

CURRICULUM VITAE ABREVIADO (CVA)

IMPORTANT – The Curriculum Vitae cannot exceed 4 pages. Instructions to fill this document are available in the website.

Part A. PERSONAL INFORMATION

First name	Fernando		
Family name	Villate		
Gender (*)	Male	Birth date (dd/mm/yyyy)	09/06/1957
Social Security, Passport, ID number	14933632P		
e-mail	fernando.villate@ehu.eus	URL Web	
Open Researcher and Contributor ID (ORCID) (*)		0000-0002-2189-3931	

(*) Mandatory

A.1. Current position

Position	Permanent staff		
Initial date	19/01/1993		
Institution	University of Basque Country (UPV/EHU)		
Department/Center	Plant Biology and Ecology	Faculty of Science and Technology	
Country	Spain	Teleph. number	946015515
Key words	Zooplankton, ecology, estuaries, marine environment, human impact, time series		

A.2. Previous positions (research activity interruptions, indicate total months)

Period	Position/Institution/Country/Interruption cause
1990-1992	Acting official/ University of Basque Country (UPV/EHU)
1987-1990	Tenured-track/ University of Basque Country (UPV/EHU)
1986-1987	Advanced Technician/ Oceanographic Research Service (Basque Government)
1981-1984	Grantee/ University of Basque Country (UPV/EHU)

A.3. Education

PhD, Licensed, Graduate	University/Country	Year
PhD in Biological Sciences	University of Basque Country (UPV/EHU)	1987
Licensed in Biological Sciences	University of Basque Country (UPV/EHU)	1980

(Include all the necessary rows)

Part B. CV SUMMARY (max. 5000 characters, including spaces)

I am a marine ecologist with a wide experience in the study of coastal plankton ecosystems, mainly in that concern to zooplankton biodiversity, function and response to both natural and anthropogenic stressors. I have 78 scientific publications, 62 in indexed journals and 24 in Q1, with 1343 citations and $h = 22$ (Scopus). I have 5 six-year terms positively evaluated (in Spain), the last one in 2018. I have participated in 28 competitive projects funded by the Spanish Ministry, the Basque Government, the University of the Basque Country (UPV/EHU) and the UNESCO Cathedra, in 19 of them as principal investigator, signed contracts and undertaken consultancy works for private companies (most of them for AZTI-Tecnalia Technology Center), and participate in advisory commissions for the Basque Government in the Guiding Plan for use and Management of the Biosphere Reserve of Urdaibai and in the Program of recovery, conservation and improvement of the marine environment of the strategic Fishing Plan.

Among my main scientific achievements are (1) the first taxonomic description of estuarine zooplankton communities in the Basque coast, (2) the description of spatial and seasonal dynamics of brackish and neritic zooplankton communities in this area, (3) the contributions to the knowledge of the trophic role of small zooplankton in estuaries and the trophic ecology of fish larvae of commercial species, and (4) the contributions to assess the effect of pollution

and climate on water quality and plankton communities in estuaries and coastal waters. Recently, I focused in the analysis of plankton time series to assess the impact of climate change and local anthropogenic perturbations on long-term changes in plankton ecosystems, but I am also working on new approaches to assess the impact of non-native zooplankton on biodiversity and ecosystem services, and in zooplankton studies that use metabarcoding. I am the promoter and present responsible for an ongoing plankton-monitoring program in the contrasting estuaries of Bilbao and Urdaibai (Basque coast, Bay of Biscay), initiated in 1997. This program is providing the long-term data needed to characterize brackish and marine ecosystems variability and change from seasonal to interdecadal scales, and identify the main natural and anthropogenic drivers of change in our study area, in line with similar initiatives in other marine regions across the world. Information and data on these plankton series are disclosed internationally in the webs of COPEPEDIA, a database of plankton biodiversity, photos, biometric traits and genetic markers cooperatively compiled by ICES (International Council for the Exploration of the Sea) and NOAA (National Oceanic and Atmospheric Administration), the IGMETS (International Group for Marine Ecological Time Series) and the GOOS BioEco portal, a publicly available tool to monitor the status of the marine biological observing system.

I have collaborated with researchers from the Institute of Biology Marine of the University of Bordeaux (France) in studies on estuarine zooplankton production, the AZTI Technology Center in studies on interannual zooplankton dynamics in the Basque shelf and ecology of small pelagic fish, the Institute of Marine Sciences (CSIC) of Barcelona in studies on fish larvae trophic ecology and plankton-environment relationships, and the Marine Laboratory of Plymouth and the Marine Laboratory of the Marine Scotland Science (UK) in comparative analyses of zooplankton time series from different European Atlantic coasts.

Presently, I lead the consolidated research group Marine Ecology (ECOMAR) of the UPV/EHU, and I am researcher and coordinator of the Research Committee at the PiE-EHU (Research Centre for Experimental Marine Biology & Biotechnology), which is member of the European Marine Biological Research Centre. I am chair-invited member of the expert groups Working Group on Zooplankton Ecology and Working Group entitled Towards a EUROpean OBServatory of the non-indigenous calanoid copepod *Pseudodiaptomus* marinUS of the ICES/CIEM.

I have supervised 12 PhD thesis, 9 Master Thesis, and several Degree Final Projects. Among the PhD graduates, currently two are college professors of the UPV/EHU, two are researchers in AZTI-Tecnalia, one is working in the “National Board of Science and Technology Research” of Chile, one is college professor of the Begoñako Andra Mari Teacher Training University College and other four are working in the Basque Research and Technology Alliance (BRTA), the Fishery Producers Organization of Almeria OPP71), ANBIOTEK (company for water quality monitoring services) and the Biodonostia Health Research Institute. The most recent graduate currently has temporal contracts as researchers in the UPV/EHU.

I have done 3 reviews for the ANEP (National Agency for Evaluation and Foresight of Spain) and I am regular reviewer of articles for scientific journals of the areas of Marine & Freshwater biology and Oceanography.

Part C. RELEVANT MERITS (*sorted by typology*)

C.1. Publications (*see instructions*)

Iriarte A, Villate F, Uriarte I, Bidegain G, Barroeta Z. 2022. Shifts in neritic copepod communities off the Basque coast (southeastern Bay of Biscay) between 1998 and 2015. ICES Journal of Marine Science, 79: 830–843.

Uriarte I, Villate F, Iriarte A, Fanjul A, Atkinson A, Cook K. 2021. Opposite phenological responses of zooplankton to climate along a latitudinal gradient through the European shelf. ICES Journal of Marine Science 78: 1090-1107.

Villarino E, Irigoien X, Villate F, ... Chust G (3/9). 2020. Response of copepod communities to sea warming in three time-series across the North Atlantic and Mediterranean Sea. Marine Ecology- Progress Series 636: 47-61.

Fanjul A, Iriarte A, Villate F, Uriarte I, Artiach M, Atkinson A, Cook K. 2019. Latitude, distance offshore and local environmental features as modulators of zooplankton assemblages across the NE Atlantic Shelves Province. Journal of Plankton Research 41: 293-308.

- Fanjul A, Villate F, Iriarte A, Uriarte I, Atkinson A, Cook K. 2018. Zooplankton seasonality across a latitudinal gradient in the Northeast Atlantic Shelves Province. *Continental Shelf Research* 160: 49-62.
- Fanjul A, Villate F, Uriarte I, Iriarte A, Atkinson A, Cook K. 2017. Zooplankton variability at four monitoring sites of the Northeast Atlantic Shelves differing in latitude and trophic status. *Journal of Plankton Research* 39: 891-909.
- Villate F, Iriarte A, Uriarte I, Sanchez I. 2017. Seasonal and interannual variability of mesozooplankton in two contrasting estuaries of the Bay of Biscay: Relationship to environmental factors. *Journal of Sea Research* 130: 189-203.
- Uriarte I, Villate F, Iriarte A. 2016. Zooplankton recolonization of the inner estuary of Bilbao: influence of pollution abatement, climate and non-indigenous species. *Journal of Plankton Research* 38: 718-731.
- Villate F, Uriarte I, Olivar MP, Maynou F, Emelianov M, Amezttoy I. 2014. Mesoscale structure of microplankton and mesoplankton assemblages under contrasting oceanographic conditions in the Catalan Sea (NW Mediterranean). *Journal of Marine Systems*, 139: 9–26.
- Intxausti L, Villate F, Uriarte I, Iriarte A, Amezttoy I. 2012. Size-related response of zooplankton to hydroclimatic variability and water-quality in an organically polluted estuary of the Basque coast (Bay of Biscay). *Journal of Marine Systems*, 94: 87-96

C.2. Congress, indicating the modality of their participation (invited conference, oral presentation, poster)

- Patterns of variations in the neritic copepod community of the Basque coast (Bay of Biscay) during the last two decades (1998-2020) in relation to climate teleconnections and local environmental variables. Poster. F. Villate, I. Uriarte, A. Iriarte, Z. Barroeta. Symposium on Decadal Variability of the North Atlantic and its Marine Ecosystems: 2010 – 2019. June 2022. Bergen, Norway.
- Interannual variations in neritic copepods of the Basque coast (Southeastern Bay of Biscay): has there been a community shift in the 2010s decade? Oral presentation. A. Iriarte, I. Uriarte, Z. Barroeta, G. Bidegain, F. Villate. ICES Annual Science Conference 2021. September 2021. Copenhagen, Denmark.
- Monitoring the non-indigenous species *Pseudodiaptomus marinus* in two estuaries of the Bay of Biscay. Oral presentation. Z. Barroeta, T. Garcia, F. Villate, I. Uriarte, A. Iriarte. Neobiota-Aquainvad-ED: Management, Risk control and early Detection of aquatic invasive species session. September 2018. Dun Laoghaire, Ireland.
- Long-term trends of zooplankton and sea warming across the North Atlantic and Mediterranean Sea. Oral presentation. E. Villarino, X. Irigoien, F. Villate, ... G. Chust (3/10). XVIth International Symposium on Oceanography of the Bay of Biscay (ISOBAY 16). June 2018. Angelu, France.
- Long term changes in zooplankton community at four monitoring sites in the North East Atlantic. Oral presentation. A. Fanjul, M. Spencer, F. Villate, I. Uriarte, A. Iriarte, A. Atkinson, K. Cook. Estuarine & Coastal Science Association Conference 2017. October 2017. Shanghai, China.
- Seasonal and interannual variability of mesozooplankton and the relationship to environmental factors in two contrasting estuaries of the Bay of Biscay. Oral presentation. F. Villate, A. Iriarte, I. Uriarte, I. Sanchez. XV International Symposium on Oceanography of the Bay of Biscay (Isobay15). June 2016. Bilbao, Spain.
- Comparison of Metabarcoding and Microscopy for Estuarine Plankton Monitoring: Quantitative Characterization and Non-Indigenous Species Detectability. Oral presentation. D. Abad, A. Albaina, A. Aguirre, M. Laza-Martinez, I. Uriarte, A. Iriarte, F. Villate, A. Estonba. ICES/PICES 6th Zooplankton Production Symposium. May 2016. Bergen, Norway.
- Complexity of mechanisms accounting for the changes in the estuarine zooplankton during the rehabilitation process of the estuary of Bilbao. Oral presentation. F. Villate, A. Iriarte, I. Uriarte, L. Intxausti. ASLO 2015 Aquatic Sciences Meeting. February 2015. Granada, Spain.
- A multidisciplinary approach to understand the health of estuaries and coastal areas in the Bay of Biscay. Oral presentation. M.P. Cajaraville E. Orive, F. Villate, ... I. (3/9). Marigómez. XIVth International Symposium on Oceanography of the Bay of Biscay (Isobay14). June 2014. Bordeaux, France.

Progress Reports: Time series of the Basque coast zooplankton. Oral presentation. A. Iriarte, F. Villate, I. Uriarte. ICES WGPME-WGZE meeting. March 2014. Reykjavík, Island.

C.3. Research projects, indicating your personal contribution. In the case of young researchers, indicate lines of research for which they have been responsible.

IT1723-22. Ecología marina (ECOMAR). Basque Government. 2021 Grupos consolidados. 01/01/2022-31/12/2025. 79.300.00 €. PI

TED2021-132109BC21. El faro del observatorio One-Health: características ambientales de la bahía de Plentzia. Ministry for the Science and Innovation. 2021 Proyectos de transición ecológica y transición digital. 01/12/2022-30/11/2024. 368.000 €. Researcher.

PIBA 2020-1-0028. Patrones de cambio en los ecosistemas planctónicos de la costa vasca en las dos últimas décadas ¿Ha habido cambio de régimen?. Basque Government. 2020 Proyectos de investigación básica y/o aplicada. 01/10/2020-30/09/2023. 49.958 €. PI

GIU19/059. Ecología del plancton marino y estuarino. University of the Basque Country. UPV/EHU. 2019 Grupos de investigación UPV/EHU. 04/03/2020-03/03/2022. 37.530 €. PI

GIU16/69. Ecología marina y de estuarios: zooplancton/ictioplancton. UPV/EHU. 2016 Grupos de investigación. 22/12/2016-21/12/2019. 20.000 €. PI

CGL2013-47607-R. Respuesta del zooplancton a las variaciones climáticas en la provincia de plataformas del noreste atlántico en relación a la latitud y la eutrofia. Ministry for the Economy and Competitiveness. 2013 MINECOR Retos Proyectos. 01/01/2014-31/12/2017. 147.162 €. PI

IT778-13. Bioindicación de cambios ambientales a largo plazo a partir del plancton. Basque Government. 2012 Grupos Consolidados. 01/01/13-31/12/15. 43.600 €. PI

IT354-10. Estudio del medio pelágico marino y estuarino y las comunidades planctónicas. Basque Government. 2010 Grupos Consolidados. 01/01/2010-31/12/2012. 72.000 €. PI

IE08-216. Adaptación de los impactos del cambio climático en la Comunidad Autónoma Vasca II. Basque Government. 2008 ETORTEK. 01/01/2008-31/12/2008. 44.479 €. PI

EHU06/52. Estudio del efecto de la NAO sobre el plancton costero-estuarino de la costa vasca. UPV/EHU. 2006 Proyectos de investigación. 18/12/2006-17/12/2008. 22.000 €. PI

C.4. Contracts, technological or transfer merits, Include patents and other industrial or intellectual property activities (contracts, licenses, agreements, etc.) in which you have collaborated. Indicate: a) the order of signature of authors; b) reference; c) title; d) priority countries; e) date; f) Entity and companies that exploit the patent or similar information, if any

Contracts for the monitoring program in the estuaries of Bilbao and Plentzia, funded by the Bilbao-Bizkaia Water Consortium (17 contracts since 1995).

Análisis del zooplankton en el estuario del Nervión: estudio de seguimiento. Foundation AZTI. PI: F. Villate, UPV/EHU. 15/04/2013-15/06/2013. 6.710 €.

Análisis del zooplankton en el estuario del Nervión: estudio de seguimiento. Foundation AZTI. PI: F. Villate, UPV/EHU. 13/02/2012-30/04/2012. 6.514 €.

Análisis del zooplankton en el estuario del Nervión: estudio de seguimiento. Foundation AZTI. PI: F. Villate, UPV/EHU. 10/01/2011-30/04/2011. 6.354 €.

Análisis del zooplankton en el estuario del Nervión: estudio de seguimiento. Foundation AZTI. PI: F. Villate, UPV/EHU. 01/01/2010-30/04/2010. 6.304 €.

Análisis del zooplankton en el estuario del Nervión: estudio de seguimiento. Foundation AZTI. PI: F. Villate, UPV/EHU. 01/06/2009-30/08/2009. 6.061 €.

Análisis del zooplankton en el estuario del Nervión: estudio de seguimiento. Foundation AZTI. PI: F. Villate, UPV/EHU. 01/07/2008-30/09/2008. 6.194 €.

Análisis del zooplankton en el estuario del Nervión y Butrón: estudio de seguimiento. Foundation AZTI. PI: F. Villate, UPV/EHU. 13/06/2007-15/08/2007. 5.945 €.

Análisis del zooplankton en el estuario del Nervión: estudio de seguimiento. Foundation AZTI. PI: F. Villate, UPV/EHU. 27/04/2006-15/08/2006. 5.945 €.

Análisis del zooplankton en el estuario del Nervión y Butrón: estudio de seguimiento. Foundation AZTI. PI: F. Villate, UPV/EHU. 15/12/2004-15/03/2005. 5.542 €.

Análisis del zooplankton en el estuario del Nervión y Butrón: estudio de seguimiento. Foundation AZTI. PI: F. Villate, UPV/EHU. 12/11/2003-13/03/2004. 8.953 €.