CURRÍCULUM VÍTAE NORMALIZADO

Gorka Bidegain Cancer

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GOBIERNO DE ESPAÑA
MINISTERIO DE ECONOMÍA, INDUSTRIA Y COMPETITIVIDAD

FECYT FUNDACIÓN ESPAÑOLA PARA LA CIENCIA Y LA TECNOLOGÍA

Summary of CV

This section describes briefly a summary of your career in science, academic and research; the main scientific and technological achievements and goals in your line of research in the medium -and long- term. It also includes other important aspects or peculiarities.

Gorka Bidegain (GB) is an assistant professor (Profesor Laboral Interino) of the University of the Basque Country at the Preventive Medicine and Public Health Department (28 ECTS) and a Research Affiliate of the University of Southern Mississippi (USM). His main research interests lie within disease modelling, disease ecology and population dynamics. He conducts laboratory/field experiments and uses advanced mathematical and computational ecological modelling techniques to identify and asses the population and ecosystem responses to pressures and ecological and environmental heterogeneities. GB plans to develop new models, methodologies and algorithms with implications for the understanding of how climate variability interacts with marine host-pathogen systems. Recently he was awarded a Juan de la Cierva Incorporación Research grant for working at CSIC in Mallorca.

GB is a certified Adjunct Professor (UNIBASQ). He has supervised two Master thesis. He has co-organized a marine disease modeling conference session and a workshop in an international venue, developing, presenting and assisting in several teaching lectures and activities directed to junior/senior faculties and graduate students. He also taught/organized a field/laboratory marine biology course under a COST ACTION project.

GB completed his degrees in Marine Science and Environmental Science. He was awarded a Research Scholarship in the University of Las Palmas de G.C. and a Research Initiation Fellowship (CSIC). He was also awarded a MSc research fellowship to study Coastal and Port Engineering Master in the Polythechnic University of Catalonia. In 2009 GB was awarded a PhD scholarship from the Environmental Hydraulics Institute of Cantabria and obtained his PhD in Environmental Hydraulics and Ecology at the University of Cantabria (UC) in 2013. He was awarded a PhD Excellence Award from the UC. After obtaining his PhD, he moved to the USM (USA) in August 2013 after being awarded a NSF Fellowship to work as a Postdoctoral Researcher in marine disease modeling. This research required that he spend considerable time (4 months) at the Old Dominion University working with the modeling team.

GB has participated in 16 national and international R&D competitive projects and contracts with administration, including two EU projects such as a EMBOS (COST action under Horizon 2020) and THESEUS (FP7 - Environment project), two National Science Foundation projects in USA. GB also served as PI on a regional fisheries project (project 3 in R&D contracts).

GB has published 19 articles in top rank peer reviewed journals (13 as first author, 16 in Q1, resulting in 160 citations ~32 citations/year), 2 book chapters, several scientific/technical reports and open access computer codes (R, Matalab) and participated in more than 25 national/international conferences. He has reviewed more than 30 papers and 2 US grant proposals. He is member of the (1) Expert Review panel of the Intergovernmental Panel on Climate Change (IPCC) Global Warming Special Reports, (2) Ecology of Infectious Marine Diseases Research Coordination Network (EIMD-RCN) (Cornell University, USA), and (3) International Research Network Ecosystem Health and Environmental Disease Ecology. He is also member of the Editorial Board of Frontiers in Marine Science. GB is member of the Ecological Society of America, National Shellfish Association and the Estuarine and Coastal Sciences Association.

General quality indicators of scientific research

This section describes briefly the main quality indicators of scientific production (periods of research activity, experience in supervising doctoral theses, total citations, articles in journals of the first quartile, H index...). It also includes other important aspects or peculiarities.

- Teaching: Assistant professor of the University of Basque Country since 10/2017 (28.1 ECTS). Certified UNIBASQ Adjunt Profesor ('Profesor Adjunto' UNIBASQ, similar to 'Profesor Ayudante Doctor of ANECA). 2 MSc supervised. Currently, supervising 2 PhD. Several teaching lectures and activities directed to faculty and graduate students (University of Cantabria, Old Domninion University).
- Number of publications in peer reviewed journals in the last five years: 19
- Number of book chapters in the last five years: 2
- Publications as first author: 13
- Publications as second author: 4
- Publications in the first quartle (Q1): 16
- Manuscripts under review: 2
- Drafts in preparation: 2
- Number of citations in the last 5 years: 160
- Average citation/year in the last 5 years: 32
- H-index (Google Scholar): 8
- Scientific/technical reports/computational codes: 6
- Works presented in international conferences 2013-2017: 29 (18 as first author)
- Participation in 16 national and international funded projects (USA, EU, National, Regional). co-PI of a regional project (see project 3 in R&D non-competitive contracts).
- Member of the Expert Review panel of the Intergovernmental Panel on Climate Change (IPCC) Global Warming Special Reports, the Ecology of Infectious Marine Diseases Research Coordination Network (EIMD-RCN) (Cornell University), and the International Research Network Ecosystem health and environmental disease ecology.
- Member of the Editorial Board of Frontiers in Marine Science.
- Papers reviewed (SCI journals in the field of ecology): 28
- Grants reviewed: 2 US grants in the field of marine ecology and fisheries
- Grants, Honors and Awards:

  Juan de la Cierva Incorporación 2016 Fellowship
  PostDoctoral Fellowship. National Science Foundation–USM. Aug 2013–Dec 2015.
  PhD Excellence Award by the University of Cantabria. 2016.
  Workshop Grant. Applied Biostatistics with R. Marie Curie Actions. FP 7. NIOZ. 2010.
  Doctoral Fellowship. University of Cantabria. Feb 2009-Jul 2013.
  MSc Scholarship. UPC–Barcelona Port Authority.
  Junior Research Fellowship. Spanish National Research Council, CSIC.
  Junior Research Scholarship. Ministry of Education, Culture and Sport.

Gorka Bidegain Cancer

Surname(s):	**Bidegain Cancer**
Name:	**Gorka**
DNI:	**44143881G**
ORCID:	**0000-0002-2173-5140**
Date of birth:	**04/11/1974**
Gender:	**Male**
Nationality:	**Spain**
Country of birth:	**Spain**
Aut. region/reg. of birth:	**Catalonia**
Contact province:	**Gipuzkoa**
City of birth:	**Barcelona**
Contact address:	**AVDA NAVARRA 35 1-C**
Postcode:	**20800**
Contact country:	**Spain**
Contact aut. region/reg.:	**Basque Country**
Contact city:	**Zarautz**
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Personal web page:	**https://www.researchgate.net/profile/Gorka_Bidegain/contributions**

Current professional situation

Employing entity: University of the Basque Country **Type of entity:** University

Department: Environmental Sciences / Pharmacy

Professional category: Assistant Professor (Adjunt)

Type of contract: Temporary employment contract

Primary (UNESCO code): 240106 - Animal ecology; 321200 - Public health

Performed tasks: Assistant Professor (Profesor Laboral Interino) at the Preventive Medicine and Public Health Department (Subjects: Biostatistics, Epidemiology and Public Health in Basque and Spanish). 28 ECTS of teaching teaching experience. Research on disease ecology, epidemiology, climate change and public health, nonparametric statistics applied in biology.

Previous positions and activities

	Employing entity	Professional category	Start date
1	Gulf Coast Research Laboratory, University of Southern Mississippi	Postdoctoral Research Associate / Research Affiliate	20/08/2013
2	FUNDACIÓN INSTITUTO DE HIDRÁULICA AMBIENTAL DE CANTABRIA	Research Associate/PhD Student	01/01/2011
3		PhD Felllow/PhD Student	01/02/2009

	Employing entity	Professional category	Start date
	FUNDACIÓN INSTITUTO DE HIDRÁULICA AMBIENTAL DE CANTABRIA		
4	Bureau Veritas, Department of Aquaculture and Fisheries	Biologist	01/06/2008
5	Grupo Tragsa, Gestión del Medio Marino	Marine Scientist	15/01/2008
6	SERTIIC Engineering and Environment	Marine Scientist	06/2003
7	Intecsa Inarsa	Marine Scientist	03/2001
8	Universitat Politècnica de Catalunya	Postgraduate Fellow/MSc Student (Master Scholarship)	01/2000
9	Centro de Estudios Avanzados de Blanes, CSIC	Postgraduate Fellow (Research Initiation Fellowship)	07/1997
10	Universidad de las Palmas de Gran Canaria	Teaching Assistant (Research Scholarship)	01/1997
11	Marine Research Station, EDIMAR, Fundación La Salle	Teaching Assistant (Research Scholarship)	06/1994

1 **Employing entity:** Gulf Coast Research Laboratory, University of Southern Mississippi
Professional category: Postdoctoral Research Associate / Research Affiliate
Start-End date: 20/08/2013 - 31/12/2017 **Duration:** 2 years - 5 months - 11 days
Type of contract: Grant-assisted student (pre or post-doctoral, others)
Performed tasks: The applicant Gorka Bidegain (GB) was based at the University of Southern Mississippi working with Dr. Eric Powell, although he spent considerable time at the Center of Coastal Physical Oceanography (CCPO) at Old Dominion University working with Dr. Eileen Hofmann and Dr. John Klinck to develop and implement a range of models designed to investigate marine disease processes, especially those associated with transmission. The research project concerned the development of the first general model for marine diseases and the first serious comprehensive modeling effort to adapt contact-based Kermack-McKendrick transmission models to the marine world. The proposal that was funded emphasized the need to develop models that could be solved analytically and also models coupled with hydrodynamic models that, necessarily, required numerical solutions. GB described in two papers (Ecosphere, Ecological Modelling) a comprehensive theoretical modeling approach to marine diseases that will represent the state-of-the-art for a long time. These are the seminal papers in the field and establish the jumping off point for all future marine models dealing with the transmission of marine diseases. GB showed in a third paper the basic reproduction number for arguably the most famous of marine pandemic diseases, Dermo (Fisheries Research). This is a very important step forward in our understanding of the pandemic disease process in marine bivalves. GB also collaborated on the development of a model that explores the effect of fisheries on host-parasite dynamics and on a review of parasite transmission through suspension feeding. The results of this research were published in Philosophical Transactions of the Royal Society of London B and Journal of Invertebrate Pathology, respectively. Since returning to Spain from USA (Gulf Coast Research Lab, University of Southern Mississippi, GCRL-USM) Gorka Bidegain is working from his country as a Research Affiliate of GCRL-USM. He is continuing and expanding his research on theoretical and applied ecological models of marine diseases and is working on additional manuscripts describing these results.The present research involves the use of biophysical models to model disease transmission under various distributions of hosts and oceanic current regimes.

2 **Employing entity:** FUNDACIÓN INSTITUTO DE HIDRÁULICA AMBIENTAL DE CANTABRIA
Department: Instituto de Hidráulica Ambiental, Universidad de Cantabria
Professional category: Research Associate/PhD Student
Start-End date: 01/01/2011 - 31/07/2013 **Duration:** 2 years - 7 months
Type of contract: Temporary employment contract

Dedication regime: Full time
Primary (UNESCO code): 240106 - Animal ecology; 251000 - Oceanography
Secondary (UNESCO code): 310509 - Habitat influences
Tertiary (UNESCO code): 520708 - Population models
Performed tasks: Gorka Bidegain (GB) focused his PhD research on the study of ecological dynamics of benthic organisms. He conducted several field surveys and field/lab experiments. He also worked on the development and application of mathematical models to understand some specific ecological processes and interactions that influence the population dynamics of a native European and a nonindigenous clam species. As his major contributions, (1) he demonstrated the habitat suitability and predation as determinants to limit the expansion of the nonindigenous clam in the region of Cantabria and (2) developed a coupled oceanographic larval dispersal-habitat suitability model to determine post-settlement mortality, recruitment intensity and population connectivity. The Goverment of Cantabria used this results to support the native clam restoration strategies. GB also (i) estimated a nonparametric length-weight regression model using local linear Kernel-smoothers, and calculate the first derivative as a method to estimate a new suitable minimum capture size, and (ii) applied an Ecological Niche Factor Analysis-based habitat suitability model for understanding the potential expansion of the nonindigenous species over the native species. This strong modeling and numerical simulation part of his thesis had a field data and experimental counterpart (which he carried out) so that advances could be grounded with both a theoretical an observational component. The experimental results provided valuable information to understand model predictions.
Identify key words: Environmental impacts (environment, fisheries and aquaculture interactions); Metapopulations; Benthic ecosystems; Modelling and modelling tools (fisheries science); Aquatic ecology

3 **Employing entity:** FUNDACIÓN INSTITUTO DE HIDRÁULICA AMBIENTAL DE CANTABRIA
Department: Instituto de Hidráulica Ambiental, Universidad de Cantabria
Professional category: PhD Felllow/PhD Student
Start-End date: 01/02/2009 - 31/12/2010 **Duration:** 1 year - 11 months
Type of contract: Temporary employment contract
Dedication regime: Full time
Primary (UNESCO code): 240106 - Animal ecology; 251000 - Oceanography
Secondary (UNESCO code): 310509 - Habitat influences
Tertiary (UNESCO code): 520708 - Population models
Performed tasks: GB initiated his PhD work. His research was focused on the understanding some specific ecological processes and interactions that influence the population dynamics of a native European (Ruditapes decussatus) and a nonindigenous (Ruditapes philippinarum) clam species. He conducted experimental (competition and predation experiments) and a substantial amount of field surveys in different estuaries which provided valuable information to understand his model predictions.
Identify key words: Environmental impacts (environment, fisheries and aquaculture interactions); Metapopulations; Benthic ecosystems; Modelling and modelling tools (fisheries science); Aquatic ecology
Applicability in teaching and/or research: The Goverment of Cantabria used the results of the habitat suitability of model to support the native clam restoration strategies.

4 **Employing entity:** Bureau Veritas, Department of Aquaculture and Fisheries **Type of entity:** Testing, Inspection and Certification
Department: Department of Aquaculture and Fisheries
City employing entity: Madrid, Community of Madrid, Spain
Professional category: Biologist **Educational Management (Yes/No):** No
Start-End date: 01/06/2008 - 15/12/2008 **Duration:** 6 months - 15 days
Type of contract: Temporary
Dedication regime: Part time
Primary (UNESCO code): 310500 - Fish and wildlife

Performed tasks: Quality Inspection and Certification of hake fisheries

5 **Employing entity:** Grupo Tragsa, Gestión del Medio Marino
Department: Gestión del Medio Marino
Professional category: Marine Scientist **Educational Management (Yes/No):** No
Start-End date: 15/01/2008 - 25/05/2008 **Duration:** 4 months - 10 days
Type of contract: Temporary
Dedication regime: Full time
Primary (UNESCO code): 240106 - Animal ecology; 531201 - Agricultura, forestry, fishing
Performed tasks: Biological surveys of Bluefin tuna (Thunnnus thynnus) on Mediterranean fishing boats and landing ports. Biometric and gonad analysis.
Identify key words: Conservation of fish stocks; Ecology (environment, fisheries and aquaculture interactions) nt6; Aquatic ecology

6 **Employing entity:** SERTIIC Engineering and Environment **Type of entity:** Marine Environmental Consulting
Department: Marine Environmental Division
City employing entity: Ibiza, Balearic Islands, Spain
Professional category: Marine Scientist **Educational Management (Yes/No):** No
Start-End date: 06/2003 - 12/2007 **Duration:** 4 years - 6 months
Type of contract: Collaboration Tasks
Dedication regime: Part time
Primary (UNESCO code): 120314 - Environmental control systems; 240106 - Animal ecology
Performed tasks: Water quality and benthic ecology studies, environmental Impact Assessments in coastal zones including marine protected areas.
Identify key words: Benthic ecosystems; Aquatic environment; Anthropogenic impact on ecosystems; Aquatic ecology

7 **Employing entity:** Intecsa Inarsa **Type of entity:** Maritime Engineering
Department: Marine Environmental Division
City employing entity: Ibiza, Balearic Islands, Spain
Professional category: Marine Scientist **Educational Management (Yes/No):** No
Start-End date: 03/2001 - 06/2003 **Duration:** 2 years - 4 months
Type of contract: Temporary
Dedication regime: Part time
Primary (UNESCO code): 120314 - Environmental control systems; 240106 - Animal ecology
Performed tasks: Water quality, air quality and benthic ecology studies, posidonia oceanica conservation studies, environmental Impact Assessments in coastal zones including marine protected areas.
Identify key words: Benthic ecosystems; Aquatic environment; Anthropogenic impact on ecosystems; Aquatic ecology

8 **Employing entity:** Universitat Politècnica de Catalunya **Type of entity:** University
Department: CENTRO INTERNACIONAL DE INVESTIGACION DE RECURSOS COSTEROS
City employing entity: Barcelona, Catalonia, Spain
Professional category: Postgraduate Fellow/MSc Student (Master Scholarship) **Educational Management (Yes/No):** No
Start-End date: 01/2000 - 09/2001 **Duration:** 1 year - 8 months
Type of contract: Grant-assisted student (pre or post-doctoral, others)
Dedication regime: Full time
Primary (UNESCO code): 251001 - Biological oceanography; 251007 - Physical oceanography

Performed tasks: Water quality data analysis
Identify key words: Aquatic biology; Marine ecosystem management; Marine pollution

9 **Employing entity:** Centro de Estudios Avanzados de Blanes, CSIC **Type of entity:** Public Research Body
Department: Marine Ecology
City employing entity: Blanes, Catalonia, Spain
Professional category: Postgraduate Fellow (Research Initiation Fellowship) **Educational Management (Yes/No):** No
Start-End date: 07/1997 - 12/1997 **Duration:** 6 months
Type of contract: Grant-assisted student (pre or post-doctoral, others)
Dedication regime: Full time
Primary (UNESCO code): 240106 - Animal ecology; 241705 - Marine biology; 251001 - Biological oceanography; 251007 - Physical oceanography
Performed tasks: Ecological and fishery dynamics of Namibian hake using satellite image analysis.
Identify key words: Aquatic biology; Marine ecosystems and processes; Ecology (environment, fisheries and aquaculture interactions)

10 **Employing entity:** Universidad de las Palmas de Gran Canaria **Type of entity:** University
Department: Departamento de Física, Facultad de Ciencias del Mar
City employing entity: Tafira, Canary Islands, Spain
Professional category: Teaching Assistant (Research Scholarship) **Educational Management (Yes/No):** No
Start-End date: 01/1997 - 06/1997 **Duration:** 6 months
Type of contract: Grant-assisted student (pre or post-doctoral, others)
Dedication regime: Full time
Primary (UNESCO code): 250618 - Sedimentology; 251007 - Physical oceanography
Performed tasks: Granulometry and organic matter analysis of sediments from sandy beaches.
Identify key words: Sedimentology

11 **Employing entity:** Marine Research Station, EDIMAR, Fundación La Salle **Type of entity:** R&D Centre
Department: Marine Ecology
City employing entity: Isla Margarita, Venezuela
Professional category: Teaching Assistant (Research Scholarship) **Educational Management (Yes/No):** No
Start-End date: 06/1994 - 07/1994 **Duration:** 2 months
Type of contract: Grant-assisted student (pre or post-doctoral, others)
Dedication regime: Full time
Primary (UNESCO code): 241705 - Marine biology; 241713 - Plant ecology
Performed tasks: Primary production studies in Mangroves (Rizophora spp), field surveys, laboratory work and data analysis.
Identify key words: Aquatic biology

Education

University education

1st and 2nd cycle studies and pre-Bologna degrees

1 **University degree:** Master
Name of qualification: MSc Teacher Training
Degree awarding entity: University of the Basque Country **Type of entity:** University
Date of qualification: 09/2017
Average mark: Excellent

2 **University degree:** MAS
Name of qualification: Master of Advances Studies, MAS (Diploma de Estudios Avanzados)
Degree awarding entity: Polytechnic University of Catalonia **Type of entity:** University
Date of qualification: 2005

3 **University degree:** MSc
Name of qualification: MSc Coastal Engineering and Management
City degree awarding entity: Barcelona, Catalonia, Spain
Degree awarding entity: Universitat Politècnica de Catalunya **Type of entity:** University
Date of qualification: 12/09/2001
Average mark: Outstanding
Prize: End of degree award

4 **University degree:** BSc
Name of qualification: BSc Environmental Science
City degree awarding entity: Almeria, Andalusia, Spain
Degree awarding entity: Universidad de Almería **Type of entity:** University
Date of qualification: 13/07/1999
Average mark: Excellent
Prize: End of degree award
Foreign qualification: First-class honours

5 **University degree:** BSc
Name of qualification: BSc Marine Science
City degree awarding entity: Tafira, Canary Islands, Spain
Degree awarding entity: Universidad de las Palmas de Gran Canaria **Type of entity:** University
Date of qualification: 15/07/1997
Average mark: Excellent
Prize: End of degree award
Standardised degree: Yes
Foreign qualification: First-class honours

Doctorates

Doctorate programme: Environmental Hydraulics / Ecological Dynamics
Degree awarding entity: Universidad de Cantabria **Type of entity:** University
City degree awarding entity: Santander, Cantabria, Spain
Date of degree: 08/03/2013
DEA awarding entity: Universitat Politècnica de Catalunya
European doctorate: No
Thesis title: Ecological dynamics of a native and a nonindigenous clam species
Thesis director: José Antonio Juanes De la Peña
Thesis co-director: Andrés García Goméz
Obtained qualification: Apto "Cum Laude"
Recognition of quality: Yes
Special doctorate award: Yes **Date of award:** 04/12/2015

Language skills

Language	Listening skills	Reading skills	Spoken interaction	Speaking skills	Writing skills
French	B1	B1	A1	A1	A1
Catalan	C1	C1	B1	B1	B1
English	C1	C2	C1	C1	C1
Basque	C2	C2	C2	C2	C2

Teaching experience

General teaching experience

1
Type of teaching: Official teaching
Name of the course: Epidemiology and Public Health
Type of programme: Bachelor's degree **Type of teaching:** Practical work (classroom-problems)
Type of subject: Core
University degree: BSc Odontology
Start date: 19/02/2018 **End date:** 01/06/2018
End date: 01/06/2018 **Type of hours/ ECTS credits:** Credits
Hours/ECTS credits: 8,1
Entity: Uniersity of the Basque Country
Faculty, institute or centre: Preventive Medicine and Public Health
City of entity: Leioa,

2
Name of the course: Biostatistics
Type of programme: Bachelor's degree **Type of teaching:** In person theory
Type of subject: Core
University degree: BSc Medicine
Start date: 19/02/2018 **End date:** 01/06/2018
End date: 01/06/2018 **Type of hours/ ECTS credits:** Credits

Hours/ECTS credits: 5,7
Entity: Uniersity of the Basque Country
Department: Preventive Medicine and Public Health

3 **Name of the course:** Epidemiology
Type of programme: Bachelor's degree
Type of teaching: In person theory
Type of subject: Core
University degree: BSc Environmental Science
Start date: 02/10/2017
End date: 31/12/2017
End date: 31/12/2017
Type of hours/ ECTS credits: Credits
Hours/ECTS credits: 7,8
Entity: University of the Basque Country
Faculty, institute or centre: Preventive Medicine and Public Health

4 **Name of the course:** PUblic Health / Salud Pública
Type of programme: Bachelor's degree
Type of teaching: Practical work (classroom-problems)
Type of subject: Core
University degree: BSc Pharmacy
Start date: 02/10/2017
End date: 31/12/2017
End date: 31/12/2017
Type of hours/ ECTS credits: Credits
Hours/ECTS credits: 4,7
Entity: Uniersity of the Basque Country
Faculty, institute or centre: Preventive Medicine and Public Health

Experience supervising doctoral thesis and/or final year projects

1 **Project title:** Ecological food web model for oyster reef management in Mississippi Sound.
Type of project: Doctoral thesis
Entity: University of Southern Mississippi, NASA Stenis Space Center
Student: Courage Klutse
Identify key words: Coastal zone ecosystems and management; Benthic ecosystems; Modelling and modelling tools (fisheries science); Aquatic ecology
Date of reading: 2019

2 **Project title:** Modelling eelgrass (Zostera marina) distribution along the eastern coast of China
Entity: Ocean university of China
Student: Haddy Yang
Date of reading: 2019

3 **Project title:** Recruitment, growth and population structure of Pollicipes pollicipes on the coast of Cantabria (Gulf of Biscay, N Spain)
Type of project: Master Thesis
Co-director of thesis: Ana Silio Calzada
Entity: Universidad de Cantabria
Type of entity: University
Student: María Belén Gutiérrez Cobo
Identify key words: Benthic ecosystems; Biological oceanography; Aquatic ecology
Date of reading: 09/02/2012

4 **Project title:** Identificación de variables e indicadores ambientales sobre el sedimento marino que determinen el impacto de la salmonicultura en el Sur de Chile
Type of project: Master Thesis
Co-director of thesis: Beatriz Echavarri Erasun
Entity: Universidad de Cantabria **Type of entity:** University
Student: Diego Ortiz Cañete
Identify key words: Environmental impacts (environment, fisheries and aquaculture interactions); Ecology (environment, fisheries and aquaculture interactions) nt6; Aquatic ecology
Date of reading: 10/02/2011

Scientific and technological experience

Scientific or technological activities

R&D projects funded through competitive calls of public or private entities

1 **Name of the project:** Research Coordination Network - Evaluating the Impacts of a Changing Ocean on Management and Ecology of Infectious Marine Disease
Identify key words: Animal disease; Benthic ecosystems; Biological oceanography; Aquatic ecology
Geographical area: Non EU International
Entity where project took place: Cornell University
City of entity: Ithaca, United States of America
Name principal investigator (PI, Co-PI....): Drew Harvell
Funding entity or bodies:
National Science Foundation **Type of entity:** State agency

Start-End date: 2012 - 2017
Total amount: 553.145 €
Dedication regime: Part time
Applicant's contribution: The applicant developed and parameterized marine disease models using experimental data in order to in the near future increase the understanding of disease ecology and the impacts of climate change in marine systems. He also co-organize and participate in a workshop in marine disease ecology and modelling. He is an active member of the Ecology of Infectious Diseases Research Coordination Network.

2 **Name of the project:** Development of a theoretical basis for modeling disease processes in marine invertebrates. OCE-1216220
Identify key words: Animal disease; Benthic ecosystems; Biological oceanography; Aquatic ecology
Type of project: Research and development, including transfer
Entity where project took place: Old Dominion Univerisity/University of Southern Mississippi/Rutgers University
City of entity: United States of America
Name principal investigator (PI, Co-PI....): Eric Powell; Eileen Hofmann
Nº of researchers: 13
Funding entity or bodies:
National Science Foundation **Type of entity:** State agency

Start-End date: 2012 - 2016
Total amount: 1.384.482 €

Applicant's contribution: The applicant developed and parameterized marine disease models using experimental data. The primary objective of the project was to investigate experimentally and theoretically the infective dose-particle flux-population density hypothesis so that a marine equivalent of the base reproduction number (Ro, a measure of epidemic/epizootic risk) can be specified. When Gorka joined the project, he was asked to develop modeling frameworks to address this objective. He started with the standard Kermack-McKendrick epidemic model framework and modified this for marine invertebrate diseases, with a particular focus on dermo disease in oysters. Gorka modified and expanded the disease equations to include a remote infective particle reservoir in the water column, pathogen acquisition by the host via filtration, and pathogen release into the water column by dead individuals. After setting up and implementing the model frameworks, Gorka did an analytical analysis of the behavior of these models, including determinations of Ro. These results were published in Ecosphere. Gorka also did numerical integrations of the disease models to consider the effects of larval recruitment, filtration rate, particle loss and diffusion-like processes in the water column on disease infection prevalence. These results are summarized in two paper recently published in Ecological Modeling and Fisheries Research. He also collaborated on the development of a model that explores the effect of fisheries on host-parasite dynamics and on a review paper on parasite transmission through suspension feeding. The results were recently published in Philosophical Transactions of the Royal Society of London B and Journal of Invertebrate Pathology, respectively (5 papers in total, 3 as first author; and still working in three more papers in the field of disease ecology and ecological modelling in benthic systems). Gorka has also been involved in development and implementation of a benthic disease module for inclusion in the Regional Ocean Modeling System (ROMS), which is community-based circulation modeling framework. He also co-organize and participate in a workshop in marine disease ecology and modelling. He is an active member of the Ecology of Infectious Diseases Research Coordination Network.

3 **Name of the project:** Innovación en la restauración ambiental de zonas costeras mediante el desarrollo de un sistema piloto integrado para la caracterización, dragado, tratamiento y valorización de lodos y sedimentos con contaminantes orgánicos e inorgánicos (INNODRAVAL) (IPT-310000-2010-17)

Identify key words: Marine pollution; Aquatic biology; Marine ecosystems and processes; Benthic ecosystems

Type of project: Research and development, including transfer

Entity where project took place: Universidad de Cantabria **Type of entity:** University

Name principal investigator (PI, Co-PI....): Aina García Gómez; Pedro Avellanosa

Nº of researchers: 20

Funding entity or bodies:

Ministerio de Ciencia e Innovación. Desarrollo e Innovación Tecnológica (2008-2011). Subprograma INNPACTO Plan Nacional de Investigación Científica

Type of participation: Team member

Start-End date: 2010 - 2013

Total amount: 4.734.696 €

Applicant's contribution: Gorka Bidegain was in charge of the laboratory research experiments conducted for determining the effect of turbidity caused by dredging in different clam species.

4 **Name of the project:** THESEUS, Innovative technologies for safer European coasts in a changing climate.

Identify key words: Modelling (environmental risks); Aquatic ecology

Identify key words: Aquatic biology; Marine ecosystems and processes; Benthic ecosystems; Climate change

Type of project: Research and development, including transfer **Geographical area:** European Union

Degree of contribution: Researcher

Entity where project took place: Universidad de Cantabria **Type of entity:** University

City of entity: Santander, Cantabria, Spain

Name principal investigator (PI, Co-PI....): Iñigo Losada

Funding entity or bodies:
European Commission

Type of participation: Team member
Name of the programme: FP7, WP3 ECOLOGY
Start-End date: 2009 - 2013 **Duration:** 4 years
Total amount: 6.530.000 €
Dedication regime: Part time
Applicant's contribution: Participation in ecological studies of Posidonia oceanica: field surveys, detailed cartography, habitat suitability maps for the THESEUS (Innovative technologies for safer European coasts in a changing climate) project. The largest Integrated Project within coastal risk assessment and mitigation funded by the European Commission (6,530,000 €) and consisted of 31 partner institutes. The project developed a systematic approach to deliver both a low-risk coast for human use and healthy coastal habitats for evolving coastal zones subjected to multiple factors.

5 **Name of the project:** VULMA II. Establecimiento de criterios para la valoración de la vulnerabilidad de las masas de agua sometidas a vertidos urbanos e industriales (VULMA II) (CTM2009-11206)
Identify key words: Marine pollution; Aquatic biology; Marine ecosystems and processes; Benthic ecosystems
Type of project: Research and development, including transfer
Degree of contribution: Researcher
Entity where project took place: Universidad de Cantabria **Type of entity:** University
City of entity: Santander, Cantabria, Spain
Name principal investigator (PI, Co-PI....): Jose Antonio Revilla Cortezón
Nº of researchers: 6
Funding entity or bodies:
Ministerio de Ciencia e innovación. Plan Nacional de I+D+i (2008-2011).

Type of participation: Team member
Start-End date: 2010 - 2012 **Duration:** 3 years
Total amount: 54.000 €
Dedication regime: Part time
Applicant's contribution: The applicant worked in the diving team member of IH cantabria. He participate in the field experiments with mussels to assess the water masses ecological vulnerability.

6 **Name of the project:** Estudio de los aspectos clave para la determinación de caudales ecológicos en estuarios
Identify key words: Ecological balance; Aquatic ecology
Entity where project took place: Universidad de Cantabria **Type of entity:** University
Name principal investigator (PI, Co-PI....): César Álvarez Díaz
Funding entity or bodies:
Plan Nacional de I+D+i (2008-2011)

Name of the programme: Plan Nacional de I+D+i (2008-2011)
Code according to the funding entity: CGL2009-10620/Subprogrma BTE
Start-End date: 2009 - 2012
Total amount: 122.000 €
Applicant's contribution: The applicant was in charge (and conducted) field surveys, field experiments and data analysis for habitat suitability determination

7 **Name of the project:** VIGES 2. Desarrollo de protocolos específicos para la evaluación del estado químico y del estado ecológico de las masas de agua costeras en el entorno de influencia de vertidos de emisarios submarinos (CTM 2008-04649)

Identify key words: Marine pollution; Aquatic biology; Marine ecosystems and processes; Benthic ecosystems

Type of project: Research and development, including transfer

Degree of contribution: Researcher

Entity where project took place: Universidad de Cantabria **Type of entity:** University

City of entity: Santander, Cantabria, Spain

Name principal investigator (PI, Co-PI....): Jose Antonio Juanes

Nº of researchers: 6

Funding entity or bodies:

Ministerio de Ciencia e innovación. Plan Nacional de I+D+i (2008-2011).

Type of participation: Team member

Start-End date: 2009 - 2011 **Duration:** 3 years

Total amount: 108.900 €

Dedication regime: Part time

Applicant's contribution: The candidate participated as a an active member of the ROV and Diving team. He participated in algae characterization field studies developing vifordeo mosaics and distributions maps to assess the ecological status of coastal waters

8 **Name of the project:** VULMA I. Establecimiento de criterios para la valoración de la vulnerabilidad de las masas de agua sometidas a vertidos urbanos e industriales (CTM2008-03800/TECNO).

Identify key words: Marine pollution; Aquatic biology; Marine ecosystems and processes; Benthic ecosystems

Type of project: Research and development, including transfer

Degree of contribution: Researcher

Entity where project took place: Universidad de Cantabria **Type of entity:** University

City of entity: Santander, Cantabria, Spain

Name principal investigator (PI, Co-PI....): Jose Antonio Revilla Cortezón

Nº of researchers: 10

Funding entity or bodies:

Ministerio de Ciencia e innovación. Plan Nacional de I+D+i (2008-2011).

Type of participation: Team member

Start-End date: 2009 - 2010 **Duration:** 2 years

Total amount: 54.000 €

Dedication regime: Part time

Applicant's contribution: The applicant worked in the diving team member of IH cantabria. He participate in the field experiments with mussels to assess the water masses ecological vulnerability.

9 **Name of the project:** VERTITOX, Desarrollo de procedimientos para el control operativo integrado de vertidos al medio litoral (urbano e industrial), mediante el uso de biomarcadores, bioensayos e indicadores del estado ecológico (018/RN08/02.1)

Identify key words: Modelling (environmental risks); Aquatic ecology

Identify key words: Marine ecosystems and processes; Aquatic environment; Aquatic ecology

Type of project: Research and development, including transfer

Degree of contribution: Researcher

Entity where project took place: Universidad de Cantabria **Type of entity:** University

Name principal investigator (PI, Co-PI....): José Antonio Juanes de la Peña; Pedro Aguirremota
Nº of researchers: 10
Type of participation: Team member
Name of the programme: CGL2006-10282/HID
Start-End date: 2008 - 2010 **Duration:** 3 years
Total amount: 738.458 €
Dedication regime: Part time
Applicant's contribution: Diving team member for field experiments with mussels

10 **Name of the project:** Development and implementation of a pan-European Marine Biodiversity Observatory System (EMBOS).
Identify key words: Modelling (environmental risks); Aquatic ecology
Identify key words: Aquatic biology; Marine ecosystems and processes; Benthic ecosystems; Climate change
Type of project: Research and development, including transfer
Degree of contribution: Researcher
Entity where project took place: Universidad de Cantabria **Type of entity:** University
City of entity: Santander, Cantabria, Spain
Name principal investigator (PI, Co-PI....): Herman Hummel
Funding entity or bodies:
Programa Europeo COST “European Cooperation in Science and Technology”. Action ES1003.

Type of participation: Team member
Name of the programme: EMBOS
Start-End date: 2008 - 2009 **Duration:** 5 years
Total amount: 367.383 €
Dedication regime: Part time
Applicant's contribution: Teaching assistanship

11 **Name of the project:** Catchability of Namibian hakes from the perspective of the spatial dynamics of: fish, fleet and environmental bounadaries.
Identify key words: Marine ecosystems and processes; Marine ecosystem management; Aquatic ecology
Type of project: Research and development, including transfer
Degree of contribution: Researcher
Entity where project took place: Centro de Estudios Avanzados de Blanes, CSIC
Name principal investigator (PI, Co-PI....): Ana Gordoa Ezquerra
Funding entity or bodies:
Agencia Española de Cooperación Internacional **Type of entity:** State agency

Type of participation: Team member
Start-End date: 1997 - 2007
Dedication regime: Part time
Applicant's contribution: Development of hake catchability vs water temperature maps

12 **Name of the project:** Caribbean Coastal Marine Productivity Program (CARICOMP): Sustaining coastal biodiversity benefits and ecosystem services.
Identify key words: Coastal zone ecosystems and management; Aquatic ecology
Type of project: Basic research (including archaeological digs, etc)
Degree of contribution: Current university student
Entity where project took place: EDIMAR Marine Research Station **Type of entity:** State agency
Name principal investigator (PI, Co-PI....): Ramón Varela

Funding entity or bodies:
UNESCO, Arthur Foundation, U.S. National Science Foundation, U.S. Coral Reef initiative.

Type of participation: Team member
Start date: 1995
Dedication regime: Full time
Applicant's contribution: Mangrove ecology studies, primary production, field surveys

R&D non-competitive contracts, agreements or projects with public or private entities

1 **Name of the project:** Evaluación del stock de las poblaciones de Erizo en la costa de Cantabria.
Identify key words: Aquatic biology; Benthic ecosystems; Ecosystem
Type of project: Research and development, including transfer
Degree of contribution: Researcher
Name principal investigator (PI, Co-PI....): Araceli Puente
Nº of researchers: 6
Participating entity/entities: Universidad de Cantabria
Funding entity or bodies:
Consejería de Desarrollo Rural, Pesca y Biodiversidad. Gobierno de Cantabria.

Start date: 2013 **Duration:** 6 months
Total amount: 12.000 €
Relevant results: Cartography and stock assessment of sea urchin for setting of fishing quotas

2 **Name of the project:** Evaluación del stock de las poblaciones de Gelidium corneum en la costa oeste de Cantabria.
Identify key words: Aquatic biology; Benthic ecosystems; Ecosystem
Type of project: Research and development, including transfer
Degree of contribution: Researcher
Name principal investigator (PI, Co-PI....): Araceli Puente
Nº of researchers: 8
Participating entity/entities: Universidad de Cantabria
Funding entity or bodies:
Consejería de Desarrollo Rural, Pesca y Biodiversidad. Gobierno de Cantabria.

Start date: 2012 **Duration:** 1 year
Total amount: 11.500 €
Relevant results: Cartography and stock assessment of Gelidium. Results supported the setting of fishing quotas

3 **Name of the project:** Actualización de los modelos de gestión de los recursos marisqueros del litoral de Cantabria.
Identify key words: Aquatic biology; Benthic ecosystems; Ecosystem
Type of project: Research and development, including transfer
Degree of contribution: Researcher
Name principal investigator (PI, Co-PI....): José Juanes; Gorka Bidegain Cancer
Nº of researchers: 9
Participating entity/entities: Universidad de Cantabria
Funding entity or bodies:
Consejería de Desarrollo Rural, Pesca y Biodiversidad. Gobierno de Cantabria.

Start date: 2009 **Duration:** 3 years

Total amount: 116.000 €
Relevant results: Habitat suitability maps, field experiments results and larval dispersion models obtained in the project supported native clam restoration programs of Goverment of Cantabria

4 **Name of the project:** Red de Control de la Calidad del Litoral de Cantabria. Directiva Marco del Agua.
Identify key words: Aquatic biology; Benthic ecosystems; Ecosystem
Type of project: Research and development, including transfer
Degree of contribution: Researcher
Name principal investigator (PI, Co-PI....): José Juanes
Nº of researchers: 8
Participating entity/entities: Universidad de Cantabria
Funding entity or bodies:
Gobierno de Cantabria.
Type of entity: State agency
Start date: 2006
Duration: 4 years
Total amount: 142.802 €

Scientific and technological activities

Scientific production

H index: 8
Date of application: 09/07/2018

Publications, scientific and technical documents

1 Gorka Bidegain; Xabier Guinda; Araceli Puente; Jose Antonio Juanes. Distribution patterns of the gooseneck barnacle (Pollicipes pollicipes, Gmelin, 1789) in the Cantabria region (N Spain): Exploring different population assessment methods. Journal of Shellfish Research. 36 - 3, pp. 1 - 10. Bio One, 2017. ISSN 0730-8000
Type of production: Scientific paper
Format: Journal
Position of signature: 1
Degree of contribution: Author or co-author of article in journal without external admissions assessment committee
Total no. authors: 4
Corresponding author: Yes
Impact source: SCOPUS
Category: Aquatic Science
Impact index in year of publication: 0.72
Journal in the top 25%: No
Position of publication: 115
No. of journals in the cat.: 203
Relevant publication: Yes

2 Patricia L. Luque; Saijin Zhang; Jay R. Rooker; Gorka Bidegain; Enrique Rodríguez Marín. Dorsal fin spines as a non-invasive alternative calcified structure for microelemental studies in Atlantic bluefin tuna. Journal of Experimental Biology and Ecology. 486, pp. 127 - 133. Elsevier, 2017.
Type of production: Scientific paper
Format: Journal
Corresponding author: No
Impact source: Scopus (SJR)
Category: Aquatic Science
Impact index in year of publication: 1.796
Journal in the top 25%: Yes
Position of publication: 23
No. of journals in the cat.: 194

Relevant publication: Yes

3 Bidegain, G.; Powell, E.N.; Klinck, J.M.; Ben-Horin, T.; Hofmann, E.E.Marine infectious disease dynamics and outbreak thresholds: pandemic infection and the potential role of filter feeders. Ecosphere. 7 - 4, pp. e01286. Wiley, 2016. Available on-line at: <http://onlinelibrary.wiley.com/doi/10.1002/ecs2.1286/full>.

Type of production: Scientific paper
Format: Journal
Position of signature: 1
Degree of contribution: Author or co-author of article in journal with external admissions assessment committee
Total no. authors: 5
Corresponding author: Yes
Impact source: Scopus (SJR)
Category: Ecology
Impact index in year of publication: 2.29
Journal in the top 25%: Yes
Position of publication: 35
No. of journals in the cat.: 299

Relevant publication: Yes

4 Bidegain, G.; Ben-Horin, T.Discrete stochastic marine metapopulation disease model. PeerJ. Accepted, PeerJ, 2018. ISSN 21678359

Type of production: Scientific paper
Corresponding author: Yes
Impact source: SCOPUS
Category: Biology
Impact index in year of publication: 2.2
Journal in the top 25%: Yes
Position of publication: 27
No. of journals in the cat.: 217

5 Ben-Horin, T.; Bidegain, G.; Burge, C.; Groner, M.; Carnegie, R.; Proestou, D.A.; Bushek. D.Disease at the interface of oyster aquacullture and wild oyster reefs. Journal of Applied Ecology. Accepted, Wiley-Blackwell, 2018.

Type of production: Scientific paper
Format: Journal
Position of signature: 7
Total no. authors: 8
Corresponding author: No
Impact source: SCOPUS
Category: Ecology
Impact index in year of publication: 5.3
Journal in the top 25%: Yes
Position of publication: 15
No. of journals in the cat.: 153

6 Plastic waste associated with disease in coral reefs. Frontiers in Marine Science. 5 - 237, Frontiers, 2018.

Type of production: Scientific paper
Format: Journal
Position of signature: 1
Total no. authors: 2
Impact source: SCOPUS
Category: Water Science
Impact index in year of publication: 2.8
Journal in the top 25%: Yes
Position of publication: 21
No. of journals in the cat.: 275

7 Bidegain, G.; Ben-Horin, T.; Sestelo, M.The role of microplastics on marine disease transmission: an experimental and modelling perspective. PeerJ. Accepted, 2018. ISSN 21678359

Type of production: Scientific paper
Format: Journal
Position of signature: 1
Total no. authors: 3
Corresponding author: Yes
Impact source: SCOPUS
Category: Biology
Impact index in year of publication: 2.2
Journal in the top 25%: Yes
Position of publication: 27
No. of journals in the cat.: 217

8 Xabier Guinda; Gorka Bidegain; Araceli Puente; José Antonio Juanes. A first approach to stock assessment of the sea urchin Paracentrotus lividus (Lamarck, 1816) in Cantabria (Bay of Biscay). Journal of the Marine Biological Association of the UK. doi: 10.1017/S002531 - 97, pp. 561 - 570. Cambridge University Press, 2017.

Type of production: Scientific paper
Format: Journal
Corresponding author: No
Impact source: SCOPUS
Category: Aquatic Science
Impact index in year of publication: 1.09
Journal in the top 25%: No
Position of publication: 69
No. of journals in the cat.: 103

9 G. Bidegain; E.N. Powell; J.M. Klinck; E.E. Hofmann; T. Ben-Horin; D. Bushek; S.E. Ford; D.M. Munroe; X. Guo. Modeling the transmission of Perkinsus marinus in the Eastern oyster Crassostrea virginica. Fisheries Research. Elsevier, 2017. Available on-line at: <http://www.scopus.com/inward/record.url?eid=2-s2.0-84981343281&partnerID=MN8TOARS>.

Type of production: Scientific paper
Format: Journal
Corresponding author: Yes
Impact source: Scopus (SJR)
Category: Aquatic Science
Impact index in year of publication: 2.2332
Journal in the top 25%: Yes
Position of publication: 32
No. of journals in the cat.: 195

10 Tal Ben-Horin; Kevin D. Lafferty; Gorka Bidegain; Hunter S. Lenihan. Fishing diseased abalone to promote yield and conservation. Phil. Trans. R. Soc. B. 2016.

Type of production: Scientific paper
Format: Journal
Corresponding author: No
Impact source: SCOPUS
Category: Science Edition - BIOLOGY
Impact index in year of publication: 7.224
Journal in the top 25%: Yes
Position of publication: 6
No. of journals in the cat.: 86

11 Gorka Bidegain; Powell, E.N.; Klinck, J.M.; Ben-Horin, T.; Hofmann, E.E.Microparasitic disease dynamics in benthic suspension feeders: Infective dose, non-focal hosts, and particle diffusion. Ecological Modelling. 328, pp. 44 - 61. Elsevier, 2016.

Type of production: Scientific paper
Format: Journal
Corresponding author: Yes
Impact source: Scopus (SJR)
Category: Science Edition - ENVIRONMENTAL SCIENCES
Impact index in year of publication: 2.28
Journal in the top 25%: Yes
Position of publication: 212
No. of journals in the cat.: 1.370

12 Gorka Bidegain. A habitat suitability modeling-based approach for estimating coastal shellfish biomass. Thalassas. Springer, 2015.

Type of production: Scientific paper
Format: Journal
Corresponding author: Yes
Impact source: SCOPUS
Category: Science Edition - MARINE & FRESHWATER BIOLOGY
Impact index in year of publication: 0.54
Journal in the top 25%: No
Position of publication: 93
No. of journals in the cat.: 104

13 G. Bidegain; X. Guinda; M. Sestelo; J. Roca-Pardiñas; A. Puente; J.A. Juanes. Assessing the suitability of the minimum capture size and protection regimes in the gooseneck barnacle shellfishery. Ocean and Coastal Management. 104, pp. 150 - 158. 2015. Available on-line at: <http://www.scopus.com/inward/record.url?eid=2-s2.0-84918567300&partnerID=MN8TOARS>.

Type of production: Scientific paper
Format: Journal
Impact source: SCOPUS
Category: Science Edition - WATER RESOURCES
Impact index in year of publication: 1.691
Journal in the top 25%: No
Position of publication: 31
No. of journals in the cat.: 85

14 Tal Ben-Horin; Gorka Bidegain; Lauren Huey; Diego A. Narvaez; David Bushek. Parasite transmission through suspension feeding. Journal of Invertebrate Pathology. 2015.

Type of production: Scientific paper
Format: Journal
Corresponding author: No
Impact source: SCOPUS
Category: Science Edition - ZOOLOGY
Impact index in year of publication: 2.19
Journal in the top 25%: Yes
Position of publication: 18
No. of journals in the cat.: 161

15 G. Bidegain; J.F. Bárcena; A. García; J.A. Juanes. Predicting coexistence and predominance patterns between the introduced Manila clam (Ruditapes philippinarum) and the European native clam (Ruditapes decussatus). Estuarine, Coastal and Shelf Science. 152, pp. 162 - 172. 2015. Available on-line at: <http://www.scopus.com/inward/record.url?eid=2-s2.0-84921303811&partnerID=MN8TOARS>.

Type of production: Scientific paper
Format: Journal
Impact source: SCOPUS
Category: Science Edition - MARINE & FRESHWATER BIOLOGY
Impact index in year of publication: 2.34
Journal in the top 25%: Yes
Position of publication: 24
No. of journals in the cat.: 104

16 Gorka Bidegain; José Antonio Juanes. Does expansion of the introduced Manila clam Ruditapes philippinarum cause competitive displacement of the European native clam Ruditapes decussatus?. Journal of Experimental Marine Biology and Ecology. 2013.

Type of production: Scientific paper
Format: Journal
Corresponding author: Yes
Impact source: SCOPUS
Category: Science Edition - MARINE & FRESHWATER BIOLOGY
Impact index in year of publication: 2.475
Journal in the top 25%: Yes
Position of publication: 21
No. of journals in the cat.: 103

17 G. Bidegain; M. Sestelo; J. Roca-Pardiñas; J.A. Juanes. Estimating a new suitable catch size for two clam species: Implications for shellfishery management. Ocean and Coastal Management. 71, pp. 52 - 63. 2013. Available on-line at: <http://www.scopus.com/inward/record.url?eid=2-s2.0-84869879370&partnerID=MN8TOARS>.

Type of production: Scientific paper
Format: Journal
Impact source: SCOPUS
Category: Science Edition - WATER RESOURCES
Impact index in year of publication: 1.769
Journal in the top 25%: No
Position of publication: 27
No. of journals in the cat.: 81

18 Gorka Bidegain; Javier Francisco Bárcena; Andrés García; José Antonio Juanes. LARVAHS: Predicting clam larval dispersal and recruitment using habitat suitability-based particle tracking model. Ecological Modelling. 2013.

Type of production: Scientific paper
Format: Journal
Corresponding author: Yes

Impact source: Scopus (SJR)
Category: Science Edition - ENVIRONMENTAL SCIENCES
Impact index in year of publication: 2.326
Journal in the top 25%: Yes
Position of publication: 202
No. of journals in the cat.: 1.374

19 Bidegain, G.Marine back home: searching for the big wave. Journal of Marine Animals and Their Ecology. 6 - 1, pp. 4 - 5. (Canada): Oceanographic Environmental Research Soceity, Canada, 2013. Available on-line at: <http://www.oers.ca/journal/volume6/issue1/Letter_Editor.pdf>. ISSN 1911-8929
Type of production: Scientific paper
Format: Journal
Position of signature: 1
Degree of contribution: Author or co-author of article in journal with external admissions assessment committee
Total no. authors: 1
Corresponding author: Yes

20 J.A. Juanes; G. Bidegain; B. Echavarri-Erasun; A. Puente; A. García; A. García; J.F. Bárcena; C. Álvarez; G. García-Castillo. Differential distribution pattern of native Ruditapes decussatus and introduced Ruditapes phillippinarum clam populations in the Bay of Santander (Gulf of Biscay): Considerations for fisheries management. Ocean and Coastal Management. 69, pp. 316 - 326. 2012. Available on-line at: <http://www.scopus.com/inward/record.url?eid=2-s2.0-84867235941&partnerID=MN8TOARS>.
Type of production: Scientific paper
Format: Journal
Impact source: SCOPUS
Category: Science Edition - WATER RESOURCES
Impact index in year of publication: 1.597
Journal in the top 25%: No
Position of publication: 33
No. of journals in the cat.: 80

21 Ben-Horin, T.; Bidegain, G.; de Leo, G.A.; Hofmann, E.E.; McCallum, H.; Powell, E.N.Modeling and forecasting disease dynamics in the sea. Marine Disease Ecology. Oxford University Press.2018.
Type of production: Book chapter
Format: Book
Corresponding author: No

22 Isabel Martinez-Silva; Marta Sestelo; Gorka Bidegain; Altea Lorenzo Arribas; Javier Roca-Pardiñas. Nonparametric regression applied to sea urchin growth. Sea Urchins: Habitat, Embryonic Development and Importance in the Environment. pp. 53 - 84. New York(United States of America): E. Raymond Banks, 2014. ISBN 978-1-6332-1550-4
Type of production: Book chapter
Format: Book
Degree of contribution: Author or co-author of chapter in book
Corresponding author: No

23 Klinck, J.M.; Bidegain, G.; Ben-Horin, T.; Aalto, E.; Lal Dutta, B.Marine disease single population models in Matlab and R. Old Dominion University. 1 - 1, pp. 1 - 4. Old Dominion University, 2015.
Type of production: Scientific book or monograph
Format: Scientific and technical document or report
Corresponding author: Yes

24 Klinck, J.M.; Bidegain, G.; Ben-Horin, T.; Aalto, E.; Lal Dutta, B.Multi-species population models. Old Dominion University. 1 - 1, pp. 1 - 12. Old Dominion University, 2015.
Type of production: Scientific book or monograph
Format: Scientific and technical document or report
Corresponding author: Yes

25 Klinck, J.M.; Bidegain, G.; Ben-Horin, T.; Aalto, E.; Lal Dutta, B.Multiple subpopulations and marine diseases. Old Dominion University. 1 - 1, pp. 1 - 8. Old Dominion University, 2015.
Type of production: Scientific book or monograph
Format: Scientific and technical document or report
Corresponding author: Yes

26 Guinda, G.; Bidegain, G.; Puente, A.; Juanes, J.A.Evaluación del stock de las poblaciones de Erizo en la costa de Cantabria.Gobierno de Cantabria. pp. 1 - 48. Gobierno de Cantabria, 2013.
Type of production: Scientific-technical report **Format:** Scientific and technical document or report
Corresponding author: No

27 Guinda, G.; Bidegain, G.; Puente, A.; Juanes, J.A.Evaluación del stock de las poblaciones de Gelidium corneum en la costa oeste de Cantabria.Gobierno de Cantabria. pp. 1 - 48. Gobierno de Cantabria, 2012.
Type of production: Scientific-technical report **Format:** Scientific and technical document or report
Corresponding author: No

28 Bidegain, G.; Guinda, G.; Puente, A.; Echavarri, B.; Juanes, J.A.Update of shellfish resources management models on the coast of Cantabria.Government of Cantabria. pp. 1 - 150. Department of Rural Development, Livestock, Fisheries and Biodiversity. Government of Cantabria, 2012.
Type of production: Scientific-technical report **Format:** Scientific and technical document or report
Corresponding author: Yes

29 Bidegain, G.; Puente, A.; Juanes, J.A.Environmental Sustainability Report of Santander Port Autohority. Santander Port Authority. Santander Port Authority, 2011.
Type of production: Scientific-technical report **Format:** Scientific and technical document or report
Corresponding author: Yes

30 Puente, A.; Juanes, J.A.; Bidegain, G.Environmental effects of dredging in the Port of Santander.Santander Port Authority. Santander Port Authority, 2011.
Type of production: Scientific-technical report **Format:** Scientific and technical document or report
Corresponding author: No

Works submitted to national or international conferences

1 **Title of the work:** Does restoring oyster reefs restore oyster health?
Name of the conference: Coastal & Estuarine Research Federation Biennial Conference
Corresponding author: No
City of event: Providence, RI, United States of America
Date of event: 09/11/2017
Organising entity: CERF
Ben-Horin, T.; Bidegain, G.; Burge, C.; Bushek, D.; Carnegie, R.; Groner, M.; Hofmann, E.E.; Powell, E.N.; Proestou, D.; Shroer, W.

2 **Title of the work:** MODELING MARINE BIVALVE POPULATIONS: APPROACHES AND CHALLENGES
Name of the conference: 109 National Shellfish Association Annual Meeting
Corresponding author: No
City of event: Knoxville, United States of America
Date of event: 27/03/2017
Organising entity: National Shellfish Association
City organizing entity: Knoxville, United States of America
Eileen Hofmann; Eric Powell; John Klinck; Gorka Bidegain. "Hofmann, E.E., Powell, E.N., Klinck, J.M., Bidegain, G. Modeling marine bivalve populations: Approaches and Challenges".

3 **Title of the work:** The influence of hydrodynamics (advection and vertical mixing) on disease transmission time in benthic metapopulations distributed among reefs
Name of the conference: 109th National Shellfish Association Conference
Type of event: Conference

Corresponding author: Yes
City of event: Knoxville, United States of America
Date of event: 03/2017
Organising entity: National Shellfish Association
Gorka Bidegain; John Klinck; Eric Powell; Eileen Hofmann; Julia Levin. Journal of Shellfish Research,

4 **Title of the work:** A coupled benthic-circulation model for Dermo disease in the eastern oyster Crassostrea virginica
Name of the conference: Aquaculture 2016
Type of event: Conference
Corresponding author: Yes
City of event: Las Vegas, United States of America
Date of event: 2016
Organising entity: World Aquaculture Society
Gorka Bidegain; John Klinck; Julia Levin; Eric Powell; Dale Haidvogel; Tal Ben-Horin; Eileen Hofmann. Journal of Shellfish Research,

5 **Title of the work:** Disease transmission by free drifting infectious particles in sessile filter feeders: a theoretical and model analysis
Name of the conference: Ocean Sciences Meeting
Type of event: Conference
Corresponding author: No
City of event: New Orleans, United States of America
Date of event: 2016
John Klinck; Gorka Bidegain; Eric Powell; Tal Ben-Horin; Eileen Hofmann.

6 **Title of the work:** Fishing diseased abalone to promote yield and conservation
Name of the conference: Aquaculture 2016
Type of event: Conference
Corresponding author: Yes
City of event: Las Vegas, United States of America
Date of event: 2016
Organising entity: World Aquaculture Society
Tal Ben-Horin; Gorka Bidegain; Kevin Lafferty; Hunter Lenihan. Journal of Shellfish Research,

7 **Title of the work:** Modeling within-host pathogen interactions in marine bivalves
Name of the conference: 14th Ecology and Evolution of Infectious Disease Meeting
Type of event: Conference
Corresponding author: No
City of event: Ithaca, United States of America
Date of event: 2016
Organising entity: Cornell University
Eileen Hofmann; Eric Powell; John Klinck; Gorka Bidegain.

8 **Title of the work:** Application of science to policy in the harvesting of Paracentrotus lividus (Lamark, 1816)
Name of the conference: 50th European Marine Biology Symposium
Type of event: Conference
Corresponding author: No
City of event: Helgoland, Germany
Date of event: 2015
Organising entity: EMBS

Xabier Guinda; Gorka Bidegain; Araceli Puente; José Juanes.

9 **Title of the work:** Dilution of the oyster parasite Perkinsus marinus by commensal tunicates
Name of the conference: 107th National Shellfish Association Conference
Type of event: Conference
Corresponding author: No
City of event: Monterrey, United States of America
Date of event: 2015
Organising entity: National Shellfish Association
William Schroer; Tal Ben-Horin; Gorka Bidegain; David Bushek; Eric Powell. Journal of Shellfish Research,

10 **Title of the work:** Epizootiological modeling of marine infectious diseases
Name of the conference: 79th Mississippi Academy of Science Meeting
Type of event: Conference
Corresponding author: Yes
City of event: Hattiesburg, United States of America
Date of event: 2015
Organising entity: Mississippi Academy of Science
Gorka Bidegain; Eric Powell; John Klinck; Tal Ben-Horin; Eileen Hofmann. Journal of Mississippi Academy of Science,

11 **Title of the work:** Modeling overfiltration of marine pathogens
Name of the conference: 79th Mississippi Academy of Science Meeting
Type of event: Conference
Corresponding author: Yes
City of event: Hattiesburg, United States of America
Date of event: 2015
Organising entity: Mississippi Academy of Science
Gorka Bidegain; Tal Ben-Horin; Eric Powell; John Klinck; David Bushek; Eileen Hofmann. Journal of Mississippi Academy of Science,

12 **Title of the work:** Models, reference points, and restoration: the challenge of oyster (and other marine) diseases
Name of the conference: 23rd Biennial Coastal & Estuarine Research Federation (CERF) Conference
Type of event: Conference
Corresponding author: No
City of event: Portland, United States of America
Date of event: 2015
Organising entity: CERF
Eric Powell; Gorka Bidegain; Daphne Munroe; John Klinck; Eileen Hofmann.

13 **Title of the work:** Overfiltration of marine diseases I: experimental evidence and notes from the field
Name of the conference: 107th National Shellfish Association Conference
Type of event: Conference
Corresponding author: No
City of event: Monterrey, United States of America
Date of event: 2015
Organising entity: National Shellfish Association
Tal Ben-Horin; Gorka Bidegain; Eric Powell; David Bushek. Journal of Shellfish Research,

14 **Title of the work:** Overfiltration of marine diseases II: compartmental models and water column simulations
Name of the conference: 107th National Shellfish Association Conference
Type of event: Conference
Corresponding author: Yes
City of event: Monterrey, United States of America
Date of event: 2015
Organising entity: National Shellfish Association
Gorka Bidegain; Tal Ben-Horin; Eric Powell; John Klinck; David Bushek; Eileen Hofmann. Journal of Shellfish Research,

15 **Title of the work:** The effect of current flow and oyster reef characteristics on disease dilution
Name of the conference: 1st Research Exchange Meeting
Type of event: Conference
Corresponding author: Yes
City of event: Long Beach, United States of America
Date of event: 2015
Organising entity: University of Southern Mississippi
Gorka Bidegain; Tal Ben-Horin; Eric Powell; John Klinck; David Bushek; Eileen Hofmann.

16 **Title of the work:** Marine disease transmission models and an introduction to parameter estimation
Name of the conference: RCN Marine Disease Modeling and Transmission Workshop
Type of event: Workshop
Corresponding author: Yes
City of event: Norfolk, United States of America
Date of event: 2015
Organising entity: Old Dominion University/University of Southern Mississippi/Rutgers University **Type of entity:** University
Gorka Bidegain; Tal Ben-Horin.

17 **Title of the work:** A marine infectious disease model.
Name of the conference: 78th Mississippi Academy of Science Meeting
Type of event: Conference
Corresponding author: Yes
City of event: Hattiesburg, United States of America
Date of event: 2014
Organising entity: Mississippi Academy of Science
Gorka Bidegain; Eric Powell; John Klinck; Eileen Hofmann. Journal of Mississippi Academy of Science,

18 **Title of the work:** Beyond within-host proliferation and environmental control in marine invertebrate diseases
Name of the conference: 2014 Bays and Bayous Symposium
Type of event: Conference
Corresponding author: Yes
City of event: Mobile, United States of America
Date of event: 2014
Organising entity: Sea Grant
Gorka Bidegain; Tal Ben-Horin; Eilenn Hofmann; Eric Powell; John Klinck; David Bushek; Daphne Munroe; Ximing Guo; Ming Liu; Susan Ford; Dale Haidvogel; John Wilkin; Julia Levin. Journal of Mississippi Academy of Science,

19 **Title of the work:** Development of a theoretical basis for modeling disease processes in marine invertebrates.
Name of the conference: Oceans Sciences Meeting
Type of event: Conference
Corresponding author: No
City of event: Honololu, Hawaii, United States of America
Date of event: 2014
Organising entity: AGU
Eileen Hofmann; John Klinck; Eric Powell; David Bushek; Tal Ben-Horin; Gorka Bidegain; Daphne Munroe; Ximing Guo; Susan Ford; Dale Haidvogel; John Wilkin; Julia Levin.

20 **Title of the work:** The collapse of oyster fisheries and emergence of Dermo disease in Atlantic estuaries
Name of the conference: 12th Ecology and Evolution of Infectious Disease Meeting
Type of event: Conference
Corresponding author: No
City of event: Fort Collins, CO, United States of America
Date of event: 2014
Organising entity: EEID
Tal Ben-Horin; David Bushek; Gorka Bidegain; Susan Ford; Ximing Guo; Daphne Munroe; Ming Liu; Eric Powell; Dale Haidvogel; John Wilkin; Julia Levin; Eileen Hofmann; John Klinck.

21 **Title of the work:** Ecologically relevant aspects to understand marine range shifts
Name of the conference: Coastal Sciences Seminar Series
Type of event: Seminar
Corresponding author: Yes
City of event: Ocean Springs,
Date of event: 2013
Organising entity: University of Southern Mississippi

22 **Title of the work:** Is the competitive interaction between the non indigenous bivalve Ruditapes philippinarum and the native bivalve Ruditapes decussatus a determining factor to explain the reduction of the native population?
Name of the conference: XIII International Symposium on Oceanography of the Bay of Biscay
Type of event: Conference
Corresponding author: Yes
City of event: Santander, Spain
Date of event: 2012
Organising entity: Centro Oceanográfico de Santander **Type of entity:** Public Research Body
Gorka Bidegain; José Juanes.

23 **Title of the work:** Modeling dispersal and potential recruitment patterns of Ruditapes philippinarum and Ruditapes decussatus based on particle tracking, habitat suitability and larval dynamics
Name of the conference: 50th Estuarine and Coastal Sciences Association (ECSA) Conference
Type of event: Conference
Corresponding author: Yes
City of event: Venecia, Italy
Date of event: 2012
Organising entity: ECSA
Gorka Bidegain; Javier F. Bárcena; Andrés García; José Juanes.

24 **Title of the work:** Modelling Habitat Suitability for Two Clam Species Using Ecological Niche Factor Analysis (ENFA)
Name of the conference: 50th Estuarine and Coastal Sciences Association (ECSA) Conference
Type of event: Conference
Corresponding author: Yes
City of event: Venecia, Italy
Date of event: 2012
Organising entity: ECSA
Gorka Bidegain; Javier F. Bárcena; Andrés García; José Juanes.

25 **Title of the work:** Recruitment and growth of Pollicipes pollicipes on the coast of Cantabria (Gulf of Biscay, northern Spain)
Name of the conference: XIII International Symposium on Oceanography of the Bay of Biscay
Type of event: Conference
Corresponding author: Yes
City of event: Santander, Spain
Date of event: 2012
Organising entity: Centro Oceanográfico de Santander **Type of entity:** Public Research Body
María B. Gutiérrez-Cobo; Gorka Bidegain; Ana Silio; Xabier Guinda; José Juanes.

26 **Title of the work:** A non parametric model for estimating an ideal size of capture for Ruditapes decussatus (native) and Ruditapes philippinarum (introduced) bivalves on the northern coast of Spain (Cantabrian Sea)
Name of the conference: Symposium Estuaries and lagoons ecosystem trajectories
Type of event: Conference
Corresponding author: Yes
City of event: Bordeaux, France
Date of event: 2011
Organising entity: University of Bourdeaux
Gorka Bidegain; Marta Sestelo; Javier Roca-Pardiñas; José Juanes.

27 **Title of the work:** An alternative model for estimating the length-weight relationship of Ruditapes decussatus (native) and Ruditapes philippinarum (introduced) bivalves on the northern coast of Spain (Cantabrian Sea)
Name of the conference: 6th Congress of European Malacological Societies.
Type of event: Conference
Corresponding author: Yes
City of event: Vitoria, Spain
Date of event: 2011
Organising entity: University of the Basque Country
Gorka Bidegain; Marta Sestelo; Javier Roca-Pardiñas; José Juanes.

R&D management and participation in scientific committees

Scientific, technical and/or assessment committees

1 **Committee title:** Development and implementation of a pan-European Marine Biodiversity Observatory System (EMBOS) - COST ACTION: SCIENCE AND TECHNOLOGY NETWORK
Primary (UNESCO code): 251004 - Marine botany; 251005 - Marine zoology; 251010 - Shore and near-shore processes
Start-End date: 2011 - 2015

2 **Committee title:** Expert Review Committee of the Intergovernmental Panel of Cilmate Change (IPCC)
Primary (UNESCO code): 240106 - Animal ecology; 240112 - Parasitology animal; 240191 - Invertebrates not Insects; 251001 - Biological oceanography; 251092 - Oceanography: Acucultura marina
Affiliation entity: Expert Review Committee of the Intergovernmental Panel of Cilmate Change (IPCC) **Type of entity:** International Body for assessing the science related to climate change
City affiliation entity: World Meteorological Organization (WMO) and United Nations Environment Programme (UNEP),
Start date: 2017

3 **Committee title:** Ecology of Infectious Marine Diseases Research Coordination Network
Primary (UNESCO code): 240106 - Animal ecology; 320200 - Epidemiology
Affiliation entity: Cornell University **Type of entity:** University
City affiliation entity: Ithaca, New York, United States of America
Start date: 2013

Organization of R&D activities

1 **Title of the activity:** Marine Disease Modelling Workshop
Type of activity: Workshop
Convening entity: Old Dominion University
City convening entity: Norfolk, United States of America
Type of participation: Organiser
Nº assistants: 25
Start-End date: 11/05/2015 - 15/05/2015

2 **Title of the activity:** Modelling marine diseases in aquaculture. Session
Type of activity: Conference Session
Convening entity: World Aquaculture Society
City convening entity: Las Vegas, United States of America
Start date: 25/02/2016

Other achievements

Stays in public or private R&D centres

1 **Entity:** Center for Coastal Physical Oceanography
Start-End date: 2014 - 2016 **Duration:** 3 months - 15 days
Goals of the stay: Post-doctoral
Provable tasks: Training in disease modeling and development of host-pathogen system models

2 **Entity:** NIOZ **Type of entity:** Public Research Body
Faculty, institute or centre: Royal Netherlands Institute for Sea Research
City of entity: Yersekee, Zeeland, Holland
Start date: 10/10/2010 **Duration:** 7 days
Goals of the stay: Doctorate
Provable tasks: Applied Biostatistics with R