Giuseppe Baldassarre

Environmental Engineer (Ph.D.) and Forester

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LinkedIn

As an Environmental Engineer I developed technical skills to collect, process and visualize large datasets (GIS/RS analysis). My second master in Forestry and Natural Resource Management provided me with practical tools of decision support systems and inclusive mechanisms of governance.

Skills

Languages: Italian (native), English, Spanish (fluent), Turkish, Portuguese (intermediate)
Software tools: MATLAB, Python, QGIS, PyQGIS, Office, LATEX, Google Earth Engine

Professional experience (linked: recommendations, international cooperation)

International GIS/RS consultant *FAO, Land and Water Division* **2023 – present**
- Land Cover Atlas of Yemen (publication)
- Geospatial technical assistance for Resilience of Organizations for Transformative Smallholder Agriculture (ROOTS) project, The Gambia. (publication, video of the project)

Post-doctoral researcher *University of Lisbon, Portugal* **2020 – 2023**
- Estimating shrub live fuel moisture content for mainland Portugal (github)
- Study of traditional extensive pastoralism relying on fires in Northern Portugal with GIS/RS analysis
- Mapping Fire Regimes over Portugal and Turkey (website)
- Automatic monitoring of the national fuel break network of Portugal with Sentinel-2 in GEE.

EUaid volunteer *Sustainable Rural Development, Vietnam* **2020 – 2022**
- Developing an App in GEE to monitor Canopy Cover in Vietnam.
- Mapping smallholder coffee production system in NW Vietnam. (video of the project)

Post-doctoral researcher *Istanbul Technical University, Turkey* **2012 – 2018**
- Biomass Burning emission estimation with geostationary observations (link)
- Description of forest fires over Turkey using the most advanced satellite observations (link)
- First version of Forest Fire Monitoring System web-GIS in Turkey (link)

Environmental consultant (volunteer) *Aprode Peru (NGO), Peru* **2011**
- Field campaigns to outline the solid waste management cycle in rural villages in Northern Peru
- Implemented a project for the social inclusion of informal recyclers. (video of the project)

Visiting scholar *University of Wisconsin, USA* **2008, 2009 - 2010**
- Development and assessment of advanced satellite fire detection products using statistical tools
- Testing product operational applicability over Southern Italy

Education (linked: certificates, subjects and grades, extra-courses)

M.S., Mediterranean Forestry and Natural Resource Management **Erasmus Mundus**
1st year: University of Lisbon (Portugal), Valladolid (Spain) & Padova (Italy) **2019**
- Natural resource management with decision support systems. Forest governance, agroforestry, fire ecology & management, GIS, research & project development methodology
2st year: University of Porto (Portugal) & Lleida (Spain) **2020**
- Governance of Mediterranean Forests, Economics and Management Non-Profit Organizations, Research Methods, Mathematical Tools For Business and Economics. Environmental Economics.
- Thesis: "Describing fire regimes over Turkey using MODIS fire observations"

Ph.D., Environmental Applications with Remote Sensing
University of Wisconsin, Madison & University of Basilicata **2007– 2011**
- Advanced tools for satellite-based environmental monitoring (biomass combustion emissions)

- Thesis: Performance of satellite techniques for real-time fire monitoring in Italy

B.S. and M.S., Environmental Engineering (summa cum laude)

University of Basilicata   **2001–2004**

- Waste-water and waste management; atmospheric physics; water, air and soil pollution dynamics
- Physics, chemistry, geology, statistics, economics

Research Activity (linked: ResearchGate, Pyrogeography Lab)

- Land Cover Atlas of Yemen, 2025 (link)
- Mapping land cover in the Maputo and Gaza provinces in Mozambique, 2024 (link)
- Regimes de fogo em Portugal Continental, 2022 (link)
- Cartografia de Regimes de Fogo à Escala da Freguesia (1980-2017), 2022. (link)
- Fuel Break Monitoring with Sentinel-2 Imagery and GEDI Validation, 2022. (link)
- Using SEVIRI fire observations to drive smoke plumes in the CMAQ air quality model: a case study over Antalya in 2008, *Atmos. Chem. Phys.*, 15, 8539-8558, 5, 2015. (link)
- Automatic RST-based system for a rapid detection of fires. *Proceedings of the VI International Conference on Forest Fire Research* (ICFFR), 2010, p. 43. (link)
- A Total Validation Approach for assessing the RST technique in forest fire detection and monitoring. 12. 13475. (link)
- Assessment of the Robust Satellite Technique (RST) in real time detection of summer fires, *Proceedings of Multitemp* 2009, pp 216-223. (link)
- Monitoring of pipeline ruptures by means of a Robust Satellite Technique (RST). In EGU General Assembly, Vienna, Austria, 19 - 24 April 2009. (link)

Awards (linked: grants)

- Scientific Communication Award. *XIII Young Forest Researchers Meeting (iuFOR 2019, Spain)*
- Erasmus Mundus Scholarship, MEDfOR program (2018)
- Research Fellowship Program for International Researcher (2216, TUBITAK, 2012)
- Scholarship for Ph.D program (CNR, 2007)
- U20 Basketball Regional Champion, Italian Basketball Federation (2004)

Conferences (selected)

- Metereological Satellites for forest fires management. *XIII Young Forest Researchers Meeting on Conservation and Sustainable u.se of Forest Systems. 31th of Jan - 1st of Feb 2019, Valsaín (Segovia, Spain). (link)*
- MSG-SEVIRI based fire characterization data to simulate the atmospheric composition over a strong wildfire episode with the CMAQ air quality model. *3rd IBBI Workshop 23-26 April 2014 Schloss Ringberg. (link)*
- Estimation of biomass burning emissions over Turkey using SEVIRI fire characterization data: the Antalya fire, August 2008. *Electronic proceedings of the Presented at the 12th Annual CMAS Conference, Chapel Hill, NC, October 28-30, 2013*. (link)

Projects

- **FIRE-MODSAT:** Supporting FIRE-Suppression strategies combining fire spread MODelling and SATellite data in an operational context in Portugal
- **KAMAG:** Create an integrated atmospheric emission inventory over Turkey (Turkish Research Council).
- **AVVISA:** Integrate satellite fire monitoring in Basilicata's forest management system (Italian Research Council, CNR).
- **AVVISTA:** Test the performance of satellite observations for early fire monitoring (CNR).