



Sergio Noce

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Fondazione Centro Euro Mediterraneo sui Cambiamenti Climatici - CMCC, Viale Trieste 127, 01100, Viterbo, Italy

About me: Over fifteen years of experience in geographic information systems (GIS). My background includes forest ecology, biogeography and climate change impacts on forest ecosystems, under the statistical approach of Species Distribution Models (SDMs). Since 2012, I hold the position of a researcher at the Impact on Agriculture, Forests and Ecosystem Services (IAFES) division of the CMCC Foundation

● WORK EXPERIENCE

01/01/2012 – CURRENT – Lecce, Italy

RESEARCHER - GIS ANALYST – FONDAZIONE CENTRO EURO-MEDITERRANEO SUI CAMBIAMENTI CLIMATICI - CMCC

Main projects:

- TEACHER-CE-INTERREG creation of GIS datasets supporting TEACHER-CE Toolbox, (tool focused on climate-proof management of water related issues such as floods, heavy rain and drought risk prevention, small water retention measures and protection of water resources through sustainable land-use management).
- C3S Soil Erosion: production of GIS datasets and tools supporting the C3S Climate Data Store (CDS)
- PROLINE-CE INTERREG: implementation and application of small and large land use change models in GIS environment
- MADAMES: report production in forest ecosystem services (mediterranean area)
- ACEA: development of web gis applications and geodatabase implementation
- GEMINA: Species Distribution Modeling; studies on the future impacts of climate change on the European forests through application of statistical models (BIOMOD et al). Preparation of spatial inputs in GIS environment, parameterization and modeling. Spatial analysis and production of thematic maps. Spatial and Geostatistical analysis applied to forest data for the production of presence maps
- FUME: implementation and application of small and large land use change models. Preparation of inputs in GIS environment and analysis of results
- FAO GEOCARBON: creation and updating of the Global Soil Organic Carbon Geodatabase, global atlas of small-scale organic soil carbon content (30 arcsec) in collaboration with FAO

Other activities:

Collaboration with private companies (ACEA-BARILLA and other) in the implementation of climatic data geodatabases and development of WEBGIS applications
GIS and climate data supporting to division (data production, analysis and mapping)

www.cmcc.it | Lecce, Italy

07/2006 – 31/12/2011

GIS ANALYST AND REMOTE SENSING TECHNICIAN – AGRICONSULTING S.P.A.

Main projects:

- Ponte sullo Stretto di Messina: monitoring the environmental impact of large infrastructures, implementation, design and management of spatial databases. Modeling spatial data, creation of thematic maps and layers, implementation and running of land use change models. Analysis and management of remote sensing data
- SIGRA2: creation of an information system for flood risk management in Italy for ANIA (Italian association of insurance institutions). Implementation of spatial analysis processes for the automatic creation of the Italian hydrographic network
- PIC Integrated Field Platform: implementation of an integrated field platform (JAVA based) for the collection of agronomic data in the field
- LUCAS: data collection for agronomic and forestry statistics (European Community), production and processing of geographic data, implementation of automated processes aimed at collection of data field (Python in GIS environment)
- Technical assistance to the National Park of Cilento and Vallo di Diano: acquisition, homogenisation, topological correction of geographical data, production of thematic maps. Responsible for the implementation and management of the Park Information System (both hardware and software). Teacher in GIS courses for park employees
- Register of forest fires in the Campania Region: collection and analysis of satellite images for the identification of burned areas, digitization on aerial photos and on cadastral maps

- Desertification risk Sardinia Region: acquisition and processing of geographical and alphanumeric data; implementation and analysis of statistical models to produce desertification and hydrogeological risk maps for Sardinia.

www.agriconsulting.com | Rome, Italy

● EDUCATION AND TRAINING

05/2013 – Rome, Italy

INDRODUCTION TO GEOPROCESSING SCRIPT USING PYTHON – ESRI Italia

Python in ESRI Geoprocessing environment

04/2008 – Roma, Italy

SPECTRAL ANALYSIS WITH ENVI – EXELIS Visual Information Solutions

Hyperspectral satellite images processing

10/2005 – 11/2006 – San Giovanni Valdarno (AR), Italy

ENVIRONMENTAL GEOTECHNOLOGIES MASTER DEGREE – CGT - Centro di Geotecnologie dell'Università di Siena

- Polluted sites and planning of remediation interventions
- Design of controlled landfills
- Ecocompatible stabilizations
- Geochemistry of water and soil
- Bioremediation
- Environmental Geostatistics
- GIS Geographic Information Systems
- Geo-environmental modeling

EQF level 8

10/1999 – 10/2005 – Viterbo, Italy

FORESTRY AND ENVIRONMENTAL SCIENCE DEGREE CUM LAUDE – Università della Tuscia

Thesis title: “Nuove tecniche di monitoraggio del Mal dell’Inchiostro del castagno e studi sulla dinamica dell’inoculo dell’agente causale *Phytophthora cambivora*.” Rel.Prof. A.Vannini. 110/110 cum laude

EQF level 7

● LANGUAGE SKILLS

Mother tongue(s): ITALIAN

Other language(s):

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken production	Spoken interaction	
ENGLISH	B2	B2	B2	B2	B2
FRENCH	A1	A1	A1	A1	A1

Levels: A1 and A2: Basic user; B1 and B2: Independent user; C1 and C2: Proficient user

● DIGITAL SKILLS

GIS

ArcGIS Pro | Geographic information system (QGIS) | ArcGIS Desktop | gvSIG | ArcGIS Online

NetCDF

Panoply | NCO Tools for Netcdf | CDO (climate data operators)

Other

Gimp Photoshop (photo editing) | OpenOffice.org | ENVI SAT | SPSS Statistical Tool

● PUBLICATIONS

Papers/Chapters/Reports

- Pasetti, S., Mariano, E., **Noce, S.**, Santini, M., Trotta, C. (2020). Il progetto MADAMES-AX: I Servizi ecosistemici forestali tra opportunità di innovazione e mercato. *Reticula* 25, 119-132
- **Noce, S.**, Caporaso, L., & Santini, M. (2020). A new global dataset of bioclimatic indicators. *Scientific data*, 7(1), 1-12.
- Saunio, M., Stavert, A. R., Poulter, B., Bousquet, P., Canadell, J. G., Jackson, R. B., ... **Noce, S.**, ... & Zhuang, Q. (2020). The global methane budget 2000–2017. *Earth System Science Data*, 12(3), 1561-1623.
- Valentini, R., Zmolodchikov, D., Reyer, C., **Noce, S.**, Santini, M., & Lindner, M. (2020). Climate change in Russia—past, present and future. In *Russian forests and climate change. What Science Can Tell Us 11*. European Forest Institute.
- Caporaso, L., Santini, M., **Noce, S.**, de Sanctis, A., Caracciolo, L., & Antonelli, M. (2019). Drivers of Migration in the Trans-Mediterranean Region: The Likely Role of Climate Change and Resource Security in the Geopolitical Context. In *Achieving the Sustainable Development Goals Through Sustainable Food Systems* (pp. 35-61). Springer, Cham.
- **Noce, S.**, Caporaso, L., & Santini, M. (2019). Climate change and geographic ranges: the implications for Russian forests. *Frontiers in Ecology and Evolution*, 7, 57.
- **Noce, S.**, Santini, M. (2018). Mediterranean Forest Ecosystem Services and their Vulnerability. *Climate-KIC MADAMES Synthesis Report*
- **Noce, S.**, Collalti, A., & Santini, M. (2017). Likelihood of changes in forest species suitability, distribution, and diversity under future climate: The case of Southern Europe. *Ecology and evolution*, 7(22), 9358-9375.
- Gatti, R. C., Di Paola, A., Bombelli, A., **Noce, S.**, & Valentini, R. (2017). Exploring the relationship between canopy height and terrestrial plant diversity. *Plant ecology*, 218(7), 899-908.
- **Noce, S.**, Collalti, A., Valentini, R., & Santini, M. (2016). Hot spot maps of forest presence in the Mediterranean basin. *iForest-Biogeosciences and Forestry*, 9(5), 766.
- Vaglio Laurin, G., Hawthorne, W. D., Chiti, T., Di Paola, A., Cazzolla Gatti, R., Marconi, S., **Noce, S.** ... & Valentini, R. (2016). Does degradation from selective logging and illegal activities differently impact forest resources? A case study in Ghana. *iForest-Biogeosciences and Forestry*, 9, 354-362.
- Santini, M., Caccamo, G., Laurenti, A., **Noce, S.**, & Valentini, R. (2010). A multi-component GIS framework for desertification risk assessment by an integrated index. *Applied Geography*, 30(3), 394-415.

Datasets

- **Noce, S.**, Caporaso, L.,; Santini, M. (2019): CMCC-BioClimInd. A global dataset of bioclimatic indicators. CENTRO EURO-MEDITERRANEO SUI CAMBIAMENTI CLIMATICI, PANGAEA, <https://doi.org/10.1594/PANGAEA.904278>
- Latham J., Nachergaele F., Henry M., Vargas R., **Noce S.**, Santini M., Chiti T. (2017). Global Soil Organic Carbon (at 30 arcsec). FAO-CMCC, <http://www.fao.org/documents/card/en/c/9cfc39c3-2950-4691-aa8d-4eaf23a7ba3c/>

● CONFERENCES AND SEMINARS

Conferences

Conference proceedings:

- Rianna, G., Santini, M., Mancini, M., Padulano, R., **Noce, S.** (2020). Exploiting Copernicus Climate Change Service (C3S) to assess ongoing and future soil erosion over Italy. EGU General Assembly Conference Abstracts
- Santini, M., Rianna, G., Mancini, M., **Noce, S.**, & Padulano, R. (2019). C3S Demo Case Soil Erosion: Assessing climate change impacts to support the implementation of best management practices against soil erosion over Italy. *AGUFM*, NH31C-03
- Pham, H V., Sperotto, A., Torresan, S., Critto, A., Rianna, G., Santini, M., **Noce, S.**, Acuña, V., Jorda-Capdevila, D., Marcomini, A. (2019). Coupling scenarios of climate and land use change with assessments of ecosystem services at river basin scale. *Geophysical Research Abstracts* . Vol. 21
- **Noce, S.** Mappe di Hot Spot di presenza forestale nel Bacino del Mediterraneo. Atti della 16° Conferenza Italiana Utenti ESRI 2016 Roma
- Bacciu, V., Alcasena, F., Arca, B., Bosello, F., Gualdi, S., **Noce, S.** & Santini. (2014). M. Fires in the perspective of future changes: the contribute of CMCC to FUME Project. SISC, Second Annual Conference Climate change: scenarios, impacts and policy. Venezia, Italy
- Papale, D., Belli, C., Calvani, P., Gioli, B., **Noce, S.**, & Vannini, A. (2007). A new flexible airborne multispectral sensor for agriculture and forestry applications. In AGU Fall Meeting Abstracts (Vol. 1, p. 1528)
- Santini, M., Caccamo, G., **Noce, S.**, & Valentini, R. (2007). Integrated modelling and GIS: A new approach to assess desertification vulnerability and risk in Sardinia Island (Italy). In AGU Fall Meeting Abstracts (Vol. 1, p. 0948)

Oral presentations:

- Likelihood of changes in forest species suitability, distribution and diversity under future climate: the case of Southern Europe. SISC Conference 2017, October 2017, Bologna, Italy
- Likelihood of changes in forest species suitability, distribution and diversity under future climate: the case of Southern Europe. International Mistral workshop. Climate Change impacts in the Mediterranean region Montpellier. October 2017, Montpellier, France
- Mappe di Hot Spot di presenza forestale nel bacino del Mediterraneo. Dal dato grezzo al dato qualitativo. ESRI Italia user conference 2016, April 2016, Rome, Italy
- Hot Spots maps of Forest Presence. A Web Mapping Application of ArcGis Online. Live Poster. ESRI Italia user conference 2014, April 2014, Rome, Italy

● JOB-RELATED SKILLS

Job-related skills

Professional Basketball referee in the Italian SerieA League