

# JENNIFER L. BAILEY

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## PROFESSIONAL EXPERIENCE

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### Research Fellow

March 2019 - Present

*Institute for Environmental Research & Sustainable Development (IERSD)*

*National Observatory of Athens (NOA), Greece*

- A core member for SMURBS/ERA-PLANET “SMart URBan Solutions for air quality, disasters and city growth” project, an EU Horizon 2020 Research & Innovation funded project (NOA as coordinator)
- The pan-European project focuses on building a portfolio of smart city solutions through synthesizing Earth observation (EO) platforms for sustainable development, while addressing health and migration issues
- Co-leading the use of EO to address UN Sustainable Development Goal (SDG) indicator 11.6.2 (population-weighted fine particulate matter in cities), including building an online platform for European decision-makers to assess progress towards the SDG target and address city-level hot spots through focused mitigation measures
- Authoring technical and policy-oriented documents on the policy implications of defining a city’s extent and how it impacts SDG 11.6.2, as well as other reporting frameworks
- Coordinating lead for e-shape’s Health Surveillance Showcase “EO-based pollution-health risks profiling in the urban environment” Pilot (EuroGEO Showcases: Applications Powered by Europe, EU H2020 funded)
- Organizing the Pilot’s approach to building a global service with EO-derived AQ information and local city-specific cases with detailed data layers (AQ, health & socioeconomic) through co-designing with users and management of deadlines and partner & Project needs
- Active member of the Group on Earth Observation (GEO) Programme Board’s Urban Resilience Subgroup, aiming to align and coordinate GEOs urban initiatives and activities to enhance the resilience focus of GEO in support of the Work Programme and engagement priorities
- Fundamental to GEO Community Activity “EO for Climate Change Impacts to World Heritage Cities,” led by Greece in collaboration with UNESCO, adding urban heritage aspects into the GEO Work Programme
- Coordination with city and national-level stakeholders (i.e. statistical authorities), as well as regional and international entities and initiatives (i.e. GEO, EO4SDGs) to facilitate the use of EO and inter-disciplinary approaches to inform pollution mitigation measures and address health and social issues

### Science-Policy Interface Consultant

August 2018 - December 2018

*United Nations Environment Programme, North America Regional Office, Washington, D.C.*

- Worked to strengthen UN Environment North America’s engagement with the scientific community, particularly in the areas of integrated assessments, environmental data and information flows, and strategic partnerships
- Served as a Chapter Coordinator for the Sixth Global Environment Outlook (GEO-6), specifically overseeing the production of the Policy Outlooks chapters, helping to solve technical challenges and guide it to publication
- Planned and implemented a first convening of a regional science advisory group, which resulted in a summary report on the proceedings and recommendations for action for UN Environment’s Senior Management Team
- Supported the continued planning of a Science-Policy-Business Forum through developing and implementation and outreach plan, coordinating substantive inputs from external partners, and other logistical support
- Experience working in an international environment, working between UN Environment offices, other UN agencies and global experts and scientists to achieve our work plan

### Environmental Science & Policy Intern

January 2018 - July 2018

*United Nations Environment Programme, North America Regional Office, Washington, D.C.*

- Supported the development of a Science-Policy-Business Forum through performing research to inform the topic, management of tracking documents, and budget creation
- Worked directly under the Regional Coordinator of the Science Division supporting the coordination of the production of GEO-6

- Assist with governmental affairs efforts including outreach to governments, non-governmental organizations and academic institutions engaged in environmental issues, drafting of partnership agreements, and research and writing of regional political briefing materials

**Research Assistant**

June 2017 - January 2018

*Scripps Institution of Oceanography, University of California, San Diego*

- Conducted research and analysis on climate change health impacts and briefed stakeholders, including state and county-level decision makers to empower informed and scientifically sound policymaking to improve health
- Prepared research briefings for the County of San Diego's Health & Human Services Agency on the impact of heat waves on hospital admissions in San Diego, communicating scientific research to inform staff and aid in regionally specific action plans in response to heat waves and the identified at-risk and vulnerable populations
- Authored a policy brief on wildfires and smoke impact to air quality and human health across different populations in Southern California, looking at policy response options within the context of climate change

**Consulting Scientist - Energy & Infrastructure Business Unit**

February 2016 - January 2017

*Haley & Aldrich, Inc., San Diego*

- Lead consultant performing an airport-wide GHG inventory for 2014/2015 and applied for the Airport Carbon Accreditation program, resulting in Level 2 Accreditation from Airports Council International allowing the airport to become one of the first U.S. airports making annual commitments to track and reduce GHG emissions
- Charged with writing and quality assurance and control of the airport's Sustainability Report, which involved working within all departments to increase efficiency and ensure accountability to sustainability commitments

**Staff Analyst - Environmental Affairs Department**

November 2014 - February 2016

*San Diego County Regional Airport Authority*

- Developed a comprehensive annual report of the Authority's recycling & diversion efforts, served as key resource in the airport winning the City of San Diego's Recycler of the Year Award in 2015 & 2016
- Coordinated the Authority's clean transportation initiative, researching funding opportunities and regulatory needs, and communicating among key stakeholders to streamline processes and phase out old, polluting vehicles and equipment and institute a low/zero emission vehicle replacement program
- Authored a monthly environmental newsletter with Airport wide distribution of 6,000 plus employees
- Prior to this, I served as an intern for 5 months, where I implemented an Integrated Pest Management Policy

**EDUCATION & RESEARCH**

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**Master of Advanced Studies, Climate Science & Policy**

August 2016 - June 2017

University of California, San Diego | La Jolla, CA

Scripps Institution of Oceanography

**Bachelor of Arts & Sciences, Environmental Studies, Math Minor**

August 2010 - May 2014

University of San Diego | San Diego, CA

**Potential health co-benefits related to mitigation of air pollution from wood burning: A systematic review & health impact assessment case study in Athens, Greece**

**Independent Graduate Research**

2016 - 2017

- Performed a systematic literature review and a random effect meta-analysis to obtain pooled estimates of particulate matter pollution reductions associated with intervention policies aimed at wood burning emissions
- Executed a risk assessment using varying scenarios and local Athens data and peer-reviewed studies to calculate population attributable fractions, estimating the health benefits of the intervention strategies
- Discussed local aspects, economic viability, & potential impact to vulnerable sub-populations
- Presented at the Scripps Institution of Oceanography Graduate Symposium; 2017 June 9; La Jolla, CA

**Geospatial Analysis of the Tecolote Creek Watershed**

**Undergraduate Senior Research Project**

2013 - 2014

- Collected data and soil samples from different sampling sites within the Tecolote Creek watershed system
- Created spatial analysis maps on Geographic Information Systems (GIS) Software comparing land use patterns/driven sources to elevated concentrations of chlordane contamination
- Presented findings at the University of San Diego Creative Collaborations Symposium; 2014 May 23

## **PUBLICATIONS**

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Bailey, J., Gerasopoulos, E., Rojas-Rueda, D. & Benmarhnia, T.: Potential health and equity co-benefits related to the mitigation policies reducing air pollution from residential wood burning in Athens, Greece, *Journal of Environmental Science and Health, Part A*, 2019, doi:10.1080/10934529.2019.1629211

Green, H., Bailey, J., Schwarz, L., Vanos, J., Ebi, K. & Benmarhnia, T.: Impact of heat on mortality and morbidity in low and middle income countries: A review of the epidemiological evidence and considerations for future research, *Environmental Research*, Volume 171, 2019, 80–91, doi:10.1016/j.envres.2019.01.010

## **INTERNATIONAL CONFERENCES & SEMINARS**

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Presented graduate research titled “The Health Benefits of Reducing Particulate Matter Emissions from Wood Burning in Athens, Greece: A Health Impact Assessment” at the Athens Institute for Education & Research’s 3rd Annual International Conference on Public Health; 2017 June 19-20; Athens, Greece. Abstract Book

Invited as part of Greek delegation to attend and present ERA-PLANET/SMURBS project outputs at side events of the Group on Earth Observations Week 2019 Ministerial Summit, Canberra, Australia, 04-09 November 2019.

Gerasopoulos, E., Athanasopoulou, E., Ramacher, M., Speyer, O., Karl, M., Stavroulas, I., Grivas, G., Bailey, J. & Kakouri, A., City scale air pollution modelling and high resolution exposure mapping of an urban hotspot in the Eastern Mediterranean. Abstract

Bailey, J., Gerasopoulos, E., Athanasopoulou, E., & Speyer, O., Insight and Policy Implications from a Harmonized Earth Observation Approach to Urban Air Quality. eLighting Session at the AGU Fall Meeting 2019, San Francisco, California, 09-13 December 2019. Poster available via AGU & at doi:10.1002/essoar.10502027.1

Invited talk for “Current Topics in Environmental Sciences” course, University of Notre Dame College of Science, as an expert in communicating solutions to global environmental change with policymakers. Virtual seminar, 12 November 2019.

Invited talk for “Professional Development” course for Environmental Science majors, University of Notre Dame College of Science. Virtual seminar, 6 March 2020.

Invited lecturer at the 16th Summer School and SMURBS Training School 2020 organized by RECETOX Research Infrastructure and Stockholm Convention Regional Centre in the Czech Republic, presenting on “Addressing the UN Sustainable Development Goals on urban air quality and exposure through Earth Observation Information.” Virtual lecture, 18 June 2020. Program and presentation found here.