



## Europass Curriculum Vitae

### Personal information



Name **Maria Katherina Dal Barco**

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Edificio Porta dell'Innovazione, Piano 2 – Via della Libertà, 12 – 30175 Venezia

E-mail [mariakatherina.dalbarco@cmcc.it](mailto:mariakatherina.dalbarco@cmcc.it) | [mariak.dalbarco@unive.it](mailto:mariak.dalbarco@unive.it)

Nationality Italian, German

Date of birth 19/08/1992

### Work experience

Dates 12/2024 →

Occupation or position held Post-degree/Post-doc

Main activities and responsibilities The research activities are carried out within the following projects:

H2020 **MYRIAD\_EU** project (2021 →) (<https://www.myriadproject.eu/>): Multi-hazard and sYstemic framework for enhancing Risk-Informed mAnagement and Decision-making in the E.U.

- Contribution to the organization of *Project Workshops* for the Veneto Pilot.
- Development of an AI-based model to prioritize coastal risks and enhance adaptation plans.

Interreg Italy-Croatia **AcquaGuard** project (2024 →) (<https://www.italy-croatia.eu/web/acquaguard>): Nature based solutions for Flood Prevention.

- Contribution to the organization of *Capacity Building activities* for the Veneto Pilot.
- Design of a decision support matrix tools supporting prioritization of adaptation measures to address risk scenarios identified in the project regions.

H2020 **AGILE** project (2023 →) (<https://www.project-agile.eu/>): AGnostic risk management for high Impact Low probability Events.

- Contribution to the organization of *Project Workshops* for the Veneto Pilot.

Name and address of employer Fondazione Euro-Mediterranean Center on Climate Change | RAAS Division  
Fondazione CMCC: via Marco Biagi 5 - 73100 Lecce, Italy  
RAAS Division: Edificio Porta dell'Innovazione - Piano 2 - Via della Libertà, 12 - 30175 Venezia

Type of business or sector Research activities, climate change vulnerability and risk assessment

Dates 09/2020 → 04/2025

Occupation or position held PhD candidate in Science and Management of Climate Change and student representative

Main activities and responsibilities Research topic: "Multi-risk assessment in coastal areas through the implementation of Artificial Intelligence methods"

- Development of a Machine Learning model to estimate daily risks driven by extreme climate events along the coastal area of the Veneto region.
- Implementation of a two-tier Machine Learning approach to assess future climate risks along the Veneto coastal municipalities.
- Application of a custom LLM to prioritise risks and improve adaptation strategies in the Veneto coast.

Supervisors: Prof. Andrea CRITTO, Prof. Sebastiano VASCON, Dr. Silvia TORRESAN (CMCC)

Name and address of employer Ca' Foscari University of Venice - Dorsoduro 3246, 30123 Venezia (Italia)

Type of business or sector Research activities, climate change vulnerability and risk assessment

Dates	09/2023 → 11/2024
Occupation or position held	Collaborator researcher
Main activities and responsibilities	<p>The research activities are carried out within Horizon 2020 <b>MYRIAD_EU</b> project (2021 → 2025) (<a href="https://www.myriadproject.eu/">https://www.myriadproject.eu/</a>): Multi-hazard and sYstemic framework for enhancing Risk-Informed mAnagement and Decision-making in the E.U.</p> <ul style="list-style-type: none"> <li>- Contribution to the organization of <i>Focus Groups</i> for the Veneto Pilot.</li> <li>- Contribution to the collection and updating of hazard, exposure and vulnerability indicators for the Veneto Pilot and their use in the testing phase of multi-risk methods and tools for the Veneto Pilot.</li> <li>- Contribution to the writing of technical-scientific reports for the Veneto case study.</li> </ul>
Name and address of employer	<p>Fondazione Euro-Mediterranean Center on Climate Change   RAAS Division  Fondazione CMCC: via Marco Biagi 5 - 73100 Lecce, Italy  RAAS Division: Edificio Porta dell'Innovazione - Piano 2 - Via della Libertà, 12 - 30175 Venezia</p>
Type of business or sector	Research activities, climate change vulnerability and risk assessment
Dates	05/2020 → 08/2023
Occupation or position held	Affiliate researcher
Main activities and responsibilities	<p>The research activities are carried out within the following projects:</p> <p><b>ADRIACLIM</b> project (2021 → 2023) (<a href="http://www.italy-croatia.eu/web/adriacim">www.italy-croatia.eu/web/adriacim</a>): <i>Climate change information, monitoring and management tools for adaptation strategies in Adriatic coastal areas.</i></p> <ul style="list-style-type: none"> <li>- Contribution to the development of a Machine Learning approach to support disaster risk reduction and climate adaptation planning in the Veneto pilot;</li> <li>- Collaboration with local stakeholders and communities to retrieve local data, as well as to identify the most suitable adaptation plans to be implemented along the Veneto pilot.</li> </ul> <p><b>CORILA – VENEZIA2021</b> project (2019 → 2022) (<a href="http://www.corila.it">www.corila.it</a>): Analysis of exposure and vulnerability of natural and anthropic systems to climate change-related impact in the Metropolitan city of Venice and its lagoon.</p> <p><b>SAVEMEDCOASTS-2</b> project (2019 → 2022) (<a href="http://www.savemedcoasts.eu">www.savemedcoasts.eu</a>): Review of the state-of-art needs for prevention from natural disasters in Mediterranean coastal areas, due to the combined impact of sea level rise (SLR) and land subsidence (LS) in the major river deltas, lagoons and reclamation areas previously identified in the SAVEMEDCOASTS project, being the coastal zones most exposed to flooding within the Mediterranean region.</p> <p><b>TRITON</b> project (2018 → 2021) (<a href="http://www.interregtriton.eu">www.interregtriton.eu</a>): Contribution to the development of a handbook aimed at identifying management tools and directives for immediate protection of biodiversity in coastal areas affected by sea erosion.</p>
Name and address of employer	<p>Fondazione Euro-Mediterranean Center on Climate Change   RAAS Division  Fondazione CMCC: via Marco Biagi 5 - 73100 Lecce, Italy  RAAS Division: Edificio Porta dell'Innovazione, Piano 2 - Via della Libertà, 12 - 30175 Venezia</p>
Type of business or sector	Research activities, climate change vulnerability and risk assessment
Dates	04/2020 → 08/2020
Occupation or position held	Research fellow
Main activities and responsibilities	<p><i>"Risk assessment of climate change impacts in the Metropolitan City of Venice and its lagoon"</i></p> <p>The research activities are carried out within the <b>CORILA – VENEZIA2021</b> project (2019 → 2022) (<a href="http://www.corila.it">www.corila.it</a>): Analysis of exposure and vulnerability of natural and anthropic systems to climate change-related impact in the Metropolitan city of Venice and its lagoon.</p> <ul style="list-style-type: none"> <li>- Contribution to the writing of technical-scientific reports for the Veneto case study.</li> </ul>
Name and address of employer	Ca' Foscari University of Venice - Dorsoduro 3246, 30123 Venezia (Italia)
Type of business or sector	Research activities, climate change vulnerability and risk assessment

Dates	03/2020 → 04/2020
Occupation or position held	Junior researcher
Main activities and responsibilities	<p>The research activities are carried out within the following projects:</p> <p><b>SAVEMEDCOASTS-2</b> project (2019 → 2022) (<a href="http://www.savemedcoasts.eu">www.savemedcoasts.eu</a>): Review of the state-of-art needs for prevention from natural disasters in Mediterranean coastal areas, due to the combined impact of sea level rise (SLR) and land subsidence (LS) in the major river deltas, lagoons and reclamation areas previously identified in the SAVEMEDCOASTS project, being the coastal zones most exposed to flooding within the Mediterranean region.</p> <p><b>TRITON</b> project (2018 → 2021) (<a href="http://www.interregtriton.eu">www.interregtriton.eu</a>): Contribution to the development of a handbook aimed at identifying management tools and directives for immediate protection of biodiversity in coastal areas affected by sea erosion and establishment of appropriate environmental control systems; Collaboration with local stakeholders (e.g., municipality of Ugento, Lecce) aimed at study and implement the most suitable adaptation measures and strategies (e.g., nature-based solutions) to tackle coastal erosion.</p>
Name and address of employer	<p>Fondazione Euro-Mediterranean Center on Climate Change   RAAS Division</p> <p>Fondazione CMCC: via Marco Biagi 5 - 73100 Lecce, Italy</p> <p>RAAS Division: Edificio Porta dell'Innovazione - Piano 2 - Via della Libertà, 12 - 30175 Venezia</p>
Type of business or sector	Research activities, climate change vulnerability and risk assessment
<b>Education and training</b>	
Dates	04/2024
Title of qualification awarded	Participation to the "UCPM - Introduction to the Union Civil Protection Mechanism" course
Principal subjects/occupational skills covered	Introductory course about humanitarian aid and civil protection of the European Union, as well as relevant decisions and regulations about the Union Civil Protection Mechanism (UCPM) and introduction to the main components and tools of the UCPM and how it works in case of an activation.
Name and type of organisation	European Commission
Dates	26/08/2023 → 17/09/2023
Title of qualification awarded	Participation to the ESSA Summer School on " <i>Social Simulation</i> "
Principal subjects/occupational skills covered	Introductory course on Agent-Based Models aimed at postgraduate students, early career researchers and analysts from academia, industry and policy, to learn 'Agent-Based Modelling for Wicked Problems'.
Name and type of organisation	The James Hutton Institute - Craigiebuckler Aberdeen AB15 8QH Scotland (United Kingdom)
Dates	01/09/2022 → 07/09/2022
Title of qualification awarded	Participation to the IS-ENES3 Summer School on " <i>Data Science for Climate Modelling</i> "
Principal subjects/occupational skills covered	Increase expertise and skills on theoretical and practical concepts of Data Science, building upon and mainly targeting how to accelerate scientific discovery from data. Activities covers analysis, visualization and report on massive datasets, in the scientific domain as well as application of data-intensive and data-oriented paradigms and solutions to address scientific discovery in climate science.
Name and type of organisation	Institute of Informatics and Telecommunications, NCSR 'Demokritos', 27, Neapoleos str & Patriarchou Grigoriou E, Ag. Paraskevi 153 41 (Greece)
Dates	01/09/2020 →
Title of qualification awarded	Master of Research in " <i>Science and Management of Climate Change</i> "
Principal subjects/occupational skills covered	The Master's programme prepare experts in understanding, synthesizing, and communicating the biophysical and socio-economic nature of climate change, evaluating the socio-economic implications of climate risks, and designing innovative policy solutions and risk management strategies.
Name and type of organisation providing education and training	<p>Ca' Foscari University of Venice - Dorsoduro 3246, 30123 Venezia (Italia)</p> <p>Department of Environmental Science, Informatics and Statistics – Via Torino 155, Venezia (Italia)</p>

Dates	09/2017 → 03/2020
Title of qualification awarded	Master's degree in "Environmental Science" (LM75) (110/110 cum Laude) Curriculum: Global Environmental Change
Principal subjects/occupational skills covered	Development and application of a GIS-based Bayesian Network approach, exploiting functionalities offered by both methods to evaluate the probability (and related uncertainty) of coastal erosion risks, and connected water quality variation against multiple 'what-if' scenarios, including different management measures (e.g., nature-based solutions) and oceanographic conditions (i.e., rising coastal waves). Resulting output of its application to the testing case of the shoreline of the municipality of Ugento (Apulia Region - Italy), represents valuable information to support robust decision-making and to provide the means for adaptive policy pathways in the context ICZM implementation and disaster risk reduction, related to the management of coastal areas in the area of intervention. Thesis: Multi-scenario analysis in the Apulian shoreline: a Bayesian Network approach to support coastal erosion risk assessment and management. Supervisors: Prof. Andrea Critto, Dr. Elisa Furlan (CMCC)
Name and type of organisation providing education and training	Ca' Foscari University of Venice - Dorsoduro 3246, 30123 Venezia (Italia) Department of Environmental Science, Informatics and Statistics – Via Torino 155, Venezia (Italia)
Dates	10/2018 → 02/2020
Title of qualification awarded	Student traineeship (as part of the learning activities included in the MSc study plan)
Main activities and responsibilities	The research activities have been carried out within the following projects: <b>TRITON</b> project (2018 → 2021) ( <a href="http://www.interregtriton.eu">www.interregtriton.eu</a> ), including: <ul style="list-style-type: none"> <li>- Review of the state-of-the-art past and on-going projects, available datasets and methodological approaches (including indicator and index-based methods, Decision Support Systems and Bayesian Network approaches) supporting with coastal erosion risk assessment and management.</li> <li>- Development of a joint risk-based tool implemented across the Greece-Italy pilot cases of the project, by using remote sensing techniques applied to satellite images (Landsat and RapidEye), as well design and implementation of a GIS-based Bayesian Network approach for coastal erosion risks appraisal and management in the Ugento shoreline (Apulia region, Italy).</li> <li>- Contribution to the draft of technical reports and deliverables summarizing key project outcomes and providing criteria and guideline for coastal erosion risk and vulnerability assessment and management.</li> </ul> <b>DG CLIMA</b> project (2019 → 2020): Review of the state-of-the-art Decision Support Systems (DSSs) supporting systemic climate change impacts assessment across different sectors, and management purposes (e.g. integrated coastal zone management, maritime spatial planning).
Name and type of organisation providing education and training	Fondazione Euro-Mediterranean Center on Climate Change   RAAS Division Fondazione CMCC: via Marco Biagi 5 - 73100 Lecce, Italy RAAS Division: Edificio Porta dell'Innovazione - Piano 2 - Via della Libertà, 12 - 30175 Venezia
Dates	12/2018 → 07/2019
Title of qualification awarded	Specialization's degree in <i>Education and Teaching Habilitation</i>
Principal subjects/occupational skills covered	Training course in anthropo-psycho-pedagogic disciplines and in didactic methodologies and technologies ( <i>PF 24 CFU</i> ): Cognitive and Developmental Psychology (6 ETCS), Special Pedagogy and Didactics of Inclusion (6 ETCS), Methodology and General Didactics (6 ETCS), ICT (6 ETCS).
Name and type of organization providing education and training	University Ca' Foscari of Venice, Dorsoduro 2137, 30121, Venice
Dates	06/2019
Title of qualification awarded	Final Certificate
Principal subjects/occupational skills covered	Safety and health course in teaching and research activities: <ul style="list-style-type: none"> <li>- online course of general training (4 hours)</li> <li>- presence course with specific training (12 hours)</li> </ul>
Name and type of organization	University Ca' Foscari of Venice, Dorsoduro 2137, 30121, Venice

Dates	09/2012 → 09/2017																																								
Title of qualification awarded	Bachelor's degree in Environmental Engineering (L7)																																								
Principal subjects/occupational skills covered	Review on the role of vegetation in coping with the greenhouse effect at the global scale. The Earth's equilibrium has been strongly altered by anthropogenic activities, and the carbon cycle has been heavily modified. Therefore, the role of natural ecosystems, and in particular of forests, is extremely important to reduce its effects. Thesis: <i>Greenhouse effect, carbon cycle and forests</i> . Supervisor: Prof. Maria Giulia Cantiani.																																								
Name and type of organization providing educational and training	University of Trento, DICAM - Department of Civil, Environmental and Mechanical Engineering Via Mesiano, 77 - 38123 Trento																																								
Data	03/2010																																								
Title of qualification awarded	Final Certificate																																								
Principal subjects/occupational skills	Frontal and conversation classes, group-works for foreign students. Hosted by local families.																																								
Name and type of the organization providing educational and training	East Sussex College Station Approach, Hastings (UK)																																								
<b>Personal skills and competences</b>																																									
Mother tongue	Italian																																								
Other languages																																									
Self-assessment	<table><tr><th colspan="2">Understanding</th><th colspan="2">Speaking</th><th colspan="2">Writing</th></tr><tr><td colspan="2">Listening</td><td colspan="2">Reading</td><td colspan="2">Spoken interaction</td><td colspan="2">Spoken production</td><td colspan="2"></td></tr><tr><td></td><td>C1</td><td></td><td>C1</td><td></td><td>C1</td><td></td><td>C1</td><td></td><td>C1</td></tr><tr><td></td><td>B1</td><td></td><td>B1</td><td></td><td>B1</td><td></td><td>B1</td><td></td><td>B1</td></tr></table>					Understanding		Speaking		Writing		Listening		Reading		Spoken interaction		Spoken production					C1		C1		C1		C1		C1		B1		B1		B1		B1		B1
Understanding		Speaking		Writing																																					
Listening		Reading		Spoken interaction		Spoken production																																			
	C1		C1		C1		C1		C1																																
	B1		B1		B1		B1		B1																																
	(*) <a href="#">Common European Framework of Reference for Languages</a>																																								
Social skills and competences	Good ability to work in synergy with colleague students on different projects requiring flexibility and adaptability.																																								
Organisational skills and competences	Good team spirit and ability to develop European project proposal and deliverables aimed at explaining projects and environmental plans, as well as resulting output from analytical processes.																																								
Technical skills and competences	Good command of GIS and cartography tools: QGIS, ESRI ArcGis (including DSAS tool/plugin for shoreline evolution analysis). Good knowledge of R software (free software environment for statistical computing and graphics). Expert of the Bibliometrix R Package. Basic knowledge of Decision Support System: DESYCO (DEcision support SYstem for COastal climate change impact assessment). Basic command of Bayesian Networks (BNs) tools: Netica, R (bnlearn library). Good command of Microsoft Office™ tools: Word™, Excel™ and PowerPoint™. Good command of LaTeX tools: MiKTeX, TeXstudio.																																								
Artistic skills and competences	Good ability to design thematic maps and layouts.																																								
Driving licence	Category B																																								
<b>Additional information</b>																																									
<b>Dissemination activities</b>																																									
Participation to dissemination events aimed at introducing climate change-related issues to local stakeholders and communities, including the most recent 'CAMBIAMENTO CLIMATICO – Come superare l'emergenza' held in Quarto d'Altino (VE) on November 22, 2022.																																									
Organization of the Ca' Foscari University of Venice's Third Mission 'Scienza e cittadinanza: insieme per affrontare le sfide dei cambiamenti climatici' project to encourage and support research activities between Ca' Foscari, schools and local communities.																																									
<b>Tutoring Activities</b>																																									

Assistant instructor within the interdisciplinary course called 'Lesson Zero on Sustainability'. Departments of Environmental Sciences, Informatics and Statistics, of Economics and of Philosophy. University Ca' Foscari of Venice (2023 →).

Assistant instructor within the training carried out within the MSc courses in 'Environmental impacts related to climate change' and 'Chemistry of transition elements and laboratory'. Department of Environmental Sciences, Informatics and Statistics, University Ca' Foscari of Venice (2018/2019 →).

Tutor for the BSc course in 'Physics' for students enrolled in *Scienze e Tecnologie per i Beni Culturali*. Department of Molecular Sciences and Nanosystems, University Ca' Foscari of Venice (2021/2022).

### Collaborations

Conceptualization, drafting and activities organisation of the University Ca' Foscari – Third mission project '*Scienza e cittadinanza: insieme per affrontare le sfide dei cambiamenti climatici*' (2023)

Collaboration to the drafting of the H2020 MSCA-RISE **EXPERIENCE** (*EXploring new PartnErships for maRInE and coastal ecosystems management in small islands under a chaNging ClimatE*, 2020) and INTERREG Italy-Croatia **AcquaGuard** projects' proposal.

## Annexes

Annex 1: List of publications



## ANNEX 1

### LIST OF PUBLICATIONS

#### Published articles:

- Fogarin S., Zanetti M., **Dal Barco M.K.**, Zennaro F., Furlan E., Torresan S., Pham H. V., Critto A. (2023). Combining remote sensing analysis with machine learning to evaluate short-term coastal evolution trend in the shoreline of Venice. *Science of the Total Environment*, 859, 160293. DOI: <https://doi.org/10.1016/j.scitotenv.2022.160293>.
- H.V. Pham, **M.K. Dal Barco**, M. Cadau, R. Harris, E. Furlan, S. Torresan, S. Rubinetti, D. Zanchettin, A. Rubino, I. Kuznetsov, F. Barbariol, A. Benetazzo, M. Sclavo, A. Critto. (2023). Multi-model chain for climate change scenario analysis to support coastal erosion and water quality risk management for Metropolitan city of Venice. *Science of The Total Environment*, 904, 166310. DOI: <https://doi.org/10.1016/j.scitotenv.2023.166310>.
- Dal Barco M.K.**, Furlan E., Vuong P., Zachopoulos K., Kokkos N., Sylaios G., Torresan S., Critto A. (2024). Multi-scenario analysis in the Apulia shoreline: A multi-tiers analytical framework for the combined evaluation and management of coastal erosion and water quality risks. *Env. Science and Policy*, 153, 103665. <https://doi.org/10.1016/j.envsci.2023.103665>.
- Pham H.V., **Dal Barco M.K.**, Furlan E., Shahvar M. P., Critto A., Torresan S. (2024). Bayesian Network framework for the analysis of the interdependences among drivers of coastal erosion and water quality parameters and their related risks. *Journal of Marine Science and Engineering*, 12(1), 139. DOI: <https://doi.org/10.3390/jmse12010139>.
- Dal Barco M.K.**, Maraschini M., Ferrario D.M., Nguyen N.D., Torresan S., Vascon S., Critto A. (2024). A Machine Learning approach to evaluate coastal risks related to extreme weather events in the Veneto region (Italy). *International Journal on Disaster Risk Reduction*. Volume 108, 15 June 2024, 104526, <https://doi.org/10.1016/j.ijdrr.2024.104526>.
- Furlan, E., Zennaro, F., Bianconi, A., Simeoni, C., Allegri, E., Pham, H.V., **Dal Barco M.K.**, Torresan, T., Critto, A., Maraschini, M., Ferrario, D.M., Nguyen, N.D., Vascon, S. (2024). Intelligenza blu per le aree marino-costiere. *Ecoscienza - Sostenibilità e controllo ambientale*, Volume 4, 14-15. <https://www.arpae.it/it/ecoscienza/numeri-ecoscienza/anno-2024/numero-4-anno-2024/ecos-2024-04-per-web.pdf>
- Dal Barco M.K.**, M. Maraschini, N.D. Nguyen, D.M. Ferrario, O. Rufo, H.L. Fonseca, S. Torresan, S. Vascon, A. Critto. (2025). A Machine Learning approach to evaluate coastal risks related to extreme weather events in the Veneto region (Italy). *STOTEN*. Volume 965, 15 February 2025, 178586, <https://doi.org/10.1016/j.scitotenv.2025.178586>.

#### Papers in preparation:

- Dal Barco M.K.**, Casartelli V., Sanò M., Vascon S., Torresan S., Critto A. Prioritise risks and improve adaptation strategies in the Veneto coastal area through the application of a custom AI tool. *Submitted to Journal of Environmental Management*.
- Zachopoulos K., Kokkos N., **Dal Barco M.K.**, Furlan E., Vuong P., Torresan S., Critto A. Sylaios G. A Harmonized framework blending Copernicus marine data products and satellite imagery to assess coastal erosion along Greek and Italian shorelines. *In preparation*.
- Masina M., V. Boumpoulisc, D.M. Ferrario, M. Maraschini, N.D. Nguyen, **Dal Barco M.K.**, H.L. Fonseca, O. Rufo, Critto A., Torresan S. Relative risk assessment for future climate related hazards in the Veneto Region (Italy). *In preparation*.
- Biancardi R., Favilli F., **Dal Barco M.K.**, Furlan E. Empowering regional communities: co-designing multi-variate interactions of drivers of risk and co-assessing complex climate change risks in the Veneto Region. *In preparation*.

#### Proceedings of National and International Conferences:

- Dal Barco M.K.**, Casartelli V., Sanò M., Vascon S., Torresan S., Critto A. COAST-AId: a large language model supporting multi-hazard risk assessments in the Veneto region. *Accepted as oral presentation* to the EGU General Assembly. Vienna (Austria). 27 April - 2 May 2025.
- Dal Barco M.K.**, Horneman F., Torresan S. Intelligenza artificiale e soluzioni basate sulla natura a supporto dell'adattamento ai cambiamenti climatici in Veneto. *Accepted as oral presentation* to the RESTORE WORKSHOP 'Vulnerabilità e resilienza delle morfologie lagunari alla subsidenza e all'innalzamento del livello marino in laguna di Venezia'. Venice (Italy). 2 April 2025.
- Dal Barco M.K.**, Maraschini M., Ferrario D.M., Nguyen N.D., Torresan S., Vascon S., and Critto A. A Machine Learning approach to support multi-risk assessment and climate adaptation planning in the Veneto coastal area. *Accepted as poster* to the 3rd International Conference on Natural Hazards and Risks in a Changing World. Amsterdam (The Netherlands). 12-13 June 2024.
- Dal Barco M.K.**, Vascon S., Torresan S., Critto A. Building an agent-based model to assess multi-risk caused by climate change in coastal areas: the case study of the Jesolo municipality (Italy). *Accepted as poster* to the EGU General

- Assembly. Vienna (Austria). 14-19 April 2024.
- Ferrario D.M., Harris R., **Dal Barco M.K.**, Nguyen D.N., Fonseca H.L., Rufo O., Sano M., Maraschini M., Torresan S., Critto A. Towards an Intelligent-Multi-Risk Framework to model the impacts of extreme climate events on socio-economic and natural systems. Accepted as oral presentation to the AGU Annual Meeting 2023. San Francisco (USA). 11-15 December 2023.
- Dal Barco M.K.**, Ferrario D.M., Nguyen N.D., Maraschini M., Fonseca H.L., Rufo O., Torresan S., Vascon S., Critto A., Marcomini A. A Machine Learning approach to evaluate climate risks in the Veneto coastal areas. Accepted as oral presentation to the CMCC Annual Meeting 2023. Ugento (Italy). 29-31 May 2023.
- Dal Barco M. K.**, Ferrario D. M., Maraschini M., Nguyen D. N., Torresan S., Critto A. A Machine Learning approach to support climate risk assessment and adaptation planning in the Veneto coastal area. Accepted as oral presentation to the EGU General Assembly. Vienna (Austria). 23-28 April 2023.
- Dal Barco M. K.**, Ferrario D. M., Maraschini M., Nguyen D. N., Harris R., Gottardo S., Tosarin E., Vascon S., Torresan S., Critto A. A Machine Learning approach to support multi-risk assessment and climate adaptation planning in the Veneto region. Accepted as oral presentation to the Annual CMCC Conference. Lecce (Italy). 19-20 December 2022.
- Dal Barco M. K.**, Ferrario D. M., Maraschini M., Nguyen D. N., Pasquali A., Vascon S., Torresan S., Critto A. A Machine Learning approach to assess coastal risks related to extreme weather events along the coast of the Veneto region (Italy). Accepted as oral presentation to the SISC Conference. Rome (Italy). 19-21 October 2022.
- Dal Barco M. K.**, Maraschini M., Ferrario D. M., Nguyen D. N., Vascon S., Torresan S., Critto A. A Random Forest application to assess coastal risks related to extreme weather events on the municipalities of the Veneto region (Italy). Accepted in the poster session of the Mid-Term AdriaClim Conference. Split (Croatia). 7-8 June 2022.
- Dal Barco M. K.**, Vuong P., Fogarin S., Zanetti M., Cadau M., Harris R., Rubino A., Zanchettin D., Barbariol F., Benetazzo A., Furlan E., Torresan S., Critto A. Evaluating climate change and coastal erosion risks on the Venice coastline: a Machine Learning approach supporting multi-risk scenario analysis. Accepted as oral presentation at the EGU General Assembly. Vienna (Austria). 23-28 May 2022.
- Fogarin S., Zanetti M., **Dal Barco M. K.**, Zennaro F., Allegri E., Furlan E., Torresan S., Critto A., Marcomini A. An integrated and automatic approach to evaluate coastal erosion risk and its nexus with oceanographic drivers and water quality parameters: the Venice littoral case study. Accepted as oral presentation at the SISC 9<sup>th</sup> Annual Conference CLIMRISK21 - Climate Risk: Accelerating climate action. A just transition in a post-covid era. ONLINE. 22-24 September 2021.
- Dal Barco M. K.**, Furlan E., Vuong P., Torresan S., Critto A., Marcomini A. Multi-scenario analysis in the Apulian shoreline: A Bayesian network approach to support coastal erosion risk management. Accepted as oral presentation at the ECSA 58-EMECS 13: Estuaries and coastal seas in the Anthropocene – Structure, functions, services and management, University of Hull (United Kingdom). ONLINE. 6-10 September 2021.
- Fogarin S., Zanetti M., **Dal Barco M. K.**, Zennaro F., Allegri E., Furlan E., Torresan S., Critto A., Marcomini A. The evolution of Venice coast in the period 2015-2019: An advanced satellite images processing and machine learning approach to evaluate coastal erosion risk in a gentle-sloping sandy littoral. Accepted as oral presentation at the ECSA 58-EMECS 13: Estuaries and coastal seas in the Anthropocene – Structure, functions, services and management, University of Hull (United Kingdom). ONLINE. 6-10 September 2021.
- Dal Barco M. K.**, Furlan E., Vuong P., Torresan S., Critto A., Marcomini A. A GIS-based Bayesian Network approach for coastal erosion multi-risk assessment and climate adaptation: The case study of the Ugento shoreline. Accepted as oral presentation at the CMCC annual meeting 2020. ONLINE. 9 November 2020.
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- Dal Barco M. K.**, Furlan E., Vuong P., Torresan S., Critto A., Marcomini A. Evaluating coastal erosion risks in the Ugento shoreline: A Machine Learning approach supporting multi-scenario analysis. Accepted as oral presentation at the HERMES Virtual International Conference - Adapting to Coastal Zone Challenges and Risks: Innovative Approaches and Solutions for Local and Regional Authorities in the Balkan-Mediterranean area, Democritus University of Thrace (Greece). 18-19 June 2020.
- Furlan E., Torresan S., **Dal Barco M. K.**, Derpasko D., Critto A., Marcomini A. Risk assessment for coastal ecosystem services under changing climate and land use scenarios: results from the SAVEMEDCOAST and TRITON projects. Accepted as oral representation at the SISC 7<sup>th</sup> Annual Conference CLIMRISK19 - Climate Risk: implications for ecosystem services and society, challenges, solutions, Trento (Italy). 23-25 October 2019.



## Working documents:

Deliverable 2.2.2 'Training kit for capacity building on Decision Support Matrix Tool and Strategy for Prioritization' – Interreg IT-HR AcquaGuard project. *In preparation.*

Deliverable 1.1.2 'Risk portfolios for the project regions' – Interreg IT-HR AcquaGuard project. *Submitted.*

Deliverable 1.4.1 'Risks and solutions capacity building curriculum and plan' – Interreg IT-HR AcquaGuard project. *Submitted.*

Deliverable 1.4.2 'Risks and solutions capacity building materials' – Interreg IT-HR AcquaGuard project. *Submitted.*

Deliverable 2.1.1 'The Decision Support Matrix Tool' – Interreg IT-HR AcquaGuard project. *Submitted.*

Deliverable 3.3b 'Interim report on implementation and testing of MYRIAD-EU methods and tools in each Pilot' – H2020 MYRIAD-EU project. *Submitted.*

Deliverable 5.4.7. 'Guidelines to support cities in developing adaptation plans for Veneto project area' – Interreg IT-HR AdriaClim project. *Submitted.*

Deliverable 5.4.6. 'Definition of primary risk information layers to be included in the WP4 geoportal for the Veneto Pilot area' – Interreg IT-HR AdriaClim project. *Submitted.*

Deliverable 5.4.5. 'Multi-risk assessment in the Veneto Region pilot area: comparative analysis and prioritization of main impacts, vulnerabilities and risks related to climate change' – Interreg IT-HR AdriaClim project. *Submitted.*

Deliverable 5.2.2.2 'Analisi del rischio nello scenario futuro'. CORILA Venezia2021 project. *Submitted.*

Deliverable 5.2.2.1 'Analisi del rischio nello scenario baseline'. CORILA Venezia2021 project. *Submitted.*

Deliverable 5.4 'Handbook - Integrated coastal zone management analysis and Triton project position paper'. Interreg V-A Greece-Italy TRITON project. *Submitted.*

Deliverable 4.3 'Pilot test and joint tool development with local/operators and player's involvement'. Interreg V-A Greece-Italy TRITON project. *Submitted.*

Deliverable 3.5 'Development of the framework and tool for final users with training'. Interreg V-A Greece-Italy TRITON project. *Submitted.*

Deliverable 3.1 'Census of needs/mapping of existing systems for coastal management'. Interreg V-A Greece-Italy TRITON project. *Submitted.*

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