel, Dorothy Jane (University of Bergen). "Doing CRISPR": Genetically modified Norwegian farmed salmon: in the lab AND on the plate?

Dao, Thang (IGB Berlin and Osaka University). Heterogeneity in behavior and tipping points in a coupled human-natural model.

Duke, Christopher (Washington State University). Quantitative genetic analysis of salmonid fish reveals relative contribution of loci to phenotypic traits central to migration and growth in response to elevated rearing temperature.

Elliott, Vittoria (World Fish Center). Biomonitoring the Mekong for better EBFM. Poster presentation.

Elliott, Vittoria (World Fish Center). Environmental DNA and SNPs: essential tools for Sustainable Fisheries in the Mekong.

Ferchaud, Anne-Laure (Laval University). A compendium of novel technologies from sequencing to statistical analyses clarifies fine-scale population structure and evolutionary genomics of a marine exploited fish species.

Fuentes Pardo, Angela (Uppsala University). Population genomics and genetic tools for the effective management of two marine fish species with a wide geographic distribution in the Atlantic Ocean.

Henriques, Romina (DTU Aqua). Worldwide retrospective genomic analyses of shortfin mako (*Isurus oxyrhincus*) reveals complex patterns of population sub-structuring.

Junge, Claudia (Institute of Marine Research, Norway). A stakeholder perspective on the application of genomic tools for supporting sustainable management strategies.

Maggini, Sara (Bangor University). Integrating genetic structure with stock definitions of commercial marine fish species.

mangrove productivity in relation to important U.S fisheries.

Mariani, Stefano (LJMU). Between estuarine biorepositories and trawling sentinels: DNA metabarcoding steps up as a universal bio-meter.

Mohindra, Vindhya (ICAR-NBFGR, Lucknow, India). Understanding adaptation to high temperature in golden mahseer, *Tor putitora*, through brain transcriptome analysis.

Muñoz Abril, Laia (University of South Alabama). Lack of genetic differentiation among yellowfin tuna samples from Eastern Pacific Ocean as revealed by high throughput ddRAD sequencing: conservation implications between Ecuador and Mexico.

Nandanpawar, Priyanka (ICAR - Central Institute of Freshwater Aquaculture Kausalyaganga Bhubaneswar Odisha India). Transcriptome analysis identified genes associated with body growth trait in improved farmed carp, *Labeo rohita* (Hamilton 1822).

Pereda-Agirre, Iker (AZTI). Setting the scene for the application of CKMR for Atlantic fisheries.

Pillay, G Kirthana (Bangor University). Using Metabarcoding and stable isotope analysis to investigate

Planas, Josep (International Pacific Halibut Commission). Development of genomic resources for the Pacific halibut (*Hippoglossus stenolepis*) to assist in population biology studies informing fisheries management.
Jasonowicz, Andy (International Pacific Halibut Commission). Population genomics of Pacific halibut (*Hippoglossus stenolepis*) and the development of single nucleotide polymorphism panels to inform management and conservation.
Saha, Atal. Hierarchical genetic structure revealed by ddRAD sequencing of Sebastes mentella.
Sahoo, Lakshman (ICAR-Central Institute of Freshwater Aquaculture). Development of comprehensive transcriptome resources in monsoon carp, *Labeo rohita*.
Thomas, Austen (Smith-root). Evolution of the Smith-Root eDNA Sampler and optimization for mobile sampling.
Xuereb, Amanda (Université Laval). Genomic Tools for Enhancing Eastern Oyster Production in Canada.

Supply chains, traceability and marketing

Araneda, Cristian (Universidad De Chile). Development of barcoding technology for the identification of commercial clams species from Chile.
Barkai, Amos (OLSPS). SharkTrace: A supply chain traceability method and mobile application for tracing shark products in the seafood supply chain.
Barker, Jenny (FishWise). Explore the New Traceability Principles for Seafood that Address People and Planet.
Bezabih, Kidanie Misganaw (University of Gondar, Ethiopia). Fish Market Chain in Rift Valley Lakes and Lake Tana, Ethiopia. Poster presentation.
Cusa, Marine (Liverpool John Moores University). Taking the lab into the field: Successful application of novel methods for the rapid authentication of fish species, and its implementation in the context of fisheries regulation enforcement. Poster presentation.
Del Rio, Ane (AZTI). Next generation sequencing and trace element fingerprinting approaches for tracing provenance of mussels.
Fonseca, Vanessa (MARE – Marine and Environmental Sciences Centre). Traceability of fish species from estuarine systems via tissue elemental profiling.
Fonseca, Vanessa (MARE – Marine and Environmental Sciences Centre). Integrating natural tags to track seafood provenance.
Graham, Conor (Galway-mayo Institute of Technology). Trace elemental fingerprinting of shells and soft tissues can identify the location and timing of shellfish harvesting.
Hidalgo, Marcelo (Fishing Industry Association of Papua New Guinea). The Integrated Fisheries Information Management System - A comprehensive and revolutionary traceability system.
Howarth, Joanne (Planet Protector Packaging). Sustainable packaging innovations: A case study on lobster transport and export.
Larrain, Maria Angelica (Universidad de Chile). From Ocean to Fork: Challenges in DNA routine analysis for authenticity in Mytilus genus.
Rahman, Md. Mizanur (Tokyo University of Marine Science and Technology). Differentiation of fresh and frozen-thawed fish fillets using fluorescence excitation-emission matrix.
Tanner, Michael (Charles Darwin Research Station). Evaluating key characteristics and willingness to pay for certified marine products: An application to the Galapagos Yellowfin tuna small-scale fishery and broader implications for market-based fisheries policy.