

Giuseppe Baldassarre

Environmental Engineer (Ph.D.) and Forester

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[Website](#)



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)

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- 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, Valsain (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

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- **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).