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| **CV date** | 14/12/2021 |

**Part A. PERSONAL INFORMATION**

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| --- | --- | --- | --- |
| First name | Maria José | | |
| Family name | Sanz Sánchez |  |  |
| Gender (\*) | Woman | Birth date (dd/mm/yyyy) | 12/01/1963 |
| Social Security, Passport, ID number | 22546743G |  |  |
| e-mail | mj.sanz@bc3research.org | URL Web | |
| Open Researcher and Contributor ID (ORCID) (\*) | | 0000-0003-0471-3094 | |

*(\*) Mandatory*

**A.1. Current position**

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| --- | --- | --- | --- | --- |
| Position | Scientific Director | | | |
| Initial date | 01/01/2016 | | | |
| Institution | Asoc. BC3 – Basque Centre for Climate Change | | | |
| Department/Center |  | Asoc. BC3 – Basque Centre for Climate Change | | |
| Country | Spain | | Teleph. number | +34 944014690 |
| Key words | Climate change, carbon and nitrogen cycles, multilateral international processes, policies and measures, regulatory frameworks, air pollution | | | |

**A.2. Previous positions (research activity interuptions, art. 14.2.b))**

|  |  |
| --- | --- |
| Period | Position/Institution/Country/Interruption cause |
| 2012-2015 | Coordinator of the UNREDD Programme, Forestry Department, FAO |
| 2011-2012 | Scientific Director of the Research Institute on Climate Change Zaragoza (I2C2) |
| 2011-2011 | Senior Programme Officer, Team Leader, Sectoral Issues Unit, Methods, Data and Analysis Programme, United Nations Framework Convention on Climate Change (UNFCCC) Secretariat. Bonn, Germany |
| 2007-2011 | Senior Programme Officer, Adaptation, Technology and Science Programme, United Nations Framework Convention on Climate Change (UNFCCC) Secretariat. Bonn, Germany  10/2006 - 08/2007/ Director of the Atmospheric Chemistry Program (Laboratory EUPHORE) and the Air Pollution Effects Program, Fundación CEAM. Valencia, Spain |
| 1999-2007 | Director of the Air Pollution Effects Program, Foundation CEAM. Valencia, Spain |
| 2000-2001 | Associate Professor, Department of Botany, University of Valencia |
| 1992-1999 | Senior Researcher, CEAM. Including short periods as visiting Senior Researcher at the JRC-Ispra (EC) and the US Forest Service in Riverside (US) |
| 1996 | Associate Professor, Department of Botany, University of Valencia |
| 1991-1992 | Postdoctoral fellow, Arizona State University, Department of Botany and Microbiology, with a grant from the US Environmental Protection Agency |
| 1987-1991 | Doctoral Fellow, Department of Botany, University of Valencia. Visiting Doctoral Fellow at Arizona State University, Department of Botany and Microbiology twice within this period |

**A.3. Education**

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| --- | --- | --- |
| PhD, Licensed, Graduate | University/Country | Year |
| PhD in Biological Sciences | University of Valencia / Spain | 1991 |
| Degree in Biological Sciences. Botany specialty | University of Valencia / Spain | 1985 |

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

Spanish Ministry of Education and Science PhD. Grant (FPI) hosted at the University of Valencia for the design of experimental measuring systems for low CO2 exchange rates of Mediterranean and desert epiphytic liquens in response to air pollution. Post-Doctoral stay at the Arizona State University. In 1992, she moved to the Center for Environmental Studies of the Mediterranean (CEAM) in Valencia, continuing her research on impacts by both primary and secondary air pollutants in lower and higher plants while starting to interact with other disciplines that were very relevant to understand these impacts, such as atmospheric dynamics and atmospheric chemistry. The interdisciplinary research led by Dr. Millan Millan and herself in the 90s provided the scientific bases for the development of the joint control program of the emissions and impacts of the biggest Power Plant Facilities in Spain by ENDESA and the Regional Valencian Government after more than 10 yr of confrontation; produced scientific evidence on tropospheric ozone dynamics and its impacts reflected in the development of the air pollution European daughter directives recognizing the peculiarities of the Mediterranean region; reviewed of the Air Pollution criteria documents for EPA on tropospheric ozone; co-lead the working group on tropospheric ozone of the Pan European program ICP-Forest; and developed with the US Forest Service the first passive sampler for nitric acid.

By 1999 her program at CEAM was scale up to include climate change interactions with the carbon and nitrogen cycle promoting the systematic observation of the carbon and nitrogen cycles in Spain as part of the broader European emerging networks, in particular for terrestrial ecosystems, supported by national (CARBORED I and II, COBIFLUX, BALANGEIS, CONSOLIDER-GRACCIE) and European (MEDEFLU, MIND, CARBOMONT, RECAB, IMECC, CARBOEUROPE-IP, NITROEUROPE \_IP, ICOS) competitive funding. The observations allowed to characterize the impacts of the 2003 heat wave in the primary production of ecosystems across Europe (paper published in Nature, Ciais et al. 2005), evolved in the present ICOS European consortium. Working at CEAM she has coordinated/participated in up to 100 projects including: as a principal researcher in 14 national public tenders, and participating in eight; principal researcher in 13 European research projects, and participating in nine; Coordinator, PI, or participating in 46 projects or contracts with public and private institutions at national and international level. She is lead author of five IPCC documents (2003- 2019), including the IPCC Fourth Assessment Report, for which received the Peace Nobel Prize in 2007. Scientific advisor of the Spanish delegation to the UNFCCC (2000- 2007), she moved to the UNFCCC secretariat where lead the team on LULUCF, REDD+ and Agriculture as Senior Officer and Team Leader from COP13 to COP17. After a brief period as scientific director of the Climate Change Institute of Zaragoza, which objective was to articulate and promote networking in Climate Change science in Spain the interfacing with policy making. She moved to FAO as coordinator of the UNREDD Programme, a joint UNDP-UNEP-FAO programme to support capacity building and implementation of early REDD actions in 64 developing countries, until the end of 2015. From 2016, she is the Scientific Director of BC3. In October 2019 was awarded with the Distinction to the Scientific Merit by the Generalitat Valenciana.

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

**C.1. Publications**

1. Pérez-Domínguez, I., del Prado, A., Mittenzwei, K., Hristov, J., Frank, S., Tabeau, A., Witzke, P., Havlik, P., … & **Sanz, M.J.**. Short- and long-term warming effects of methane may affect the cost-effectiveness of mitigation policies and benefits of low-meat diets. Nat Food 2, 970–980 (2021). https://doi.org/10.1038/s43016-021-00385-8

2. Yuan Zhang, Ana Bastos,, Fabienne Maignan,, Daniel Goll, Olivier Boucher, Laurent Li1, Alessandro Cescatti, Nicolas Vuichard, Xiuzhi Chen, Christof Ammann, M. Altaf Arain, T. Andrew Black, Bogdan Chojnicki, Tomomichi Kato, Ivan Mammarella, Leonardo Montagnani, Olivier Roupsard1, **Maria J. Sanz**, Lukas Siebicke, Marek Urbaniak, Francesco Primo Vaccari, Georg Wohlfahrt, Will Woodgate, and Philippe Ciais. Modeling the impacts of diffuse light fraction on photosynthesis in ORCHIDEE (v5453) land surface model. Geosci. Model Dev., 13, 5401–5423. <https://doi.org/10.5194/gmd-13-5401-2020>

3. Sutton M.A., Flechard C.R., Van Oijen M., Cameron D.R., De Vries W., Ibrom A., Buchmann N., DIse N.B., Janssens I.A., Neirynck J., Montagnani L., Varlagin A., Loustau D., Legout A., Ziemblińska K., Aubinet M., Aurela M., Chojnicki B.H., Drewer J., Eugster W., Francez A.-J., Juszczak R., Kitzler B., Kutsch W.L., Lohila A., Longdoz B., Matteucci G., Moreaux V., Neftel A., Olejnik J., **Sanz M.J.**, Siemens J., Vesala T., Vincke C., Nemitz E., Zechmeister-Boltenstern S., Butterbach-Bahl K., Skiba U.M. 2020. Carbon-nitrogen interactions in European forests and semi-natural vegetation - Part 2: Untangling climatic, edaphic, management and nitrogen deposition effects on carbon sequestration potentials. Biogeosciences. 17. (6) 1621-1654.

4. García-Angulo D., Heres A.-M., Fernández-López M., Flores O., **Sanz M.J.**, Rey A., Valladares F., Curiel Yuste J. 2020. Holm oak decline and mortality exacerbates drought effects on soil biogeochemical cycling and soil microbial communities across a climatic gradient. SOIL BIOLOGY & BIOCHEMISTRY. 149. DOI (10.1016/j.soilbio.2020.107921).

5. Olofsson P., Arévalo P., Espejo A.B., Green C., Lindquist E., McRoberts R.E., **Sanz M.J.** 2020. Mitigating the effects of omission errors on area and area change estimates. REMOTE SENSING OF ENVIRONMENT. 236. DOI (10.1016/j.rse.2019.111492).

6. Ruiz I., Almagro M., García de Jalón S., Solà M.D.M., Sanz M.J. 2020. Assessment of sustainable land management practices in Mediterranean rural regions. JOURNAL OF ENVIRONMENTAL MANAGEMENT. 276. DOI (10.1016/j.jenvman.2020.111293)

7. Ruiz I., **Sanz M.J.** 2020. Effects of historical land-use change in the Mediterranean environment. SCIENCE OF THE TOTAL ENVIRONMENT. 732. DOI (10.1016/j.scitotenv.2020.139315).

8. Roe S., Streck C., Obersteiner M., Frank S., Griscom B., Drouet L., Fricko O., Gusti M., Harris N., Hasegawa T.,Hausfather Z., Havlík P., House J., Nabuurs G.-J., Popp A., **Sanz M.J.**, Sanderman J., Smith P., Stehfest E.,Lawrence D. 2019. Contribution of the land sector to a 1.5 °C world. Nature Climate Change. 9 (11) 817-828. DOI (10.1038/s41558-019-0591-9).

9. Herold, M. … **Sanz, M.J.** and Desy, V. 2019. The role and need for space-based forest biomass-related measurements in environmental management. Surveys in Geophysics, <https://doi.org/10.1007/s10712-019-09510-6>.

10. Grassi G., House J., Kurz W.A., Cescatti A., Houghton R.A., Peters G.P., **Sanz M.J.**, Viñas R.A., Alkama R., Arneth A., Bondeau A., Dentener F., Fader M., Federici S., Friedlingstein P., Jain A.K., Kato E., Koven C.D., Lee D., Nabel J.E.M.S., Nassikas A.A.,. 2018. Reconciling global-model estimates and country reporting of anthropogenic forest CO2 sinks. Nature Climate Change. 8. (10) 914-920. DOI (10.1038/s41558-018-0283-x).

**C.3. Research projects**

1. **ATLANTIS**. “Development of soil-smart forestry practices and of early vulnerability diagnosis tools to improve soil conservation and long-term stability of Iberian Atlantic forests” **PID2020-113244GB-C21** (01/09/2021 – 31/08/2024) Ministerio de Ciencia e Innovación. R+D+I research projects – “Research challenges” modality, call 2020. BC3 budget: 162.140,00 €. Role of M.J. Sanz.: co-PI.

2. **NDC ASPECTS**. “Assesing sectorial perspectives on climate transitions to support the global stockage and subsequent NDCS” (01/05/2021 – 30/04/2024) Horizon 2020 Call: H2020-LC-CLA-2018-2019-2020 G.A. num: 101003866 European Commission. BC3 budget: 442.156,25€. Role of M.J. Sanz.: PI of BC3 research team.

3. **ECF\_ASSEMBLIES**. “Preparing for a national citizen ´s assembly in Spain” (01/01/2021 - 30/11/2021) Ref: ECF201261308 European Climate Foundation. BC3 budget: 49.980,72€ Role of M.J. Sanz.: PI.

4. **IMAGINE**. “Modelling of greenhouse-gas emissions relevant to the Paris Agreement (informing successive NDCS in light of the global stocktake)” (01/01/2021 – 31/12/2023) European Commission. EuropeAid/140784/DH/SER/MULTI call. BC3 budget: 52.000,00€. Role of M.J. Sanz.: BC3 PI.

5. **RESH2O**. “Restauración de servicios ambientales y ciclo del agua en un contexto de adaptación al cambio climático en cuencas mediterráneas”. (01/01/2021 – 30/06/2022) Fundación Biodiversidad. Convocatoria de ayudas para la evaluación de la biodiversidad terrestre española 2020. BC3 budget: 50.400,24 €. Role of M.J. Sanz: PI.

6**. KONTRAE**. “Emergencia y diseminación de resistencias a los antibióticos: Vínculos entre salud humana, ganadería, alimentación y medio ambiente” (01/03/2020 – 31/12/2021) ELKARTEK: programa de ayudas para el apoyo a la realización de Investigación Colaborativa, llevada a cabo por las Entidades de Investigación, Desarrollo e Innovación integradas en la Red Vasca de Ciencia, Tecnología e Innovación de Euskadi funded by the Basque Government. BC3 member of the consortium; BC3 budget: 74.744,27 €. Role of M.J. Sanz: PI of BC3 research team.

7. **URBANK2050**. “Systemic implementation of the cc action in the Basque Country for increased urban resilience as full territory enabler”. (01/09/2019 – 31/12/2025) LIFE integrated project. Call 2018. BC3 budget: 494.929,00€. BC3 member of the consortium. Role of M.J. Sanz: PI of BC3 research team.

8. **Unidad de Excelencia «María de Maeztu»** (01/07/2018 – 30/06/2022) Ministerio de Ciencia e Innovación. Programa Estatal de Fomento de la Investigación Científica y Técnica de Excelencia Ref: **MDM-2017-0714**. BC3 budget: 2.000.000,00€. Role of M.J. Sanz: **Scientific Director**.

9. **OASIS**. “Olas de Calor e Impactos sobre la Salud humana”. Proyecto Klimatec, IHOBE, 2017-18. 80.000 €. Role of M.J. Sanz: Coordinator.

10. **ESPERA**. “Social equity in payments for ecosystem services (PES): a socio-ecological perspective”. CSO2015-71243-R (01/01/2016-31/12/2018) Ministerio de Ciencia e Innovación. State program of Research, Development and innovation oriented societal challenges 2015 call. Budget: 18.150€ PI: Unai Pascual and co-PI: M.J. Sanz.

**C.4. Contracts, technological or transfer merits**

1. Contract with Food and Agriculture Organization of the United Nations **FAO**, to supporting the development of modules and other materials for the global forest observations initiative's (GFOI) methods and guidance document (MGD). 2021-2022. 40.000 USD PI MJ Sanz.
2. Contract with Food and Agriculture Organization of the United Nations **FAO**, for “Using statistics on agricultural commodities to assess land footprint embedded in trade (FR)” 20.264,49 USD. 2021-2022. PI MJ Sanz.
3. Contract with Food and Agriculture Organization of the United Nations **FAO**, for “Using statistics on agricultural commodities to assess land footprint embedded in trade\_ONUREDD” 2021. 35.631 USD. PI MJ Sanz.
4. Contract with **Deutche Gesellschaft für International Zusammenarbeit** (GIZ) GMBH, to “Assesing the contribution of urban action to climate mitigation and adaptation and its link to Mexico´s NDC”. 2021-2022. 7.888,43€ PI MJ Sanz.
5. Contract with **NDC Training Partnership**: “Training Course on the Enhanced Transparency Framework and NDC Linkages for the NDC Partnership Support Unit”. 2021-2022. 39.996,69 USD PI MJ Sanz.
6. Contract with **Green Climate Fund** to develop consultancy services to “Support the development of the continuation analysis and proposal of GCF’s REDD-Plus Results-Based Payments Phase 2”, 2021-2022. 50.000 USD. PI MJ Sanz.
7. Contract with **Green Climate Fund** to develop consultancy services to “Support for the development of the continuation analysis and proposal of GCF’s REDD-plus results-based payments”, 2020-2021. 119.880 USD. PI MJ Sanz.
8. Contract with **CIFOR** to contribute to the project “Defining transformational change in the land use sector”. 8.000 USD. PI MJ Sanz.
9. Contract with the **World Bank** as member of the Advisory Committee for the evaluation of the ISLM Fund, 2018. 22.000 USD. PI MJ Sanz.
10. Contract with the **World Bank** as facilitator of the Koronivia Agriculture Workshop of UNFCCC negotiators in Rome, October 2018. 7.000 USD. PI MJ Sanz.
11. Contract with **Donna Lee Consulting** LLC to contribute to the project on The Relationship Between GHG Atmospheric Flux and Country Reporting for Forests, Phase II with the Climate and Land Use Alliance. 2017. 16.000 USD
12. Contract with the **UNFCCD secretariat** to the elaboration of a report on the potential of sustainable land management practices to create synergies between addressing DLDD and climate change mitigation and adaptation. 2016-2017. 49.280 USD. PI MJ Sanz.
13. Contract with **FAO** to support scientific and methodological discussions on National Forest Monitoring, Reference Levels and Investment Frameworks for REDD+. 2016. 95.550 USD. PI MJ Sanz.
14. Contract with the **Green Climate Fund** to support the development of a Results Base Payment pilot for REDD+. 2016-17. 54.000 USD. PI MJ Sanz.
15. Contracts with the **UNFCCC secretariat** to support the technical assessment process of the Forest Reference Levels for REDD+. 2016, 2017, 2018. PI MJ Sanz.