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**HIGHER EDUCATION**

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- 2015-now PhD student, Department of Geology and Climatology, Faculty of Geology and Geoenvironment, School of Science, National and Kapodistrian University of Athens, Greece. Thesis title: Simulation and assessment of potential fire risk in global and regional scale in the framework of climate change.
- 2007-2010 National and Kapodistrian University of Athens, Physics Department, MSc. in Environmental Physics and Meteorology. Thesis title: Theoretical estimation of isoprene gas emissions over Europe-Effects on gas chemistry
- 2001-2007 University of Crete, Division of Physics, Bachelor in Physics  
Degree: 7.02/10

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**PROFESSIONAL EXPERIENCE**

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- 2010-now Research Associate at the Institute of Environmental Research and Sustainable Development (IERSD), National Observatory of Athens
- Research Interests: the study of climate change in relation to anthropogenic changes in the chemical composition of the atmosphere by analyzing and evaluating data acquired from global and regional climate models. Evaluation and analysis of future fire risk in the Mediterranean. Climate change impact and adaptation assessments with special focus on fire risk assessments.

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**RESEARCH PROJECT PARTICIPATION**

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- 2018-now **SOCLIMPACT**-DownScaling CLimate ImPACTs and decarbonisation pathways in EU islands, and enhancing socioeconomic and non-market evaluation of Climate Change for Europe, for 2050 and Beyond. Funded by: H2020-EU.3.5.1. Fighting and adapting to climate change
- 2017-2019 **Copernicus Climate Change Service: European Tourism**. Funded by: Copernicus C3S. Ref No: ecmwf/copernicus/2017/c3s\_422\_lot2\_tec.
- 2017-2019 **DISARM**-Drought and fire obServatory and eArly waRning systeM. Funded by: Transnational Cooperation Programme Interreg Balkan-Mediterranean

- 2017-2018      **UrbanProof** - Climate Proofing Urban Municipalities. Funded by: LIFE programme for the Environment and Climate Action (2014-2020).
- 2016-2020      **ADAPT2CLIMA**-Adaptation to Climate change Impacts on the Mediterranean islands' Agriculture. Funded by: LIFE programme for the Environment and Climate Action (2014-2020).
- 2015              **Treasure**- Thermal Risk Reduction Actions and Tools for secure cities. Funded by: DG ECHO
- 2012-2014      **CLIMRUN** - Climate Local Information in the Mediterranean region Responding to end User Needs. Funded by: European Commission's FP7
- 2012-2014      **XENIOS** - Climate change impacts on the tourism development of sensitive areas of Greece. Pilot area: Messinia- Areas of integrated tourism development. Funded by: NSRF Research Funding Programme COOPERATION 2009.
- 2010-2011      **CIRCE** - Climate Change & Impact Research: The Mediterranean Environment. Funded by: European Commission's FP6.

## PUBLICATIONS

- Bossioli, E., Tombrou, M., **Karali, A.**, Dandou, A., Paronis, D., and Sofiev, M. (2012) Ozone production from the interaction of wildfire and biogenic emissions: a case study in Russia during spring 2006, *Atmos. Chem. Phys.*, 12, 7931-7953, doi:10.5194/acp-12-7931-2012.
- Giannakopoulos C, LeSager P, Moriondo M, Bindi M, **Karali A**, Hatzaki M, Kostopoulou E (2012): Comparison of fire danger indices in the Mediterranean for present day conditions. *iForest* 5: 197-203. - doi: 10.3832/ifor0622-005.
- Giannakopoulos, C.; Kostopoulou, E.; Hadjinicolaou, P.; Hatzaki, M.; **Karali, A.**; Lelieveld, J.; Lange, M.A. Impacts of Climate Change Over the Eastern Mediterranean and Middle East Region Using the Hadley Centre PRECIS RCM. In *Advances in Meteorology, Climatology and Atmospheric Physics*; Helmis, C.G., Nastos, P.T., Eds.; Springer Berlin Heidelberg: Berlin, Heidelberg, 2013; pp. 457–463 ISBN 978-3-642-29171-5.
- Kostopoulou, E.; Giannakopoulos, C.; Hatzaki, M.; Karali, A.; Hadjinicolaou, P.; Lelieveld, J.; Lange, M.A. Assessment of Climate Change Extremes Over the Eastern Mediterranean and Middle East Region Using the Hadley Centre PRECIS Regional Climate Model. In *Advances in Meteorology, Climatology and Atmospheric Physics*; Helmis, C.G., Nastos, P.T., Eds.; Springer: Berlin, Heidelberg, 2013; pp. 547–554.

- **Karali A.**, Hatzaki M., Giannakopoulos C., Roussos A., Xanthopoulos G. and Tenentes V. (2014): Sensitivity and evaluation of current fire risk and future projections due to climate change: the case study of Greece, *Nat. Hazards Earth Syst. Sci* 14: 143-153, doi: 10.5194/nhess-14-143-2014.
- Kostopoulou, E., Giannakopoulos, C., Hatzaki, M., **Karali, A.**, Hadjinicolaou, P., Lelieveld, J., and Lange, M. A. (2014): Spatio-temporal patterns of recent and future climate extremes in the eastern Mediterranean and Middle East region, *Nat. Hazards Earth Syst. Sci.*, 14, 1565-1577, doi:10.5194/nhess-14-1565-2014.
- E. Athanasopoulou, D. Rieger, C. Walter, H. Vogel, **A. Karali**, M. Hatzaki, E. Gerasopoulos, B. Vogel, C. Giannakopoulos, M. Gratsea, A. Roussos (2014): Fire risk, atmospheric chemistry and radiative forcing assessment of wildfires in eastern Mediterranean, *Atmospheric Environment*, 95, 113-125.
- Mitsopoulos, I., Mallinis, G., **Karali, A.**, Giannakopoulos, C., Arianoutsou, M. (2016). Mapping fire behaviour under changing climate in a Mediterranean landscape in Greece. *Regional Environmental Change*, 16 (7), pp. 1929-1940.
- Giannakopoulos, C., Psiloglou, B., Lemesios, G., Xevgenos, D., Papadaskalopoulou, C., **Karali, A.**, ... Loizidou, M. (2016). Climate change impacts, vulnerability and adaptive capacity of the electrical energy sector in Cyprus. *Regional Environmental Change*, 16(7), 1891–1904. <https://doi.org/10.1007/s10113-015-0885-z>.
- Lemesios, G., Giannakopoulos, C., Papadaskalopoulou, C., **Karali, A.**, Varotsos, K. V., Moustakas, K., ... Loizidou, M. (2016). Future heat-related climate change impacts on tourism industry in Cyprus. *Regional Environmental Change*, 16(7), 1915–1927. <https://doi.org/10.1007/s10113-016-0997-0>
- Keramitsoglou, I., Sismanidis, P., Analitis, A., Butler, T., Founda, D., Giannakopoulos, C., Giannatou, E., **Karali, A.**,... Kiranoudis, C. T. (2017) Urban thermal risk reduction: Developing and implementing spatially explicit services for resilient cities. *Sustainable Cities and Society*, 34(Supplement C), 56–68. <https://doi.org/10.1016/j.scs.2017.06.006>
- Vassiliki Kotroni, Constantinos Cartalis, Silas Michaelides, Julia Stoyanova, Fillipos Tymvios, Antonis Bezes, Theodoros Christoudias, Stavros Dafis, Christos Giannakopoulos, Theodore M. Giannaros, Christo Georgiev, Athanasios Karagiannidis, **Anna Karali**, Ioannis Koletsis, Konstantinos Lagouvardos, Ioannis Lemesios, Thaleia Mavrakou, Katerina Papagiannaki, Anastasios Polydoros, Yiannis Proestos (2020) DISARM early warning system for wildfires in the Eastern Mediterranean. *Sustainability* 2020, 12(16), 6670; <https://doi.org/10.3390/su12166670>.
- Christina Papadaskalopoulou, Marco Moriondo, Ioannis Lemesios, **Anna Karali**, Angeliki Konsta, Camilla Dibari, Lorenzo Brillì, Konstantinos V. Varotsos, Andreas Stylianou, Maria Loizidou, Marinos Markou, Christos Giannakopoulos (2020) Assessment of Total

Climate Change Impacts on the Agricultural Sector of Cyprus. *Atmosphere* 2020, 11, 608; doi:10.3390/atmos11060608.

- Papadopoulou, M.P.; Charchousi, D.; Spanoudaki, K.; **Karali, A.**; Varotsos, K.V.; Giannakopoulos, C.; Markou, M.; Loizidou, M. (2020) Agricultural Water Vulnerability under Climate Change in Cyprus. *Atmosphere*, 11, 648; doi:10.3390/atmos11060648.
- Konstantinos V. Varotsos, Anna Karali, John Lemesios, Gianna Kitsara, Marco Moriondo, Camilla Dibari, Christos Giannakopoulos (2021) Near future climate change projections with implications for the agricultural sector of three major Mediterranean islands. *Regional Environmental Change*, 21, 16; doi:10.1007/s10113-020-01736-0.

#### INTERNATIONAL CONFERENCE PRESENTATIONS

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- **A. Karali**, E. Bossioli, M. Tombrou, D. Paronis, A. Dandou, "Modeling study of the impact of isoprene biogenic emissions on ozone levels in Europe", 10th International Conference on Meteorology, Climatology and Atmospheric Physics, Patra, Greece, 25-28 May 2010, Conference Proceedings: Atmospheric Physics 901-908.
- **Karali, A.**, A. Roussos, C. Giannakopoulos, M. Hatzaki, G. Xanthopoulos, and K. Kaoukis, 2012: Evaluation of the Canadian fire weather index in Greece and future climate projections. 11th International Conference on Meteorology, Climatology and Atmospheric Physics, COMECAP2012, Athens, Greece, 29 May-1 June 2012. In Proc.: C.G. Helmis and P.T. Nastos (eds.), *Advances in Meteorology, Climatology and Atmospheric Physics*, Springer Atmospheric Science, pp 501–508. doi:10.1007/978-3-642-29172-2\_71, Springer-Verlag Berlin Heidelberg 2012.
- **Karali, A.**, C. Giannakopoulos, M.D. Frias, M. Hatzaki, A. Roussos, and A. Casanueva, 2013: Assessing Fire Weather Index using statistical downscaling and spatial interpolation techniques in Greece. *Geophysical Research Abstracts*, Vol. 15, EGU2013-11726, EGU General Assembly 2013, 07–12 April 2013, Vienna, Austria.
- **Karali A.**, Giannakopoulos C., Roussos A., Lemesios G., 2014: Assessing vulnerability of Greek forests to fires within the context of climate change, ADAPTtoCLIMATE, 27-28 March 2014, Nicosia, Cyprus, ([http://adapttoclimate.uest.gr/full\\_paper/karali\\_et\\_al.pdf](http://adapttoclimate.uest.gr/full_paper/karali_et_al.pdf))
- **Karali A.**, Giannakopoulos C., E. Kostopoulou, Varotsos K., Hatzaki M., Gerasopoulos E., Zerefos C.S, 2014: An integrated assessment of climate change impacts from the regional scale of the area of Peloponnese to the local scale of the area of Messinia, 12th International Conference on Meteorology, Climatology and Atmospheric Physics, COMECAP2012, Heraklion, Greece, 28-31 May 2014. In Proc. M. Kanakidou, N. Mihalopoulos, P. Nastos (eds) *Comecap 2014, Abstracts and e-contributions*, pp. 121, Crete University Press.
- **Anna Karali**, Nikolaos M. Fyllas, Maria Hatzaki, Christos Giannakopoulos, Panagiotis Nastos. A global distribution of the ignitability component of flammability based on climatic drivers. 19th EGU General Assembly, 23-28 April 2017, Vienna, Austria.
- **Anna Karali**, Maria Hatzaki, Christos Giannakopoulos, Nikolaos M. Fyllas, Panagiotis Nastos. Assessing fire danger under climate change conditions for the Euro-Mediterranean fire prone ecosystems. EMS Annual Meeting, 4-8 September 2017,

Dublin, Ireland.

- **A. Karali**, C. Giannakopoulos, G. Lemesios, V. Tenentes, V. Kotroni, K. Papagiannaki: Future fire risk projections for south-eastern Europe in the framework of DISARM project, EMS 2019, 9–13 September 2019, Copenhagen, Denmark.
- **A. Karali**, M. Hatzaki, C. Giannakopoulos, V. Bacciu, E. Briche: Mapping fire danger impacts on the tourism sector of the Mediterranean islands blue economy under climate change, EMS 2019, 9–13 September 2019, Copenhagen, Denmark.

#### COMPUTING SKILLS

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- Fortran and IDL (Interactive Data Language)
- Stata Statistics and Analytics Software Packages
- ArcGIS & QGIS Geographic Information Systems