

PERSONAL INFORMATION

Hung Vuong, PHAM



📍 Euro-Mediterranean Center on Climate Change | Ca' Foscari University of Venice
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🌐 <https://www.cmcc.it/people/vuong-pham>

💬 Skype vuongpham88

Sex Male | Date of birth 17/12/1988 | Nationality Vietnamese

WORK EXPERIENCE

- 12/2021 – Present **Researcher at the Euro-Mediterranean Center on Climate Change (CMCC)**
- Supporting in writing project proposals, fundraising, and project management.
 - Spatial analysis in both GIS program (e.g. QGIS, ArcGIS) and programming language (e.g. R, Python).
 - Ecosystem service modeling
 - Exposure, hazard, vulnerability, and risk assessment, and scenarios analysis using Machine Learning methods such as Bayesian network, Random Forest.
- Current projects:
- VENEZIA2021. Topic: Analysis of exposure and vulnerability of the Venice lagoon and metropolitan city of Venice under climate change
 - MaCoBioS - Marine Coastal Ecosystems Biodiversity and Services in a Changing World
- 12/2020 – 11/2021 **Postdoc Research fellow at Ca' Foscari University of Venice (Ca'Foscari)**
- Supporting in writing project proposals, fundraising, and project management.
 - Spatial analysis in both GIS program (e.g. QGIS, ArcGIS) and programming language (e.g. R, Python).
 - Ecosystem service modeling
 - Exposure, hazard, vulnerability, and risk assessment, and scenarios analysis using Machine Learning methods such as Bayesian network, Random Forest.
- Projects:
- VENEZIA2021. Topic: Analysis of exposure and vulnerability of the Venice lagoon and metropolitan city of Venice under climate change
 - MaCoBioS - Marine Coastal Ecosystems Biodiversity and Services in a Changing World
- 12/2019 – 11/2020 **Researcher fellow at Ca' Foscari University of Venice (Ca'Foscari)**
Porta dell'Innovazione Building - 2nd Floor, Via della Libertà, 12 - 30175 Venice (VE), Italy.
- Supporting in writing project proposals, fundraising, and project management.
 - Spatial analysis in both GIS program (e.g. QGIS, ArcGIS) and programming language (e.g. R, Python).
 - Ecosystem service modeling (e.g. InVEST model)
 - Exposure, hazard, vulnerability, damage and risk assessment, and scenarios analysis using Machine Learning methods such as Bayesian network.
- Projects:
- VENEZIA2021. Topic: Analysis of exposure and vulnerability of the Venice lagoon and metropolitan city of Venice under climate change

- 01/2017 - present **Research associate at the Euro-Mediterranean Center on Climate Change (CMCC)**
- Supporting in writing project proposals, fundraising, and project management.
 - Working on reports, deliverables, milestones of CMCC project:
 - MaCoBioS - Marine Coastal Ecosystems Biodiversity and Services in a Changing World. Topic: Risk and adaptation of marine coastal socio-ecological systems
 - LODE (2020)- Loss Data Enhancement for DRR and CCA Management. Topic: Multi-sectoral flood damage assessment and multi-scenario analysis using the Bayesian Network approach.
 - TRITON (2019) Development of management tools and directives for immediate protection of biodiversity in coastal areas affected by sea erosion and establishment of appropriate environmental control systems
 - PROLINE-CE (2017) Efficient Practices of Land Use Management Integrating Water Resources Protection and Nonstructural Flood Mitigation Experiences – funded by INTERREG
- 12/2011 – 09/2016 **Water Resource Management Specialist**
- Institute of Water Resources Planning, Hanoi, Vietnam – 162A - Tran Quang Khai, Hoan Kiem, Ha Noi
- Carry out all activities related to water resources management such as flood prevention plans, drought prevention plans, and water supply system;
 - Collect, analyze project data and propose the best management options for water resources;
 - Deal with issues related to climate change phenomena such as extreme floods, droughts and salt intrusion in coastal areas.
- List of participated projects**
- Flood protection plan of Day river basin, Vietnam (2016);
 - Flood protection plan of Thai Nguyen province, Vietnam (2016);
 - Water resources plan of Thai Nguyen province, Vietnam (2016);
 - Integration of climate change information into the water resources plan of the Midlands and Northern parts of Vietnam (2015);
 - Integrated and sustainable water management of the Red-Thai Binh River system in a changing climate, IMRR (2013);
 - Flood protection plan of the Red and Thai Binh river basin, Vietnam (2013);
 - Flood protection plan of Bac Kan province, Vietnam (2012);
 - Flood protection plan of Ha Noi city, Vietnam (2012).
- Sector Planning**
- 03/2011 - 12/2011 **Hydraulic Engineer**
- Company of Consultancy and Technology for Irrigation – 5A - Dai Kim, Hoang Mai, Ha Noi
- Design hydraulic works for water supply and flood preventions such as dams, culverts, spillways, and canals;
 - Design civil works including houses, roads, and bridges;
 - Compute and calculate costs and total financial plans for proposed projects.
- List of participated projects**
- Handling the emergency case of the left bank system of Tich river in the part of Tien Truong village, Thuy Xuan Tien, Truong My, Ha Noi (2011);
 - Designing the Dong Bo reservoir system in Dong Xuan, Quoc Oai, Ha Noi including a reservoir, a dam, a spillway, a sluice, and canal system (2011);
- Sector Designing**

EDUCATION AND TRAINING

- 09/2016 – 03/2020 **Ph.D. in Science and Management of Climate Change**
- Ca' Foscari university – Dorsoduro 3246, 30123 Venezia, Italy.
<http://www.unive.it/>
- Thesis: Multi-risk assessment of freshwater ecosystem services under climate change conditions
- Ecosystem services (ES) modeling (i.e., InVEST model) to project the capacity of the freshwater ES.
 - Identify and quantify the joint impacts of climate change and land-use change on ES.
 - Assess the potential space, using the Bayesian Network approach, to improve the capacity of ES toward sustainable, supporting decision-makers.
- 2019-10/2020 **Professional Master's Programme (2nd level) in Science and Management of Climate Change**
- Ca' Foscari university – Dorsoduro 3246, 30123 Venezia, Italy.
<http://www.unive.it/>

- 12/2018 – 03/2019 **Visiting student in Catalan Institute for Water Research**
101, Emili Grahit street, 17003, Girona, Spain
<http://icra.cat/>
- 07/2017 **Summer school “Training course on Modelling of freshwater-related ecosystem services” – Catalan Institute for Water Research**
101, Emili Grahit street, 17003, Girona, Spain
<http://icra.cat/>
- 09/2016 **Summer school “Framing global change and green economy in the Sustainable Development Goals” – Venice International University**
Isola di San Servolo, 30133 Venice, Italy
<https://www.univiu.org/>
- 09/2013 – 10/2015 **Master of Science degree in Environmental and Geomatic Engineering (110/110)**
Politecnico di Milano, Como campus – via Castenuovo 7, Como, 22100, Italy.
<http://www.polimi.it/>
- Modeling natural phenomena and territorial processes;
 - Modeling the exploitation of natural resources, especially water resources;
 - Designing sustainable exploitation plans.
- Final thesis: Using ENSO information to improve the operations of the Hoa Binh reservoir, Vietnam.
- 08/2006 – 03/2011 **Bachelor of Hydraulic Engineering (8.13/10 ~ 105-110/110)**
Hanoi Water Resources University, Vietnam – 175 Tay Son, Dong Da, Ha Noi.
<http://en.tlu.edu.vn/>
- Solid concept of hydraulic systems;
 - Designing hydraulic works such as dams, culverts, irrigation system, and water supply system;
 - Short-term and long-term plans for the water system adapting to climate changes.
- Final thesis: Designing the reservoir system A Trum, Quang Tri, Viet Nam including a gravity dam, a culvert, a spillway, and a canal system.

PERSONAL SKILLS

Mother tongue Vietnamese

Other languages

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	IELTS 7.5	IELTS 7.0	IELTS 6.0		IELTS 6.0
Italian	B2	B1	B2	B1	A2

- Communication skills**
- good communication skills obtained during social activities: charity activities in Vietnam, Flashmob 2014 in Como, Italy. Being the President of the Vietnamese Student Association in Italy since 2019.
- Organisational / managerial skills**
- experienced in writing MAECI and European project proposals.
 - good organizational skills obtained during volunteer activities: Vietnamese volunteer, assistant student for the international event “HYDRO 2014 – Cernobbio, Italy” (a week); volunteer for EXPO 2015 – Milan, Italy (2 weeks); assistant student for Politecnico di Milano (a month).
- Computer skills**
- high skill in Ecosystem modeling (Integrated Valuation of Ecosystem Services and Tradeoffs - InVEST);
 - high skill in Bayesian Network model in R environment;
 - high skill in Microsoft Office™ tools: Word, Excel, PowerPoint, Publisher;
 - high skill in graphical programs: AutoCad, Photoshop, Inkscape;
 - high skill of GIS programs: QGIS, ArcGIS, Mapinfo;
 - high skill of hydraulic programs: GEO-SLOPE, MIKE family (MIKE 11, MIKE 21, MIKE FLOOD), HEC-RASS, WEAP;
 - high skill of programming language: R
 - intermediate skill of other programming languages: MATLAB, Python, Octave, C++
 - basic skill of markup languages: HTML, OpenLayers.
- Other skills**
- running: participated in Stramilano 2015 (Milan, Italy) and Future Run 2018 (Venice, Italy)
 - Badminton, ping-pong
- Driving licence**
- A1

ADDITIONAL INFORMATION

Scientific publications

- **Pham, H. V.**, Sperotto, A., Furlan, E., Torresan, S., Marcomini, A., & Critto, A. (2021). Integrating Bayesian Networks into ecosystem services assessment to support water management at the river basin scale. *Ecosystem Services*, 50, 101300. <https://doi.org/10.1016/j.ecoser.2021.101300>
- **Pham, Hung Vuong**, Anna Sperotto, Silvia Torresan, Vicen Acua, Ddac Jorda-capdevila, Guido Rianna, Antonio Marcomini, and Andrea Critto. 2019. "Coupling Scenarios of Climate and Land – Use Change with Assessments of Potential Ecosystem Services at the River Basin Scale." *Ecosystem Services* 40 (May): 101045. <https://doi.org/10.1016/j.ecoser.2019.101045>.
- **Pham, Hung Vuong**, Silvia Torresan, Andrea Critto, and Antonio Marcomini. 2019. "Alteration of Freshwater Ecosystem Services under Global Change – A Review Focusing on the Po River Basin (Italy) and the Red River Basin (Vietnam)." *Science of the Total Environment* 652. Elsevier B.V.:1347–65. <https://doi.org/10.1016/j.scitotenv.2018.10.303>.

Publications in review and in preparation

- Dal Barco, MK., Furlan, E., **Pham, H. V.**, Torresan, S., Critto, A., Marcomini, A. Evaluating coastal erosion risks in the Ugento shoreline: a Machine Learning approach supporting multi-scenario analysis. HERMES Virtual International Conference - ISBN: 978-618-83472-1-2.
- R. Harris, E. Furlan, **H. V. Pham**, S. Torresan, J. Mysiak, A. Critto. "A Bayesian network approach for multi-sectoral flood damage assessment and multi-scenario analysis". (Submitted to Climate risk management - Under review).
- E. Furlan, D. Derepasko, **H. V. Pham**, S. Torresan, S. Fogarin, A. Critto. "Ecosystem services at risk from coastal inundation under extreme sea level scenarios: a spatially resolved approach supporting climate change adaptation" (Submitted to Integrated Environmental Assessment and Management – Under review).
- Ward, Philip James, James Daniell, Melanie Duncan, Anna Dunne, Cédric Hananel, Stefan Hochrainer-Stigler, Annegien Tijssen, **Hung Vuong Pham**, et al. "Invited perspectives: A research agenda towards Disaster Risk Management pathways in multi-risk assessment." *Natural Hazards and Earth System Sciences Discussions* (Under review).
- Dal Barco, MK., Furlan, E., **Pham, H. V.**, Torresan, S., Critto, A., Marcomini, A. "Multi-scenario analysis in the Apulia shoreline: A Bayesian network approach to support coastal erosion risk assessment and management" (In preparation for STOTEN)

Presentations at conferences

- Dal Barco, MK., Furlan, E., Pham, H. V., Torresan, S., Critto, A., Marcomini, A., 2021 “Multi-scenario analysis in the Apulia shoreline: a bayesian network approach to support coastal erosion risk assessment and management”. ECSA58 – EMECS 13 Online Conference - 6-9 September 2021
- Simeoni Christian, Elisa Furlan, Elena Allegri, Vuong Pham, Andrea Critto, Silvia de Juan, Ewan Trégarot, Cindy Cornet, Erik Meesters, Catarina Fonseca, Andrea Z. Botelho, Cristina Seijo, Torsten Krause, Alica N’Guetta, Fabiola Espinoza Cordova, Pierre Failler and Antonio Marcomini., 2021 “Cumulative Impacts Assessment (CIA) on marine and coastal ecosystems: key outputs from the scientometric and systematic reviews” *Submitted to the 9th SISC Annual Conference (2021)*
- Simeoni Christian, Elisa Furlan, Elena Allegri, Vuong Pham, Andrea Critto, Silvia de Juan, Ewan Trégarot, Cindy Cornet, Erik Meesters, Catarina Fonseca, Andrea Z. Botelho, Cristina Seijo, Torsten Krause, Alica N’Guetta, Fabiola Espinoza Cordova, Pierre Failler and Antonio Marcomini., 2021 “A review of cumulative impact assessment approaches and their applications for integrated management of marine and coastal ecosystems” Submitted to the ECSA 58 – EMECS 13 Estuaries and coastal seas in the Anthropocene – Structures, functions, services and management, held online 6-9 September 2021.
- Simeoni Christian, Elisa Furlan, Elena Allegri, Vuong Pham, Andrea Critto, Silvia de Juan, Ewan Trégarot, Cindy Cornet, Erik Meesters, Catarina Fonseca, Andrea Z. Botelho, Cristina Seijo, Torsten Krause, Alica N’Guetta, Fabiola Espinoza Cordova, Pierre Failler and Antonio Marcomini., 2021 “Cumulative Impacts Assessment (CIA) on marine and coastal ecosystems: A review and future directions for integrated management of marine and coastal ecosystems” Submitted to the ICYMARE 2021 conference in Berlin, 21 - 24 September 2021.
- Harris, R., Furlan, E., Pham, H. V., Torresan, S., Mysiak, J., & Critto, A. (2021). A Bayesian network approach for multi-sectoral flood damage assessment and multi-scenario analysis (No. EGU21-14996).
- Critto, A., Pham, H. V., Sperotto, A., Furlan, E., Torresan, S., & Marcomini, A., 2020. An ecosystem-based approach to support water quality assessment and management under climate and land-use condition – EGU General Assembly Conference Abstracts. 2020
- Pham, H. V., Sperotto, A., Furlan, E., Torresan, S., Critto, A., & Marcomini, A., 2020. Integrated application of ecosystem-based model and Bayesian Network on freshwater to explore the trade-offs among potential impacts and adaptation options in changing world – SISC conference 2020 (poster)
- Dal Barco, MK., Furlan, E., Pham, H. V., Torresan, S., Critto, A., Marcomini, A., 2020. Multi-risk scenario analysis in the Apulia shoreline: a Machine Learning approach supporting coastal erosion risks assessment and management – SISC conference 2020 (presentation)
- Dal Barco, MK., Furlan, E., Pham, H. V., Torresan, S., Critto, A., Marcomini, A., 2020. A GIS-based Bayesian Network approach for coastal erosion multi-risk assessment and management: the case study of the Ugento shoreline – CMCC annual meeting 2020.
- Pham, H. V., Sperotto, A., Furlan, E., Torresan, S., Critto, A., & Marcomini, A. (2020) An ecosystem-based approach to support freshwater quality management under climate and land-use change – CMCC annual meeting 2020.
- Pham, H. V., Sperotto, A., Torresan, S., Critto, A., Rianna, G., Santini, M., Noce, S., Acuña, V., Jorda-Capdevila, D., & Marcomini, A. (2019) Coupling scenarios of climate and land use change with assessments of ecosystem services at river basin scale - EGU 2019, Vienna 07-12 April, 2019 (Poster)
- Pham, H. V., Sperotto, A., Torresan, S., Critto, A., & Marcomini, A. (2018) Multi-risk assessment of freshwater ecosystem services under climate change and land use change - INQUIMUS 2018 - Venice 03-05 December, 2018 (Poster)
- Pham, H. V., Sperotto, A., Torresan, S., Critto, A., & Marcomini, A. (2018) Assessing the risk of climate and land use change on freshwater ecosystem services: An indicator approach supporting adaptation at the river basin scale - SISC 2018, Venice 17-19 October, 2018 (Oral)
- Pham, H. V., Sperotto, A., Torresan, S., Critto, A., & Marcomini, A. (2018). Multi-risk assessment of freshwater ecosystem services under global change - CMCC Annual Meeting 2018, Marina di Ugento, Lecce, June 05-08, 2018 (Poster)
- Pham H.V., Giove S.: Application of Multi-Criteria Decision Analysis (MCDA) methods in the evaluation of ecosystem services (ES) in the context of climate change - 85th meeting EURO working group MCDA (Padova, April 20-22, 2017) (Oral)

- Conference abstracts**
- Remi Harris, Elisa Furlan, Hung Vuong Pham, Silvia Torresan, Jaroslav Mysiak, Andrea Critto. 2021 "A Bayesian network approach for multi-sectoral flood damage assessment and multi-scenario analysis" Geophysical Research Abstracts EGU General Assembly
 - Philip Ward and the MYRIAD-EU.2021 "Towards a multi-risk, multi-sector, systemic approach to risk management" Geophysical Research Abstracts EGU General Assembly
 - Critto Andrea, Hung Vuong Pham, Anna Sperotto, Silvia Torresan, and Elisa Furlan. 2020. "An Ecosystem-Based Approach to Support Water Quality Assessment and Management under Climate and Land-Use Condition." Geophysical Research Abstracts EGU General Assembly, 17117.
 - Pham Hung Vuong, Anna Sperotto, Silvia Torresan, Andrea Critto, and Guido Rianna. 2019. "Coupling Scenarios of Climate and Land Use Change with Assessments of Ecosystem Services at River Basin Scale." In , edited by EGU General Assembly 2019, 21:8690. Geophysical Research Abstracts
 - ENSO detection and use to inform the operation of large-scale water systems, *Geophysical Research Abstracts*, Vol. 18, EGU2016-8453, 2016.
- Other publications**
- Rianna G., Alessandrini C., Pecora S., Cristofori D., Ferroni G., Ricciardi G., Noce S., Sperotto A., Pham H.V., Torresan S., Critto A., 2017. Deliverable T1.1.1 Country Reports About the Implementation of Sustainable Land Use in Drinking Water Recharge Areas (Italy)-Peer review of land use and water management practices, PROLINE-CE Project.
 - Rianna G., Cristofori D., Noce S., Sperotto A., Pham H.V., Torresan S., Critto A., 2017. Deliverable T1.2.1 Country-specific best management practice reports (Italy)- Review of best management practices for drinking water supply issues, PROLINE-CE Project.
 - Roland K., Sperotto A., Pham V., Torresan S., 2018 D.T3.1.1 Analytic report about potential public services of sustainable land use, PROLINE-CE Project.
 - Rianna G., Pham V., et. al., 2018 O.T2.3 PA cluster 'riparian strips' – Implementation, showcasing best management practices, PROLINE-CE.
 - Daniela Anghileri, Dario Bernardi, Simone Bizzi, Minh Tuan Bui, Andrea Castelletti, Simona Denaro, Quang Dinh, Matteo Giuliani, Thanh Lan Ha, Viet Son Le, Emanuele Mason, Marco Micotti, Thi Bich Thuy Nguyen, Van Tuan Nguyen, Xuan Phung Nguyen, Sara Pavan, Hung Vuong Pham, Tuyet Mai Pham, Francesca Pianosi, Thi Xuan Quach, Leonardo Schippa, Rafael Schmitt, Rodolfo Soncini Sessa, Van Anh Truong, Phuong Nam Vu, Enrico Weber, 2015. Executive Summary of "Integrated and sustainable management of Red-Thai Binh river system in a changing climate", IMRR project
- Teaching and tutoring activities**
- 20 hours of tutoring for the 1st year-PhD student in Science and Management of Climate change of Ca'Foscari university.
 - Preparing teaching material for the course "Climate change and environmental pollution" of PhD course in Science and Management of Climate change, Ca'Foscari university
 - 150 hours of tutoring for 1st year-Master student in Environmental and geomatic engineering of Politecnico di Milano university.
- Conferences**
- SISC 2020, online;
 - EGU 2020, online;
 - EGU 2019, Vienna, Austria - 07-12/04/2019;
 - SISC 2018, Venice, Italy - 17-19/10/2018
 - Ecosystem Services model (InVEST), ICRA, Girona, Spain
 - HYDRO 2014 – Building on Recent Development Progress, The international journal on Hydropower and Dams – October, 2014, Cernobbio, Italy.
- Seminars/workshops**
- INQUIMUS 2018, Venice, Italy - 3-05/12/2018
 - MCDA 2017, Padova, Italy
 - 12/2015: River basin management & Multi-purpose Reservoir Operation, HUNRE, Ha Noi, Vietnam.
- Courses**
- 03/2012: Mike 11 course, DHI centre, Vietnam;
- Honours and awards**
- Representative Vietnamese scholar in Italy for the Global Vietnamese Young Scholar Forum - 2019
 - Scholarship for 3 years of PhD in Science and Management of Climate Change, Ca'Foscari university, Venice, Italy;
 - IMRR scholarship for 2 years of master's degree in Politecnico di Milano, Milan, Italy;
 - Gold scholarship for 4.5 years of bachelor's degree in Water Resources University, Hanoi, Vietnam.