

PERSONAL INFORMATION

Jose Maria Costa Saura

📍 Valencia (Spain)

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WORK EXPERIENCE

01/11/2018–Present

Research consultant

Euro-Mediterranean Center for Climate Change (CMCC) (Italy)

Developing climate services indicators related with agriculture and forests, at seasonal and multi-annual time scales (MEDSCOPE project).

Developing and mapping risk analysis under climate change (Sardinia strategies for adapting to climate change).

01/10/2017–30/09/2018

Postdoc

Universita di Sassari-CMCC, Sassari (Italy)

Projecting agroclimatic indicators over dynamic phenological phases in orchards under current and climate change conditions (FERRERO Trading lux)

Implementing process-based models (DSSAT) at large scales (CMCC strategic project)

Calibrating crop-phenological models in the Pamirs (ECCAP project)

Mapping Fire Wheater Index at large scales

02/01/2017–31/08/2017

Postdoc

University Sassari, Sassari (Italy)

Geo-spatial analysis of forest functional traits in Europe (SIM4NEXUS project)

-Harmonising forest inventory data (Spain, Italy and France)

-Climate effects on dominant and diversity traits

-Correlation patterns of community traits

01/04/2016–30/09/2016

Erasmus Training

CREAF, Barcelona (Spain)

Climate effects on pine processionary damages in Catalonia (digitalization and geo-spatial analysis)

Trait modulation on species growth response to aridity (generalized mixed models)

01/06/2012–30/10/2012

Forestry technician

TRAGSA, Cordoba (Spain)

Monitoring forest fire equipment

01/10/2008–01/05/2011

Forestry technician

VAERSA, Valencia (Spain)

Monitoring wild rabbit population in Valencia

Project manager

01/04/2008–31/07/2008 **Forestry technician**
Tantum consultores, Valencia (Spain)
I+d projects for the furniture industry

01/10/2007–01/12/2007 **Forestry technician**
Indesfor Soria, Soria (Spain)
Project manager in hydroseeding campaign

EDUCATION AND TRAINING

01/11/2012–23/02/2016 **PhD in Agrometeorology and ecophysiology of agricultural and forest ecosystems (A trait based approach for forest ecology and management)**
Universita di Sassari, Sassari (Italy)

15/11/2014–31/01/2015 **PhD stage**
Swiss Federal Research Institute WSL (Svizzera)
Species Distribution Models

01/10/2008–01/03/2012 **Master degree in Biodiversity (Population dynamics of Oryctolagus cuniculus)**
Universidad de Valencia, Valencia (Spain)

01/09/1999–01/03/2007 **Bachelors/MSC degree in Forest engineering (Phytosociological study of vegetation communities in Magallanes, Patagonia, Chile)**
Universidad Politecnica de Valencia, Valencia (Spain)

01/09/2006–01/08/2007 **Promoe exchange program**
Universidad de Magallanes, Punta Arenas (Chile)

15/09/2003–15/07/2004 **Erasums program**
Universita degli studi di Padova (Italia)

PERSONAL SKILLS

Mother tongue(s) Spanish, Catalan/Valencian

Foreign language(s)

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	B2	C1	B2	B2	B2
Italian	B2	B2	B2	B2	B2

Levels: A1 and A2: Basic user - B1 and B2: Independent user - C1 and C2: Proficient user
Common European Framework of Reference for Languages

Organisational / managerial skills

Through several positions in Chile, Italy, Switzerland and Spain, I managed and experienced many commitments, interactions, communications and presentations with many diverse working groups. Also working with/in public and private companies allow me to understand user needs and results dissemination.

Through remotely working (2018-2019) I developed skills for working autonomously (goal-driven and problem-solving) but also to interact and organise remotely groups

Job-related skills I have a long experience using numerical tools to support decision making. I developed routines in R language to assess land crop suitability, fire risks, yield anomalies and ecosystem functioning. I armonised data from different sources (forest inventory data, phenological records, climate esamples, text files).

Digital skills

- High skills using R software
 - Downscaling and bias correction of climate data
 - Species distribution models (e.g. GAM, Random Forest, Maxent,...)
 - Structural equation modelling (SEM) to simultaneously analyse multiple-related paths
 - Generalized mixed models and Autoregressive models to account for pseudo-replication and spatial autocorrelation
 - Harmonising data bases
 - Using R as GIS (raster, rasterVis and rgdal packages)
 - Strings/text files manipulation
 - Lidar data analysis
 - Basics (ANOVA, CLUSTER, PCA, GLM, etc.)

- High expertise on several GIS software (ArcGis, QGIS, GVSIG, MiraMon)
 - Geospatial analysis
 - Batch process
 - Mapping

- Long experience manipulating NetCDF data with Climate Data Operators (CDO)

- Experience downloading data from websites (ECMWF, NASA, NOAA, etc) with python/R scripts

Driving licence B1

ADDITIONAL INFORMATION

Publications

Costa-Saura J.M., Trabucco A., Spano D., & Mereu S. 2019. **A height-wood-seed axis which is conserved across climatic regions explains tree dominance in European forest communities.** In: *Plant Ecology*, DOI: 10.1007/s11258-019-00928-x

Van de Peer T, Mereu S, Verheyen K, Costa Saura JM, Morillas L, Roales J, Locascio M, Spano D, Paquette A & Muys B. 2018. **Tree seedling vitality improves with functional diversity in a Mediterranean common garden experiment.** In: *Forest Ecology and Management* 409 614-633

Costa-Saura J.M., Trabucco A., Spano D., & Mereu S. 2017. **Environmental filtering drives community specific leaf area in Spanish forests and predicts relevant changes under future climatic conditions.** In: *Forest Ecology and Management* 405 1-8

Costa-Saura J.M. and Martínez-Vilalta J. 2017. **Els trets funcionals de les plantes, una eina per entendre i predir la seva distribució.** In: *UAB divulga* (ISSN 2014-6388).

Costa-Saura J.M., Martínez-Vilalta J., Trabucco A., Spano D., & Mereu S. 2016. **Specific leaf area and hydraulic traits explain niche segregation along an aridity gradient in Mediterranean woody species.** In: *Perspectives on plant ecology, systematics and evolution* 21 23-30

Costa-Saura J.M., García R. & Planelles N. 2011. **Geología de las Sierras del Cid y el Maigmo.** In: *Fauna Vertebrada del paisaje protegido Sierra del Maigmo y Sierra del Sit.* Ramon Garcia Pereira y

Asociación Amigos del Valle de l 'Avaiol Eds. (ISBN 978-84-615-5274-0).

In preparation:

Costa-Saura, J.M., Paquette A., Messier C., Pensavalle A., Idini T., Spano D. & Mereu S.

Functionally diverse forest stabilize productivity against inter-annual climatic variability.

Costa-Saura J.M., Trabucco A, Materia S, Bregaglio et al. **Agroclimatic indicators projected over dynamic phenological phases show the potential constrains for hazelnut plantations in South East Australia for both present and future climate conditions.**