

# Curriculum Vitae

## Donatella Spano

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**POSITION** Full Professor, Biometeorologist at the University of Sassari (Italy)

**Scientific Coordinator of the PhD program** in Agrometeorology and Ecophysiology of Agricultural and Forestry Ecosystems at University of Sassari.

**STATEMENT OF RESEARCH** Much of my research relates to studies on the interaction between the lower atmosphere and vegetative surfaces with emphasis on methods to estimate fluxes between vegetation and the atmosphere. Extensive work on the development and refinement of the surface renewal method for estimating sensible and latent heat flux density with the main purpose to use it for estimating evapotranspiration. I have worked on evaluating the surface renewal method for direct measurement of latent heat flux and CO<sub>2</sub> exchange between a forest surface and the atmosphere. In the past few years, I have been closely involved in research to model plant phenological development and relate the models to possible climate change. Indeed, my most recent research effort is directed towards the development of risk assessment frameworks, focusing on impacts of climate change on crops, forest, and fires. My studies and research can be grouped into five main research lines:

- **Modelling of exchange processes between terrestrial ecosystems and the atmosphere**

Modelling of turbulent fluxes in agricultural, forestry, and urban systems with particular regard to the analysis and application of climatological, meteorological and micrometeorological models in order to estimate the evapotranspiration, energy balance and carbon fluxes at local and regional scales.

- **Analysis and management of risk connected to fire, drought and climate change**

Analysis of the relationships between weather conditions and wildland fires. Modelling of fire spread, behaviour, danger and emissions. Calibration and validation of different fire simulators and fire danger models in Mediterranean areas. Assessment of the impacts of climate and land use changes on fire regime, spread, behaviour, danger, at the Euro-Mediterranean level.

- **Ecophysiology of tree species**

Evaluation of eco-physiological parameters in tree species. Functionality of Mediterranean ecosystems. Stress responses and stress interactions in Mediterranean species

- **Phenology**

Development of models for predicting the onset of phenological phases. Relationship between environmental parameters and phenology.

- **Adaptation strategies for the agriculture and water resources**

Analysis of climate change impacts on agricultural sector and adaptation and mitigation strategies evaluation. Potential synergies and economic evaluation. Models and tools to evaluate the climate change impacts on agriculture. Focus on crop simulation models, land evaluation methodologies and downscaling techniques.

I am actively involved in European and international research activities on the assessment of impact of climate change and modelling in the field of agriculture and forestry.

## WORK EXPERIENCE

2001–present	Full Professor, University of Sassari
1998–2000	Associate Professor, University of Basilicata, Dipartimento di Produzione Vegetale, Potenza (Italy)
1993–1994	Visiting Scientist, University of California, Davis (USA)
1990–1998	Assistant Professor, University of Sassari, Istituto di Colture Arboree, Sassari (Italy)
1989–1990	Research Scientist, National Research Council - Institute for Monitoring Agroecosystem, Sassari (Italy)
1986–1989	Researcher, Consorzio Ricerche Sardegna - Department of Agrometeorology, Sassari (Italy)

## EDUCATION AND TRAINING

1983	Baccalaureate and MSc Degree in Agricultural Science, University of Sassari, Sassari (Italy)
1986–1989	Three-year Post Doctoral program specializing in Agrometeorology and Micrometeorology
1985	Plant Water Relationship and Photosynthesis Measurement Course, Scuola Superiore di Studi Universitari e di Perfezionamento Sant'Anna, Pisa (Italy)
1985	Plant Atmosphere Relationships: Theory and Measurements of Mass and Energy Exchanges Course Istituto Biologico Selvicolturale, University of Tuscia, Viterbo (Italy)
1995	Advanced Short Course on Biometeorology and Micrometeorology, University of Sassari, Alghero (Italy)
1999	Advanced Course MEDTRAIN, Mediterranean Ecosystems under Threat: Monitoring and Protecting Strategies European Commission, General Directorate XII
2001	Advanced Short Course on Agricultural, Forest and Micro Meteorology, Bologna (Italy)

### **SERVICES, FELLOWSHIPS, AND ACADEMIC COMMITMENTS**

2014-present	Senior Member Strategic Committee CMCC Foundation Euro-Mediterranean Center on Climate Change
2020-	Member of Administration Board and Executive Committee of Foundation Euro-Mediterranean Center on Climate Change
March 2014- March 2019	Regional Minister for the Protection of the Environment – Sardinia, Italy
2019- present	Member of The Innovative Agriculture Center at University of Sassari
March 2016 – March 2019	Chair of the Environment and Energy Commission of the Italian Conference or Region and Autonomous Provinces
2013-2014	President of the Italian Society for Climate Sciences (SISC)
2011-2014	Vice Rector for Research and Technology Transfer, University of Sassari
2012-present	Membro della International Association for Urban Climate (IAUC)
2007-2014	Deputy Director of the Impacts on Agriculture, Forest, and Natural Ecosystems (IAFENT) Division at the Euro-Mediterranean Center on Climate Change (CMCC)
2013-2014	Member of the CRUI Work Group on the Internal Evaluation of Universities
2006–present	Scientific Coordinator of the Agrometeorology and Ecophysiology laboratory University of Sassari
December 2011- December 2013	Expert on Agriculture and Forestry for the European Topic Centre on Climate Change impacts, vulnerability and Adaptation (ETC/CCA)
2010-2013	Member of the Project Coordination Committee of the EU FUME project
2009-2012	Member of the Scientific steering Committee of the PO Marittimo Proterina-C project
2012	Contributing Author IPCC AR5 WGII Chapter 23
2012	Member of the Scientific Committee of the ItaliaCamp- An idea for the Country
2008-2011	Member of the Scientific steering Committee of the EU Bridge Project
2003-2005	Member of the National Civil Protection - Forecast and Prevention Risk Commission – Wildfire Session

### **MAIN CONFERENCE (chair or invited speaker) AND TRAINING COURSE ORGANIZATION (from 2009)**

- Invited speaker Inovagri Meeting Virtual 2020. Thematic Session on the "Use of Bio-climatic Indices to Assess Impacts of Drought, Aridity and Climate Change in Semi-arid Agricultural Production Areas" December 10, 2020
- Invited speaker EU Delegation 27 November 2020, Green Forum Mexico, Climate action and biodiversity conservation as an essential part of the post-Covid-19 crisis
- Invited speaker 25.11.2020 Lega ambiente Il Clima è già cambiato. Impatti, rischi e politiche per l'adattamento delle città e territori
- Invited speaker 24.11.2020 Festival della Scienza National Geographic. Il rischio dei cambiamenti climatici: conoscere, comunicare e decidere
- Invited speaker 14.10.2020 Legambiente Diretta social Un'analisi per andare oltre le emergenze. Dissesto idrogeologico
- Presentation of the CMCC report "Il rischio in Italia" supported by European Climate Foundation, 16 settembre 2020

- Invited speaker BCFN 10TH INTERNATIONAL FORUM ON FOOD AND NUTRITION Fostering Business and Innovation while preserving Mother Earth, DECEMBER 3, 2019 – THE MALL, MILAN
- Invited speaker Israel- Italy Scientific Workshop on Mediterranean Climate: Changes and Challenges. November 5th, 2019, Tel-Aviv, Israel. Organized by Italian Ministry of Foreign Affairs, the Embassy of Italy, the Italy-Israel Chamber of Commerce and Industry in Israel and the Israeli Ministry of Science and Technology (MOST)
- Invited speaker Workshop Accademia delle Scienze Forestali “Il bosco: bene indispensabile per un presente vivibile e un futuro possibile” with a presentation on ‘Selvicoltura e incendi: selvicoltura preventiva e ricostituzione’ Firenze, 24-25.09.2019.
- Invited speaker Scuola di Ecologia ed Economia, Workshop Sistemi di gestione delle emissioni globali, servizi ecosistemici e aree protette, with a presentation on “Risultati e prospettive dal rapporto IPCC su cambiamenti climatici e Land” Parco Nazionale dell’Asinara, 23 Settembre 2019.
- Invited speaker at Webinar CMCC - Il clima, il suolo, gli ecosistemi terrestri - contenuti, numeri e prospettive dell’ultimo rapporto speciale IPCC, with a presentation on “Cambiamenti climatici e sistema alimentare”, 10.09.2019
- Invited speaker at Webinar CMCC “Forecast Evapotranspiration: Fundamental Information for Agricultural Irrigation Management” with a presentation titled “Setting the Scene”, 23.07.2019.
- Invited speaker at Sotacarbo Seminars” Il clima della Terra in quattro tappe” with a presentation on “Gli impatti dei cambiamenti climatici sulla Sardegna”, Carbonia, 23.05.2019.
- Invited speaker at Webinar CMCC “Forests: solutions and perspectives to fight climate change”, with a presentation on “Managing forest fire to cope with climate change: adaptation and mitigation strategies”, 21.03.2019.
- Invited speaker “Visions, approaches and experiences in the forest circular bioeconomy”, 2018 Bioregions Forum, 13 November 2018, Barcelona
- Member Scientific Committee and Chair of session ‘Fire and Silviculture’, IV National Congress of Silviculture, 5-9 November 2018, Turin, Italy.
- Invited speaker “EU Islands for a sustainable development: main experiences and actions on the ground”, Green Islands for sustainable cohesion policy -The green economy as a development opportunity for EU islands- 10 October 2018, Bruxelles, Belgium.
- Invited speaker “Interconnecting Sustainable Development Goals to Action”, European Forest Institute annual Conference, 27 Sept 2018, Alghero, Italy.
- Invited speaker ‘Task Force on Climate’, Conference of Peripheral Maritime Regions (CPMR), 23 May 2018, Bruxelles, Belgium.
- Invited speaker “Forests in a changing climate: needs and challenges for adaptation”, EUROPEAN STATE FOREST CONFERENCE 2018 - Societal and environmental challenges of Mediterranean forests per EUSTAFOR, ANARF, FORESTAS. 16 May 2018, Tempio Pausania, Italy.
- Invited speaker “Establishing a Multi-Level Governance dynamic to achieve the objectives of the Covenant”, European Week Brussels. Covenant of Mayors Community: Coordinated local action as a blueprint for national policy frameworks per European commission – European committee of the Regions. 10 October 2017, Bruxelles, Belgium.
- Invited speaker “Climate action in support of the Paris Agreement” per SISC – Società Italiana per le Scienze del Clima. 26-27 October 2017, Bologna, Italy.
- Invited speaker “The role of the Regional Covenants of Mayors in facilitating decentralised cooperation to promote sustainable energy access and climate action. Insights from EU Neighbourhood South and Sub-Saharan Africa”, 5th Assises of Decentralized Cooperation for Development – Regions and Cities for Development per European Commission – European Committee of the Regions. 10-11 July 2017, Bruxelles, Belgium.
- Invited speaker “Le città alla sfida del clima. Gli impatti dei cambiamenti climatici e le politiche di adattamento” per Legambiente. 31 May 2017, Rome, Italy.
- Invited speaker “La strategia nazionale per lo sviluppo sostenibile. Qualità dell’ambiente, energia, trasporti, tutela del territorio e resilienza: una strategia integrata per la sostenibilità” and “Una rete per l’ambiente: il SNPA per lo sviluppo sostenibile del Paese” al Forum PA, 23-25 May 2017, Rome, Italy.
- Chair of the IV Annual Conference – Italian Society for Climate Sciences (SISC) – Cagliari, 19 – 20 October 2016.

- Invited speaker “An example of multi-level governance at national and regional level” and “Workshop Regions at the heart of adaptation strategies”, Climate Actors World Summit di Climate Chance Association. 27-28 Sept 2016, Nantes, Francia.
- Chair of the International Conference Rome 2015- Science Symposium on Climate – Rome, 19 – 20 November 2015.
- Convenor and Member of the Scientific Committee of the II International Conference on Fire Behaviour and Risk – Alghero 26 – 29 May 2015.
- Co-Chair of the First Annual Conference - – Italian Society for Climate Sciences (SISC) – Lecce, 23-24 September 2013.
- Co-Chair of the Scientific and Organizing Committee of the “Evapotranspiration Measurement and Modeling” session at the American Geophysical Union (AGU) Fall Meeting 2012, San Francisco, 3-7 Dec 2012.
- Scientific Coordinator of the International Fall School Modelling Climate Change Impacts on Water and Crops at Different Scales, Alghero (Italy) November 4-9, 2012.
- Member of the Scientific Committee of the Forest Fires In The Perspective Of Global Change Advanced Course, Zaragoza (Spain) February 13-17, 2012.
- Member of the Scientific and Organizing Committee of the International Conference on Forest Fire Behaviour and Risk, Alghero (Italy) October 4-6, 2011.
- Chair of the Scientific Committee of the Fire Behaviour Analyst courses (I-IV edition), organised by the University of Sassari for the Sardinian Forestry Corps 2009-2012.
- Member of the Scientific and Organizing Committee of the 12th National Conference AIAM on Climate and Agriculture: adaptation and mitigation strategies, Sassari (Italy) June 15-17, 2009.
- Coordinator of the Summer School on Climate Change and Agriculture, Alghero (Italy) September 14-18, 2009.

#### **ACADEMIC AND PROFESSIONAL SOCIETIES**

2016 - present	Member of the Italian Academy of Forest Sciences
2013-2014	President of the Italian Society for Climate Sciences (SISC)
2013-present	Founding Member of the Italian Society for Climate Sciences (SISC)
2008- present	Member of Accademia dei Georgofili
2004-2006	Field Editor for Agricultural and Forest Meteorology of International Journal of Biometeorology
2004-2019	Member of the Editorial Board for the Agricultural and Forest Meteorology Journal
2000-2019	Member of the Editorial Board of the Italian Journal of Agrometeorology Peer reviewer of Agricultural and Forest Meteorology, International Journal of Biometeorology, Tree Physiology, Journal of Geophysical Research, Acta Horticulturae, Italian Journal of Agronomy Member of the American Meteorological Society (AMS), American Geophysical Union (AGU), International Society for Horticultural Science (ISHS), Italian Society for Horticultural Science (SOI), and Italian Society for Agrometeorology (AIAM), Italian Society for Climate Sciences (SISC).

#### **AWARDS AND HONORS**

2017	EWRI 2017 Best Paper Award in JOURNAL OF IRRIGATION AND DRAINAGE ENGINEERING: Guerra E., Ventura F., Spano D., Snyder R. (2014). Correcting Midseason Crop Coefficients for Climate. ISSN: 1943-4774, doi: 10.1061/(ASCE)IR.1943-4774.0000839, 0401407 1.
2014	Best paper award at II Conferenza Annual SISC, pag. 1005-1020. Sept. 2014, Venice (Italy) (title: Fires in the perspective of future changes: the contribute of CMCC to FUME Project, authors Bacciu V., Arca B., Bosello F., Michetti M., Santini M., Salis M., Scoccimarro E., Spano D..)
2013	Best paper award at I Conferenza Annual SISC, 23-24 Sept. 2013, Lecce (Italy) (title: Historical Trends and Future Predictions of Fire Emission Estimation in Italy, authors Bacciu V., Salis M., Spano D.).
2012	University of Sassari award for scientific productivity.
2012	Scientific Committee Member - ItalyCamp- An idea for the Country.
2001	Co-recipient of the “Best Practice Paper” in the Journal of Irrigation and Drainage Engineering – American Society of Civil Engineers for the paper: Ventura, F., Faber, B.A., Bali, K., Snyder, R.L., Spano, D., Duce, P., and Schulbach, K.F. 2001. Model for estimating evaporation and transpiration from row crops. J. of Irrigation and Drain. Eng. 127(6):339-345.

## **NATIONAL AND INTERNATIONAL PROJECTS (ONLY FROM 2006)**

- Ministero dell'Ambiente, MATTm 2020-2021, SUSTAINadapt- Strumenti e approcci per declinare l'integrazione fra sostenibilità e adattamento. Nell'ambito del bando nazionale per la promozione del progetto di ricerca a supporto dell'attuazione della Strategia Nazionale per lo Sviluppo Sostenibile.
- INTERREG V-A Italia-Francia Marittimo 2014-2020, Asse Prioritario 2, OT 5, OS 5A1, PI 5°, Lotto 1, ID Progetto TP249. MED-Star. Strategie e misure per la mitigazione del rischio di incendio nell'area Mediterranea (2019-2022).
- INTERREG V-A Italia-Francia Marittimo 2014-2020, Asse Prioritario 2, OT 5, OS 5A1, PI 5°, Lotto 1, ID Progetto 294. INTERMED. Interventions pour gérer et réduire le risque d'incendie à l'interface habitat-espace naturel (2019-2022).
- EU LIFE2015 MASTER-ADAPT: MAInSTreaming Experiences at Regional and local level for adaptation to climate change (2016-2019).
- EU H2020 SIM4NEXUS - Sustainable Integrated Management FOR the NEXUS of water-land-food-energy-climate for a resource-efficient Europe (2016-2020).
- MIUR – PRIN (CARBOTREES) Climate change mitigation strategies in tree crops and forestry in Italy (2013-2015). Coordinator: University of Tuscia (Italy)
- Orientgate EU & South East Europe Transnational Cooperation Programme (2012-2014) – Coordination of a pilot study aiming at assessment of climate change adaptation in a new water regime in the Puglia region.
- ACLIMAS European Commission SWIM Programme (2011 -2014) – Identification of sustainable farming strategies for wheat and faba beans in Egypt. Development of guidelines for farming practice under climate change conditions.
- ETC European Environment Agency project (2012 -2013) – Collection, elaboration, review and updating of thematic contents of Agriculture and Forestry for the European Climate Adaptation Platform – Climate ADAPT.
- Regional Project L.R. 7 August 2007, n. 7, Development, functional assessment and setup of an integrated system for the quantification of net CO2 exchanges and for the evaluation of mitigation strategies at the urban and territorial levels. 2012-2013
- Regional Project L.R. 7 August 2007, n. 7 - EXTREME - Setup of methodologies and support systems for the evaluation of fire risk in extreme meteorological conditions – Coordinator CNR IBIMET Sassari. 2012 - 2014.
- World Bank Tender – Nigeria Climate risk assessment in agriculture and coastal development. Funded by World Bank. Coordinator: Euro Mediterranean Centre on Climate Change (CMCC). 2011
- EU 7FP CLIMAFRICA - Climate change predictions in Sub-Saharan Africa: impacts and adaptations. Coordinator: Euro Mediterranean Centre on Climate Change (CMCC). 2010-2014.
- EU 7FP WASSERMED - Water Availability and Security in Southern Europe and the Mediterranean. Coordinator: Euro Mediterranean Centre on Climate Change (CMCC). 2010 - 2013.
- EU 7FP FUME - Forest fires under climate, social and economic changes in Europe, the Mediterranean and other fire-affected areas of the world. Coordinator Universidad de Castilla - La Mancha. 2010 - 2013.
- Regional Project L.R. 7 August 2007, n. 7 "Promotion of scientific research and technological innovation in Sardinia." - Methodologies and indicators for fire risk assessment in the areas of urban-rural interface in the Mediterranean environment – Co-ordinator CNR IBIMET Sassari. 2010 - 2011.
- EU 7FP Increase - An Integrated Network on Climate Change Research Activities on Shrubland Ecosystems. Coordinatore Università di Copenaghen. 2009 - 2012.
- Cross-border project Italy/France Maritime Proterina-C - Coordinator Regione Liguria. 2009 - 2012.
- EU Bridge - Sustainable urban planning decision support system accounting for urban metabolism. Coordinator: Forth, Heraklion, Crete, Greece. 2009 - 2011.
- MIUR – PRIN - Methods for accounting the absorption of CO2 in Mediterranean ecosystems . Manager 2007 - 2008.
- MIUR – FISR CARBOITALY - A national network for measuring italian forest and agricultural sinks and the development of a forecasting system for the absorption of greenhouse gases. 2006 - 2008.
- Ministry of Economy and Finance, MIUR, of the Territory Protection Environment, MIPAF – Strategic Programme: Euro Mediterranean Centre on Climate Change (CMCC). Research Line 4 Evaluation and diagnosis of the Climate Change Impacts. University of Sassari, DESA, in cooperation with University of Tuscia – DISAFRI, and CNR-IBIMET Sassari. 2005 - 2008.
- CLIMED - Operational tools to assess climatic risk of Mediterranean agricultural areas. Coordinator: CNR - IBIMET, Biometeorology Institute, Sassari (Italy). 2007-2008.
- California Dep. of Water Resources e US Dep. of Agriculture-WERA-202, Projects "Crop Coefficient Testing and Development Project" and "Users' Guide on the surface renewal method". 2006 - 2007.

## LIST OF PEER-REVIEWED PUBLICATIONS

1. Pastorello, G., Trotta, C., Canfora, E. et al. (2020). The FLUXNET2015 dataset and the ONEFlux processing pipeline for eddy covariance data. *Sci Data* 7, 225 (2020). <https://doi.org/10.1038/s41597-020-0534-3>
2. C. Sirca, M. Lo Cascio, G. Noun, R. Snyder, S. Marras, A. Fernandes de Oliveira, M. Barbaro, P. Meloni, S. Loddo, M. Uccesu, M. G. Mamei, D. Satta, M. Muntoni, P. Duce, E. Vagnoni, C. Cesaraccio, D. Spano (2019). Water status monitoring in grapevines with traditional and new automated sensors. *ISHS* (accepted, in press)
3. Mereu V, Gallo A, Spano D (2019) Optimizing Genetic Parameters of CSM-CERES Wheat and CSM-CERES Maize for Durum Wheat, Common Wheat, and Maize in Italy. *Agronomy* 2019, 9(10), 665. doi:10.3390/agronomy9100665
4. Sirca C, Caddeo A, Marras S, Sallustio L, Spano D (2019). Soil organic carbon in Italian forests and agroecosystems: estimating current stock and future changes with a spatial modelling approach. *Agricultural and Forest Meteorology* 278 (2019) 107654.
5. Costa-Saura Jm, Trabucco A, Spano D, Mereu S (2019) A height-wood-seed axis which is preserved across climatic regions explains tree dominance in European forest communities *Plant Ecol* (2019) 220: 467. <https://doi.org/10.1007/s11258-019-00928-x>.
6. Salis M, Del Giudice L, Robichaud Pr, Ager Aa, Canu A, Duce P, Pellizzaro G, Ventura A, Alcasena-Urdirroz F, Spano D, Arca B (2019) Coupling burn probability and erosion models to quantify post-fire erosion before and after fuel treatments: a case study from Northern Sardinia, Italy. *International Journal of Wildland Fire* <https://doi.org/10.1071/WF19034>
7. Salis M, Arca B, Alcasena-Urdirroz F, Massaiu A, Bacciu V, Bosseur F, Caramelle P, Dettori S, Fernandes de Oliveira A, Molina-Terren D, Pellizzaro G, Santoni P, Spano D, Vega-Garcia C, Duce PP (2019). Analyzing the recent dynamics of wildland fires in *Quercus suber* L. woodlands in Sardinia (Italy), Corsica (France) and Catalonia (Spain). *EUROPEAN JOURNAL OF FOREST RESEARCH*, Volume 138, Issue 3, pp 415–431 <https://doi.org/10.1007/s10342-019-01179-1>
8. Conte A, Fares S, Salvati L, Savi F, Matteucci G, Mazzenga F, Spano D, Sirca C, Marras S, Galvagno M, Cremonese E and Montagnani L (2019). Ecophysiological Responses to Rainfall Variability in Grassland and Forests Along a Latitudinal Gradient in Italy. *FRONTIERS IN FORESTS AND GLOBAL CHANGE*, vol. 2, ISSN: 2624-893X, doi: 10.3389/ffgc.2019.00016
9. Giovanni Garau, Lourdes Morillas, Javier Roales, Paola Castaldi, Nicoletta Pasqualina Mangia, Donatella Spano, Simone Mereu (2019). Effect of monospecific and mixed Mediterranean tree plantations on soil microbial community and biochemical functioning. *APPLIED SOIL ECOLOGY*, p. 78-88, ISSN: 0929-1393, doi: 10.1016/j.apsoil.2019.04.005
10. Sirca, Costantino, Salis, Michele, Arca, Bachisio, Duce, Pierpaolo, Spano, Donatella (2018). Assessing the performance of fire danger indexes in a Mediterranean area. *IFOREST*, vol. 11, p. 563-571, ISSN: 1971-7458, doi: 10.3832/ifor2679-011
11. MASIA, Sara, Sušnik J, Marras S, MEREU, Simone, Spano D, TRABUCCO, Antonio (2018). Assessment of irrigated agriculture vulnerability under climate change in Southern Italy.. *WATER*, vol. 10, ISSN: 2073-4441, doi: 10.3390/w10020209
12. Salis M, Del Giudice L, Arca B, Ager Aa, Alcasena-Urdirroz F, Lozano O, Bacciu V, Spano D, Duce P (2018) Modeling the effects of different fuel treatment mosaics on wildfire spread and behavior in a Mediterranean agro-pastoral area. *Journal of Environmental Management* 212, 490-505. (doi:10.1016/j.jenvman.2018.02.020)
13. Van de Peer, Thomas, Mereu, Simone, Verheyen, Kris, María Costa Saura, José, Morillas, Lourdes, Roales, Javier, Lo Cascio, Mauro, Spano, Donatella, Paquette, Alain, Muys, Bart (2018). Tree seedling vitality improves with functional diversity in a Mediterranean common garden experiment. *FOREST ECOLOGY AND MANAGEMENT*, vol. 409, p. 614-633, ISSN: 0378-1127, doi: 10.1016/j.foreco.2017.12.001
14. Sirca C., Casula F., Bouillon C., Fierro García B., Fernández Ramiro M.M., Vila Molina B., Spano D. (2017). A wildfire risk oriented GIS tool for mapping Rural-Urban Interfaces. *ENVIRONMENTAL MODELLING & SOFTWARE*, p. 36-47, ISSN: 1364-8152, doi: 10.1016/j.envsoft.2017.03.024
15. Lo Cascio, Mauro, Morillas, Lourdes, Ochoa-Hueso, Raúl, Munzi, Silvana, Roales, Javier, Hasselquist, Niles J., Manrique, Esteban, Spano, Donatella, Jaoudé, Renée Abou, Mereu, Simone (2017). Contrasting effects of

nitrogen addition on soil respiration in two Mediterranean ecosystems. ENVIRONMENTAL SCIENCE AND POLLUTION RESEARCH INTERNATIONAL, vol. 24, p. 26160-26171, ISSN: 0944-1344, doi: 10.1007/s11356-017-8852-5

16. Morillas, Lourdes, BELLUCCO, Veronica, LO CASCIO, Mauro, MARRAS, Serena, SPANO, D, MEREU, Simone (2017). Contribution of biological crust to soil CO<sub>2</sub> efflux in a Mediterranean shrubland ecosystem. GEODERMA, vol. 289, p. 11-19, ISSN: 0016-7061, doi: 10.1016/j.geoderma.2016.11.012
17. Costa-Saura, José M., Trabucco, Antonio, Spano, Donatella, Mereu, Simone (2017). Environmental filtering drives community specific leaf area in Spanish forests and predicts relevant changes under future climatic conditions. FOREST ECOLOGY AND MANAGEMENT, vol. 405, p. 1-8, ISSN: 0378-1127, doi: 10.1016/j.foreco.2017.09.023
18. SIRCA, Costantino Battista, CADDEO, Antonio, SPANO, D, BACCIU, VALENTINA MARIA, MARRAS, Serena (2017). Methods for biomass stock estimation in Mediterranean maquis systems. IFOREST, vol. 10, p. 108-114, ISSN: 1971-7458, doi: 10.3832/ifor1769-009
19. BELLUCCO, Veronica, MARRAS, Serena, Grimmond, C. S. B., Järvi, L., SIRCA, Costantino Battista, SPANO, D (2017). Modelling the biogenic CO<sub>2</sub> exchange in urban and non-urban ecosystems through the assessment of light-response curve parameters. AGRICULTURAL AND FOREST METEOROLOGY, vol. 236, p. 113-122, ISSN: 0168-1923, doi: 10.1016/j.agrformet.2016.12.011
20. Lozano Olga M, Salis Michele, Ager Alan A., Arca Bachisio, Alcasena Fermin J., Monteiro Antonio T., Finney Mark A., Del Giudice Liliana, Scoccimarro Enrico, Spano Donatella (2016). Assessing Climate Change Impacts on Wildfire Exposure in Mediterranean Areas. RISK ANALYSIS, ISSN: 0272-4332, doi: 10.1111/risa.12739
21. Chirici, G., Chiesi, M., Corona, P., Salvati, R., Papale, D., Fibbi, L., SIRCA, Costantino Battista, SPANO, D, Duce, P., MARRAS, Serena, Matteucci, G., Cescatti, A., Maselli, F. (2016). Estimating daily forest carbon fluxes using a combination of ground and remotely sensed data. JOURNAL OF GEOPHYSICAL RESEARCH. BIOGEOSCIENCES, vol. 121, p. 266-279, ISSN: 2169-8953, doi: 10.1002/2015JG003019
22. Salis, Michele, Laconi, Maurizio, Ager, Alan A., Alcasena, Fermin J., Arca, Bachisio, Lozano, Olga, Fernandes de Oliveira, A, Spano, Donatella (2016). Evaluating alternative fuel treatment strategies to reduce wildfire losses in a Mediterranean area. FOREST ECOLOGY AND MANAGEMENT, vol. 368, p. 207-221, ISSN: 0378-1127, doi: 10.1016/j.foreco.2016.03.009
23. Jahdi, Roghayeh, Salis, Michele, Darvishsefat, Ali A., Alcasena, Fermin, Mostafavi, Mir A., Etemad, V., Lozano, Olga M., Spano, Donatella (2016). Evaluating fire modelling systems in recent wildfires of the Golestan National Park, Iran. FORESTRY, vol. 89, p. 136-149, ISSN: 0015-752X, doi: 10.1093/forestry/cpv045
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