

# **20th Biennial Conference of the International Institute of Fisheries Economics & Trade (IIFET 2022)**

Managing a Changing Environment

Galicia, Spain  
18 – 22 July 2022

ISBN: 978-1-7138-7950-3

**Printed from e-media with permission by:**

Curran Associates, Inc.  
57 Morehouse Lane  
Red Hook, NY 12571



**Some format issues inherent in the e-media version may also appear in this print version.**

Copyright© (2022) by The International Institute of Fisheries Economics and Trade (IIFET)  
All rights reserved.

Printed with permission by Curran Associates, Inc. (2024)

For permission requests, please contact The International Institute of Fisheries Economics and Trade (IIFET)  
at the address below.

The International Institute of Fisheries Economics and Trade (IIFET)  
Dept. of Agricultural and Resource Economics  
C/O Kara Keenan  
Oregon State University  
Corvallis, Oregon 97331-3601  
USA

Phone: (541) 737-1439  
Fax: (541) 737-1441

iifet@oregonstate.edu

**Additional copies of this publication are available from:**

Curran Associates, Inc.  
57 Morehouse Lane  
Red Hook, NY 12571 USA  
Phone: 845-758-0400  
Fax: 845-758-2633  
Email: [curran@proceedings.com](mailto:curran@proceedings.com)  
Web: [www.proceedings.com](http://www.proceedings.com)

## TABLE OF CONTENTS

THE CHALLENGES AND PROSPECTS OF WOMEN FISHER FOLK IN MAKOKO, LAGOS STATE, NIGERIA .....	1
<i>A. Oloko, K. Fakoya, S. Ferse, A. Breckwoldt, S. Harper, L. Adeleke</i>	
DECOMPOSING REVENUE EFFICIENCY IN FISHERIES .....	10
<i>A. Alvarez, C. Arias</i>	
THE ROLE OF ASTRAL EU H2020 PROJECT IN MAINSTREAMING WOMEN IN AQUACULTURE IN NIGERIA .....	11
<i>P. Anyanwu</i>	
ECONOMIC EFFICIENCY EVALUATION OF TWO-LEVEL SUPPLY CHAIN OF RAINBOW TROUT IN IRAN: A FOCUS ON USE OF IMPORTED AND DOMESTIC TROUT EGGS .....	13
<i>H. Asadikia, S. Mosavi, S. Rezaeiardabili, T. Bjorndal, M. Reed, S. Khalilian, H. Alamdarlo</i>	
ASSESSMENT OF SEAFOOD MARKET STRUCTURE IN THE SOUTHWEST COASTLINE REGION OF NIGERIA .....	15
<i>A. Lydia</i>	
INSIGHTS INTO THE ECONOMIC SITUATION OF SEABREAM AND SEABASS COMPANIES IN THE MEDITERRANEAN AREA.....	30
<i>E. Diez, M. Zamanillo, I. Garcia, J. Polanco, J. Sanchez, L. Sotorrio, M. Luna</i>	
BEHAVIORAL RESPONSES TO COMPETING INCENTIVES AND DISINCENTIVES:COMPLIANCE WITH MARINE MAMMAL PROTECTION .....	31
<i>K. Bisack, P. Clay</i>	
MEASURING THE ECONOMIC ABATEMENT COST OF SEA TURTLE BY-CATCH IN THE NORTHWEST ATLANTIC COMMERCIAL PELAGIC LONGLINE FISHERY.....	41
<i>D. Solis, K. Bisack, J. Walden, P. Richards, J. Agar</i>	
SEAFOOD CERTIFICATION SCHEMES IN JAPAN: EXAMPLES OF CHALLENGES AND OPPORTUNITIES FROM THREE MARINE STEWARDSHIP COUNCIL (MSC) APPLICANTS .....	49
<i>A. Blandon, H. Ishihara</i>	
INTANGIBLE CULTURAL HERITAGE RELATED TO FISHERIES IN THE EU ATLANTIC ARC: A COMMON METHODOLOGY FOR ITS VALUATION .....	51
<i>J. Hoyo, C. Madariaga, D. Espino</i>	
THE PERFORMANCE OF SHARED FISH STOCK FISHERIES UNDER VARYING INSTITUTIONAL AND SOCIOECONOMIC CONDITIONS: EVIDENCE FROM THE SOUTH EASTERN PACIFIC ANCHOVETA FISHERY .....	52
<i>C. Chavez, J. Dresdner, N. Gonzalez, M. Leiva, M. Quiroga</i>	
CAPITAL VALUE IN FISHERIES: THE CASE OF ITALY .....	53
<i>M. Gambino, G. Coppola, L. Malvarosa, S. Destefanis</i>	
SOUTHWEST ATLANTIC HIGH-SEAS FISHERIES: THE VIEWPOINT OF BRAZIL .....	54
<i>J. Galvao, T. Nguyen, D. Vidal, I. Kvalvik, J. Isaksen, J. Vidarsson</i>	

TO WHAT EXTENT DO FIRST SALE PRICES REFLECT THE SUSTAINABLE MANAGEMENT OF ARTISANAL FISHERIES?. AN ECONOMETRIC APPROACH FOR THE OCTOPUS IN ASTURIAS (NORTHERN SPAIN) .....	55
<i>C. Arbesu, L. Fuente, G. Rodriguez</i>	
AN INPUT-OUTPUT APPROACH TO ESTIMATE THE RELEVANCE OF RECREATIONAL MARINE FISHING IN EUROPEAN REGIONAL ECONOMIES. METHODOLOGY AND DATA REQUIREMENTS .....	56
<i>L. Garcia-De-La-Fuente, E. Fernandez-Vazquez, C. Ramos-Carvajal, A. Colina-Vuelta, L. Garcia-Flores, M. Fernandez-Rueda, J. Alcazar-Alvarez</i>	
SOCIO-ECONOMIC QUANTIFICATION OF THE FISHING IN THE CÍES ISLANDS OF THE ATLANTIC ISLANDS NATURAL PARK .....	57
<i>M. Garza-Gil, M. Vazquez-Rodriguez</i>	
THE IMPACTS OF ACCESS RULES AND SYNCHRONY IN PRODUCTIVITY IN MULTI-FISHERY SYSTEMS.....	58
<i>D. Holland, K. Oken, A. Punt</i>	
SPECIES, SPACE, AND TIME: A QUARTER-CENTURY OF FISHERS' DIVERSIFICATION STRATEGIES ON THE US WEST COAST .....	68
<i>J. Abbott, Y. Sakai, D. Holland</i>	
CONTRIBUTION OF FISHERIES AND AQUACULTURE TO NUTRITION, FOOD SECURITY AND POVERTY IN DEVELOPING COUNTRIES.....	76
<i>C. Barnes</i>	
INVESTING IN THE COMMONS: TRANSIENT WELFARE CREATES INCENTIVES DESPITE OPEN ACCESS.....	84
<i>S. Jardine, J. Ziegler, S. Jones, B. Poorten, M. Janssen, C. Solomon</i>	
THE SPATIAL DYNAMICS OF RENEWABLE RESOURCE USE .....	88
<i>S. Jardine, J. Abbott, J. Sanchirico</i>	
PRICE VOLATILITY TRANSMISSION IN THE VALUE CHAIN OF FRESH ANCHOVY IN SPAIN.....	91
<i>R. Jimenez-Toribio, J. Garcia-del-Hoyo, D. Castilla-Espino</i>	
WHO OWNS THAT? A METHODOLOGY FOR OWNERSHIP ANALYSIS IN THE FISHING INDUSTRY AND ITS APPLICATION TO THE FRENCH ATLANTIC FISHING SECTOR .....	92
<i>A. Kinds, M. Merzereaud, O. Guyader</i>	
WHO REALLY OWNS THE TUNA FISHING FLEETS IN THE SOUTHEAST PACIFIC OCEAN? .....	99
<i>A. Kinds, N. Lazzari, A. Carvalho, K. Roumbedakis, M. Palomares, G. Ainsworth, P. Majluk, R. Sumaila, S. Villasante</i>	
APPLICATIONS OF ARTIFICIAL INTELLIGENCE TO SUPPORT THE DECISION-MAKING PROCESS OF SEABREAM AND SEABASS AQUACULTURE COMPANIES .....	107
<i>M. Luna, I. Llorente, A. Cobo</i>	
SPATIAL MANAGEMENT TO REDUCE ENTANGLEMENT RISK TO NORTH ATLANTIC RIGHT WHALES IN FISHING GEAR: A CASE STUDY OF U.S. NORTHEAST LOBSTER FISHERY 2002–2009.....	108
<i>K. Bisack, G. Magnusson</i>	

STABILITY OF INTERNATIONAL FISHERIES AGREEMENTS UNDER STOCK GROWTH UNCERTAINTY .....	109
<i>K. Bediako, B. Nkuiya</i>	
BYCATCH ASSESSMENT: IMPLICATIONS ON FISHERIES MANAGEMENT IN COASTAL STATES OF NIGERIA. A CASE STUDY OF BAYELSA AND RIVERS STATES .....	110
<i>J. Obieno</i>	
CHANGES IN MARINE ECO-LABEL JAPAN (MEL) THROUGH INTERNATIONAL STANDARDIZATION AND COMPARISON WITH MSC: FOCUSING ON VESSEL SIZE AND FISHING GEARS IN CERTIFIED FISHERIES .....	111
<i>T. Oishi, H. Iwata</i>	
USING ECONOMICS TO ALLOCATE FISHING RIGHTS BETWEEN RECREATIONAL AND COMMERCIAL FISHERIES IN COMPLEX SOCIOECOLOGICAL SYSTEMS: A GLOBAL REVIEW .....	116
<i>P. Pita, M. Antelo, S. Villasante</i>	
REGIONAL FISHERIES MANAGEMENT FOR INCREASED ECONOMIC VALUE OF SHARED STOCKS: UNDERSTANDING THE ECONOMIC IMPACT OF PACIFIC HALIBUT .....	127
<i>B. Hutniczak</i>	
AUSTRALIAN FISH RIGHTS, OCEAN GOVERNANCE AND DEVELOPMENT OF THE BLUE ECONOMY .....	139
<i>A. McIlgorm, D. McIlgorm</i>	
PRODUCTIVE PERFORMANCE OF THE LAKE VICTORIA FISHING FLEET IN UGANDA: TECHNICAL EFFICIENCY AND FISHERS' PERSPECTIVE.....	146
<i>V. Mpomwenda, D. Kristofersson</i>	
EXTERNAL MONITORING AND ENFORCEMENT AND THE SUCCESS OF COLLECTIVE PROPERTY RIGHTS REGIMES .....	157
<i>F. Quezada, N. Chan</i>	
PILOT MONITORING TO INVESTIGATE THE USEFULNESS OF ARTIFICIAL REEFS USING VESSEL TRACKING TECHNOLOGY AND CLOUD COMPUTING: A CASE STUDY IN SOUTHERN PORTUGAL.....	158
<i>P. Ito, J. Costa, J. Ramos</i>	
DISCARDS AND HIGH-GRADING IN THE ICELANDIC ITQ SYSTEM; A CASE CONTROL STUDY OF ON-BOARD VS ON-LAND MONITORING OF CATCH .....	169
<i>B. Runolfsson, D. Kristofersson</i>	
IFISHIENCI: AN INNOVATIVE CIRCULARITY APPROACH FOR THE EVALUATION OF THE SUSTAINABILITY OF NEW FISH FEED .....	171
<i>I. Sanchez, D. Checa, M. Escamilla</i>	
THE ECONOMIC IMPACT OF THE MARITIME SPATIAL PLANNING (MSP) IN EUROPE.....	172
<i>J. Suris, J. Santiago, X. Gonzalez-Martinez, M. Ballesteros, L. Garza-Gil, R. Chapela</i>	
MONITORING AND MEASURING THE EFFECTS OF THE COMMUNITY-LED LOCAL DEVELOPMENT (CLLD) IN FISHERIES COMMUNITIES. THE CASE OF GALICIA.....	174
<i>J. Santiago, M. Ballesteros, R. Chapela, M. Nieto, D. Lojo</i>	

AN INVESTIGATION OF ECONOMIC, ENVIRONMENTAL, AND SOCIAL ASPECTS OF MYCTOPHID FISHING FOR FEED/ FOOD APPLICATIONS IN THE PERSIAN SIDE OF THE OMAN SEA .....	176
<i>A. Shaviklo</i>	
CO-DRYING OF THE HYDROLYZED FISH PROTEIN SOLUTION FOR USE IN ANIMAL FEED: AN ECONOMICAL APPROACH FOR SMALL-SCALE FISHERY INDUSTRIES.....	177
<i>A. Shaviklo, Y. Etemadian, F. Fafipour</i>	
THE SMALL PELAGICS VALUE CHAIN IN MAURITANIA – RECENT CHANGES AND FOOD SECURITY IMPACTS .....	178
<i>G. Touron-Gardic, O. Hermansen, P. Failler, A. Dia, M. Tarbia, K. Brahim, A. Thorpe, E. Deme, E. Beibou, E. Kane, M. Bouzouma, J. Arias-Hansen</i>	
WHY A TOWN AS SMALL AS BERMEO IS THE TUNA WORLD CAPITAL? .....	180
<i>R. Zabala, Z. Cobian, W. Tamayo, S. Landin</i>	
COMPLEXITY AND FISHERIES GOVERNANCE .....	200
<i>S. VanSanteren</i>	
A GAME THEORETIC MODEL AND SOLUTION FOR THE MALINDI UNGWANA BAY PENAEID CONFLICT .....	207
<i>M. Wambua</i>	
CHARACTERIZING TRENDS IN PARTICIPATION AND DIVERSIFICATION IN SMALL- SCALE COASTAL FISHERIES OF VIRGINIA, USA.....	209
<i>S. White, A. Scheld</i>	
BIOECONOMIC BENEFITS OF MANAGING FISHING EFFORT IN A COEXISTING SMALL- AND LARGE-SCALE FISHERY GAME .....	210
<i>E. Azevedo, P. Pintassilgo, D. Dantas, F. Daura-Jorge</i>	

**Author Index**