Salvador J. Fernández Bejarano

Based in Ghent, Belgium - **Nationality:** Spain - **Birth:** 1993-10-13 - **Email:** salvafern@pm.me

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Experience

2019-07 : **Data Manager**. Flanders Marine Institute, Data Centre. Oostende, Belgium.

Research Software Engineering and Data Management focused on Geospatial Data. A non-exhaustive list of tasks includes:

- Development and maintenance of Free Open Source Software in R. These are packages that retrieve data from REST APIs, OpenCPU or OGC. Software review at rOpenSci. Publication on CRAN. Version control with Git, community collaboration and tackling of issues with Github and Gitlab.
- Development and maintenance of R Shiny apps.
- Management and development of GIS data products in the framework of several projects: Marine Regions, Bio-Oracle, the Biology lot of EMODnet and EDITO-Infra.
- Application of FAIR data principles to datasets holding biodiversity occurrences, maritime boundaries or environmental data. Data management in SQL Server, PostgreSQL and MongoDB. Publication of datasets via Geoserver and ERDDAP. Metadata management in several systems such as GeoNetwork or GBIF IPT. Creation of DOIs.
- Intensive legal research on maritime boundaries and geopolitical conflicts over territory in the framework of Marine Regions

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2018-11/2019-02 : **Data Analyst**. Genera Games. Sevilla, Spain.

Data mining of indie mobile games following a Free-to-play business model. Areas like user retention, engagement or revenue were statiscially analyzed using big data of user behavior through PostgreSQL querying. Monthly reports were produced and passed on to the managers for strategic decision making.

Education

2016-2018 : **MSc, Erasmus Marine Biodiversity and Conservation**; EMBC+ Consortium: University of Ghent, Belgium; University of Algarve, Portugal; Galway Mayo Institute of Technology, Ireland.

Thesis: *Climate-driven range shifts in marine forests predicted in the Alboran Sea and adjacent Atlantic Ocean.*

2011-2016 : **BSc, Biology**; University of Sevilla, Spain

Tech Stack

- Languages: R, SQL, Bash, Python, Julia.
- Software development: Git, Docker.
- Geo-spatial Analysis: QGIS, ArcGIS, PostGIS, NetCDF, geoserver, ERDDAP, Leaflet.
- Data standards: Darwin Core, BODC vocab terms, RDF, INSPIRE, OGC.
- Communications: Jira Atlassian, Confluence Atlassian, Microsoft Teams, Slack, Outlook.

Human languages

Following the Common European Framework of Reference for Languages:

Spanish (Native). English B2, Portuguese B1, German A2, Dutch A2.

Publications

- Assis, J., Fernández Bejarano, S.J., Salazar, V.W., Schepers, L., Gouvêa, L., Fragkopoulou, E., Leclercq, L., Vanhoorne, B., Tyberghein, L., Serrão, E.A., Verbruggen, H., De Clerck, O. (2024) Bio-ORACLE v3.0. Pushing marine data layers to the CMIP6 Earth system models of climate change research. Global Ecology and Biogeography. https://doi.org/10.1111/geb.13813

Workshops and Hackathons

- [Coach] Open Sea Lab 3.0 Hackathon. (2023-03-27/2023-03-28). Online. https://opensealab.eu/
- [Instructor] Research Data Management workshop: Hands-on introductions to research data management and publication. (2022-09-27). Brussels, Belgium. https://oscibio.inbo.be/blog/rdm-workshop/
- [Instructor] Bringing together marine biodiversity, environmental and maritime boundaries data in R. (2022-05-30). Brussels, Belgium. https://github.com/lifewatch/ebr-2022-data-combine
- [Coach] Blue-Cloud Hackathon. (2022-02-07/2022-02-09). Online. https://hackathon.blue-cloud.org/
- [Participant] Open Sea Lab II hackathon. My team developed *Sea Invaders!*, a citizen science tool for early detection of invasive species (2019-09-04/2019-09-06). Ghent, Belgium. https://rshiny.lifewatch.be/seainvaders/ https://github.com/iobis/findingdemo. Hackathon report: https://emodnet.ec.europa.eu/en/open-sea-lab-ii-film-report-future

Conference Contributions

- Fernández Bejarano, S. *et al.* (2023). Bio-Oracle Version 3: Enhancing High-Resolution Marine Datasets for Ecological Modeling and Climate Change Predictions. In LifeWatch ERIC (Ed.), *The LifeWatch ERIC Biodiversity & Ecosystem eScience Conference 2023 - Abstract Book,* pp. 23. https://doi.org/10.48372/M2SW-MD81
- Fernández Bejarano, S.; Lonneville, B.; Vanhoorne, B.; Schepers, L. (2023). Dude, where's my lobster? Perform geospatial research using a new Extended Continental Shelves data product, in: Mees, J. *et al. Book of abstracts – VLIZ Marine Science Day, 1 March 2023, Bruges. VLIZ Special Publication,* 90: pp. 25. https://dx.doi.org/10.48470/41
- Fernández Bejarano, S. (2023) Bio-Oracle v3.0: towards the next-gen data for marine ecological modelling. LifeWatch Biodiversity Day 2023 Habitat Mapping. https://lifewatch.be/en/lifewatch-biodiversity-day-habitat-mapping
- Lonneville, B.; Schepers, L.; Seys, J.; De Smet, B.; Fernández Bejarano, S.; Mees, J. (2022). The World's 230 Exclusive Economic Zones from largest to smallest, in: Mees, J. *et al. Book of abstracts – VLIZ Marine Science Day, Online event 2 March 2022. VLIZ Special Publication,* 88: pp. 67. https://dx.doi.org/10.48470/24
- Fernández Bejarano, S., Lonneville, B., Schepers, L., Vanhoorne, B., Tyberghein, L. (2021) Marine Regions' open-border policy: creating global maritime boundaries with FOSS. FOSS4G 2021 https://callforpapers.2021.foss4g.org/foss4g2021/talk/BVDGG8/ Recording available at: https://www.youtube.com/watch?v=6NHP0TAslAM
- Fernández Bejarano, S.; Lonneville, B.; Vanhoorne, B.; Schepers, L. (2021). Where did we take those samples from? Georeferencing your research with marineregions.org, in: Mees, J. *et al. Book of abstracts – VLIZ Marine Science Day, Online event 3 March 2021. VLIZ Special Publication,* 85: pp. 58. https://dx.doi.org/10.48470/1

Internships Supervised

- Supervised and mentored Pohl L., a student in the IMBRSea MSc, in the start phase of the development of the mregions2: an R package to access data from Marineregions.org. The project involved learning software development tools such as version control with Git and GitHub, automatic testing, continuous integration and deployment, and specific knowledge writing R extensions. The contributions of Pohl can be found at: https://github.com/lifewatch/mregions2/commits?author=lottepohl (2022-04/2020-06)
- Supervised and mentored D'Hurlaborde A., a student in the IMBRSea MSc, in the creation of a new GIS data product: the Marine Regions' Extended Continental Shelves v1. The project involved extensive research on the United Nations Law of the Sea, data management, and the use of geospatial software tools. The results of the internship were presented on a dedicated website created by the student: https://sites.google.com/imbrsea.eu/alicedhurlaborde/home. (2020-04/2020-06)

Software

- Fernández Bejarano, S.J. (2024). biooracler: Import environmental ocean data from Bio-Oracle via ERDDAP. R package version 0.0.0.9000, https://bio-oracle.org/, https://github.com/bio-oracle/biooracler.

- Chamberlain S, Schepers L, Fernández-Bejarano S (2023). mregions: Marine Regions Data from 'Marineregions.org'. https://docs.ropensci.org/mregions/, https://github.com/ropensci/mregions.

- Fernández Bejarano, S.J., De Pooter D (2023). eurobis: Download data from EurOBIS using the LifeWatch/EMODnet-Biology Web Feature Services. https://github.com/lifewatch/eurobis, https://lifewatch.github.io/eurobis/.

- Fernández Bejarano, S.J., Pohl L (2023). mregions2: Access Data from Marineregions.org: The Marine Regions Gazetteer and the Marine Regions Data Products. https://github.com/lifewatch/mregions2.

- Hernandez F, Dillen N, Fernández Bejarano, S.J. (2023). lwdataexplorer: Access to data from the LifeWatch Data Explorer. R package version 0.0.0.9000, https://lifewatch.github.io/lwdataexplorer/.

- Krystalli A, Fernández Bejarano, S.J., Salmon M (2023). EMODnetWFS: Access EMODnet Web Feature Service data through R. R package version 2.0.1.9001. Integrated data products created under the European Marine Observation Data Network (EMODnet) Biology project (EASME/EMFF/2017/1.3.1.2/02/SI2.789013), funded by the by the European Union under Regulation (EU) No 508/2014 of the European Parliament and of the Council of 15 May 2014 on the European Maritime and Fisheries Fund, https://github.com/EMODnet/EMODnetWFS.

- Bosch S, Fernández Bejarano S.J (2022). sdmpredictors: Species Distribution Modelling Predictor Datasets. R package version 0.2.14, http://lifewatch.github.io/sdmpredictors/.

Reviews

- Gilardi A, Lovelace R (2023). osmextract: Download and Import Open Street Map Data Extracts. https://docs.ropensci.org/osmextract/, https://github.com/ropensci/osmextract. Review available at: https://github.com/ropensci/software-review/issues/395
- Schneider LK, Anestis K, Mansour J, Anschütz AA, Gypens N, Hansen PJ, John U, Klemm K, Martin JL, Medic N, Not F, Stolte W (2020) A dataset on trophic modes of aquatic protists. Biodiversity Data Journal 8: e56648. https://doi.org/10.3897/BDJ.8.e56648