Prof. María José Sanz-Sánchez

SPAIN - Candidate IPCC Task Force on Inventories Bureau

With 35 years of air pollution and climate science experience and expertise, Professor Sanz is dedicated to ensure climate change challenge are addressed and informed the best knowledge available. Her current role as member of the IPCC Emission Factors Data Base follows 20 years of contributions to the IPCC. She contributed to all the IPCC Task Force on Inventory methodological reports since 2003. As Scientific Director of the Basque Centre for Climate Change Professor Sanz´s research spans multiple disciplines and focuses on the solutions to climate change, with special focus on the Agriculture, Forest and Other Land (AFOLU) sector and the improvement of the GHG estimations and its contribution to climate change mitigation. She has an extensive experience in the science-policy interface, from local working with subnational policy makers to working alongside scientists and policymakers from around the world. She has a proven track record of forging consensus from different positions in the context of UN climate negotiations.

IPCC Expertise

Lead Author of *Chapter 9, Forest* (Working Group III, Fourth Assessment Cycle Report).

Lead Author of the *2003 Good Practice Guidelines on Land Use, Land Use Change and Forestry (2003 GPG-LULUCF)*

Lead Author of the *2006 IPCC Guidelines for National Greenhouse Gas Inventories (2006 GL).*

Contributing Author of the *2013 Revised Supplementary Methods and Good Practice Guidance Arising from the Kyoto Protocol*.

Review Editor of the *2013 Supplement to the 2006 IPCC Guidelines for National Greenhouse Gas Inventories: Wetlands.*

Coordinating Lead Author of the *Volume on AFOLU of the 2019 Refinement to the 2006 IPCC Guidelines for National Greenhouse Gas Inventories*.

Member of the *IPCC Emission Factor Data Base Board* (2006-2007, 2016-present)

Participated in several IPCC Expert meetings since 2003.

Professional experience

2016 -	Scientific Director, Basque Centre for Climate Change (BC3) and Ikerbasque Professor, Leioa, Spain.
2012-2015	Coordinator of the UN REDD Program, FOM Division, Forestry Departament, UN FAO.
2011 – 2012	Scientific Director of the Climate Change Research Institute of Zaragoza (I2C2), Zaragoza, Spain
2007- 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.
	Senior Programme Officer, Adaptation, Technology and Science Programme, United Nations Framework Convention on Climate Change (UNFCCC) Secretariat, Bonn, Germany.
2006 - 2007	Head of the Atmospheric Chemistry Department at the Center of Mediterranean Environmental Studies (CEAM) (EUPHORE Lab), Valencia Spain.
1999 - 2007	Head of the Air Pollution Effects Department at the Center of Mediterranean Environmental Studies (CEAM), Valencia Spain.
2001 and 2000	Profesor Asociado, Departamento de Botánica, Universitat de Valencia.
1992 - 1999	Senior Researcher at the Center of Mediterranean Environmental Studies (CEAM), Valencia Spain.
1996	Associated Faculty, Botany Departmanent, Universitat de Valencia, Valencia, Spain.
1991 - 1992	Postdoctoral fellow, Arizona State University, Phoenix, US.

Other relevant activities

Co-Chair of the Transdisciplinary Advisory Board of the JPI Climate (2019 – present).

Chair of the Advisory Group of the Methods and Guidance component del Global Forest Observation Initiative (GFOI) (2016-present).

Member of the Steering Committee of the Forest Resources Assessment (FRA), Food and Agriculture Organization (FAO) (2009 – 2011).

Member of the Board and Vice-Chair the Afforestation/Reforestation Methodological Panel of the Clean Development Mechanism of the UNFCCC (http://cdm.unfccc.int/Panels/ar. 2007

Co-Chair of the Air Quality Working Group, Panel on Deposition (EU/ICP Forest). EU/UN, ICP-FOREST. Convention on Long-Range Transboundary Air Pollution (2002 – 2007).

Reviewer of GHG inventories LULUCF sector and REDD+ Forest Reference Levels. UNFCCC Roster. (2002 – present).

Selected publications

Journal articles

2023. Harmonising the land-use flux estimates of global models and national inventories for 2000–2020, Earth Syst. Sci. Data, 15, 1093–1114, https://doi.org/10.5194/essd-15-1093-2023.

2021. Short- and long-term warming effects of methane may affect the cost-effectiveness of mitigation policies and benefits of low-meat diets. Nature Food. 2 (12) 970-980. DOI (10.1038/s43016-021-00385-8).

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).

2020. Effects of historical land-use change in the Mediterranean environment. Science of The Total Environment. 732. DOI (10.1016/j.scitotenv.2020.139315).

2019. Modeling trade-offs across carbon sequestration, biodiversity conservation, and equity in the distribution of global REDD+ funds. PNAS November 5, 2019 116 (45) 22645-22650; first published October 21, 2019 https://doi.org/10.1073/pnas.1908683116.

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).

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.

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).

2017. Strategies for greenhouse gas emissions mitigation in Mediterranean agriculture: A review. Agriculture, Ecosystems and Environment 238:5-24. 2017. doi:10.1016/j.agee.2016.09.038

2015. The Contribution of Agriculture, Forestry and other Land Use activities to Global Warming, 1990-2012: Not as high as in the past. Global Change Biology, 6: 2655-2660. DOI: 10.1111/gcb.12865

2013. REDD+ related forest monitoring remains a key issue: a report following the recent UN climate conference in Doha. *Carbon Management* (2013) 4(2).

2010. The net biome production of full crop rotations in Europe. *Agriculture, Ecosystems and Environment* 139; 336–345. doi:10.1016/j.agee.2010.07.016

2010. Use of an inverse dispersion technique for estimating ammonia emission from surface-applied slurry, *Atmospheric Environment*, Volume 44, Issue 7: 999-1002.

2009. European scale application of atmospheric reactive nitrogen measurements in a low-cost approach to infer dry deposition fluxes**.** *Agriculture, Ecosystems and Environment*, 133: 183-195.

2009. Soil CO_2 efflux and extractable organic carbon fractions under simulated precipitation events in a Mediterranean Dehesa. *Soil Biology & Biochemistry* 41 (9): 1915 – 1922 doi:10.1016/j.soilbio.2009.06.015

2008. Impacts of forest ecosystem management on greenhouse gas budgets**.** *Forest Ecology and Management*, 256: 191-193.

2007. CO_2 balance of boreal, temperate, and tropical forests derived from a global database**.** *Global Change Biology*, 13: 1-29.

2007. Including land use, land-use change, and forestry in future climate change, agreements: thinking outside the box**.** *Environmental Science & Policy*, 10: 283-294.

2007. Factoring out natural and indirect human effects on terrestrial carbon sources and sinks**.** *Environmental Science & Policy*, 10: 370-384.

2005. Europe-wide reduction in primary productivity caused by the heat and drought in 2003**.** *Nature*, 437: 529-533.

2005. Climatic feedbacks and desertification: The Mediterranean Model**.** *Journal of Climate*, 18: 684-701.

Other

2020. Integration of remote-sensing and ground-based observations for estimation of emissions and removals of greenhouse gases in forests. Methods and Guidance from the Global Forest Observations Initiative. Edition 3.0. https://www.reddcompass.org/mgd/resources/GFOI-MGD-3.1-en.pdf

2017 Sustainable Land Management contribution to successful land-based climate change adaptation and mitigation. A Report of the Science-Policy Interface. Bonn, Germany. United Nations Convention to Combat Desertification (UNCCD). 178. ISBN 978-92-95110-96-0

2017. GHG Fluxes from Forests: An assessment of national GHG estimates and independent research in the context of the Paris Agreement. Climate and Land Use Alliance.

Education

University of Valencia, Spain. PhD in Botany and Plant Ecophysiology. 1991
University of Valencia, Spain. Master. Ecology, 1986
University of Valencia, Spain. Degree in Botany. 1981

Awards

Extraordinary National Environmental Price 2022. (As part of the Coordinating Panel of the 1st Spanish Cititzen´s Assembly on Climate Change).

Research Merit Distinction of the Valencia Region Government, 2019 (October Price).