

PERSONAL INFORMATION

Tommaso Pacetti



POSITION

Environmental Engineer

WORK EXPERIENCE

March 2020 - ongoing

Lecturer

University of Camerino (Italy)

- Course of Ecosystem Services - MSc in Biological Sciences

January 2019- March 2021

Postdoc Research Fellow

Department of Biomolecular Sciences - University of Urbino (Italy)

- Agrismart project. Evaluation and mapping of Ecosystem services aiming at developing an environmental reporting in the districts of Lugela, Derre, Namarroi e Gilé in Zambezia (Mozambique)
- Foreste project: Ecosystem Services assessment in the Mocubela district (Mozambique) to support an integrated production system that can reduce vulnerability to climate change.

May 2018- ongoing

Consultant

Sogesid spa c/o Ministry of Environment (Italy)

- Member of the Creiamo PA project technical team for strengthening the administrative and technical capacity of the competent authorities for the management and sustainable use of water resources

May 2018- September 2018

Consultant

ReteSviluppo s.coop (Italy)

- Responsible of the project WaterValues for the participatory evaluation of water related ecosystem services in the Arno river basin

February 2018- April 2020

Lecturer

University of Florence (Italy)

- Course of Hydraulic Plants and Advanced Hydrology - MSc in Civil and Environmental Engineering

January 2018- December 2018

Postdoc Research Fellow

Department of Civil and Environmental Engineering - University of Florence (Italy)

- Research activities in the field of Water-Energy-Land Nexus analysis for integrated water management

February 2015 -January 2017

Scientific Consultant

CERAFRI - Centre of Research and Advanced Education for Hydrogeological Risk Prevention, University of Florence (Italy)

- Water footprint analysis of agricultural production in Tuscany (ISO 14046 and Water Footprint Network methodologies)

November 2014 - December 2014

Internship

ICU Beirut (Lebanon)

- Internship within the Accbat project for the improvement of water demand management and increase of water resources availability, through re-use of urban treated wastewater in the Beka valley

January 2014- December 2014

Technical Consultant

ProGeo Engineering (Italy)

- Member of E²STORMED project (Med Programme) technical team. E²STORMED aims to improve energy efficiency in the urban water cycle and in buildings by promoting the use of innovative storm water solutions such as Sustainable Drainage Systems (SuDS) in Mediterranean cities

May 2014- August 2014

Internship

Departamento de Ciencias Agroforestales - University of Huelva (Spain)

- Water resources management for irrigation district of Palos de la Frontera. Setting up forecasting artificial neural networks (ANN) models to optimize the use of water and energy in agriculture

January 2014- June 2104

Internship

CERAFRI - Centre of Research and Advanced Education for Hydrogeological Risk Prevention, University of Florence (Italy)

- Investigating the possibilities of implementing WF case study within the framework of Water energy nexus

February 2011- July 2013

Technical Consultant

Pisa municipality (Italy), Jericho Municipality (Palestine)

- Member of WADI Project (EU Ciudad Programme) technical team for Water master plan drafting and river training structures design. The project aims to create a Master Plan for surface water for Jericho municipality. The project is based on joint work between Palestinian and Italian partner municipalities (Jericho and Pisa) in order to develop appropriate plans for surface water management and flood control

January 2010-October 2010

Internship

Engineering Without Borders (Italy)

- Member of "Tulkarem project" technical team. The internship was based on the study of Tulkarem (Palestinian Territories) hydrological situation and analysis of issues relating to water resource management. Field activities to gather data and to implement an hydraulic simulation model of the water network of the city

EDUCATION AND TRAINING

November 2014 - May 2018

International PhD in Civil and Environmental Engineering and Natural Sciences

University of Florence (Italy) - TU Braunschweig (Germany)

- Joint PhD - PhD Thesis title: Investigation of water energy land ecosystem nexus for watershed integrated management.
The PhD research activity was focused on water resources management and its possible integration with ecosystems land management in resource scarcity scenarios. During the thesis I develop methodologies for water related ecosystem services assessment, also exploring water food nexus in developing countries.
Grade: Outstanding (summa cum laude)

October 2010 - December 2013

MSc in Environmental engineering

University of Florence (Italy)

- Life cycle assessment and water footprint assessment (ISO 10040-14046) Integrated water resources management Energy system management Water resources management in semiarid zones River morphodynamics River and irrigation structures design Operations research Advanced Hydrology Design of water treatment plants Applied Economics
35 ECTS were obtained at UNESCO-IHE (Delft) during the Erasmus Program (2011)
- Master Thesis title: Water energy nexus: the case of biogas production from energy crops evaluated by Life cycle assessment and Water Footprinting.
Grade: 110/110, cum laude

02/09/2013 - 06/09/2013

ISES 2013- International school on energy systems

Forschungszentrum Jülich (Germany)

- Strategies and challenges of today's and future energy systems management. Possible transformation process towards sustainability

8/7/2013 - 12/7/2013

International summer school on Life-Cycle Approaches to Sustainable Regional Development

University of Salento (Italy)

- LCA approach in agriculture, industry, transport, services and administration. Life-Cycle Approach for design, Carbon Footprint and Water Footprint

5/9/2011 - 9/9/2011

Intensive course on "River and Coastal measurements"

CERAFRI - Centre of Research and Advanced Education for Hydrogeological Risk Prevention, University of Florence (Italy)

- Replace with a list of principal subjects covered or skills acquired

4/7/2011 - 23/7/2011

Hydroinformatics for decision support systems short course

UNESCO-IHE (Netherlands)

- System analysis in water resources planning and management

25/4/2011 - 15/5/2011

Urban Flood Modelling and Disaster Management short course

UNESCO-IHE (Netherlands)

- Theory and practice of flood risk estimation and modelling of floods in urban areas

September 2004-October 2010

BSc in Environmental engineering

University of Florence (Italy)

- Analysis of ecological systems, Geographic information systems, Water resources management Structural analysis and design, River engineering Hydrology Hydraulic structures
Thesis: Water resources assessment and distribution systems analysis for Tulkarem region, Palestine.
Grade: 107/110

PERSONAL SKILLS

Mother tongue(s) Italian

Other language(s)

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	C1	C1	C1	C1	C1

Spanish

B1	A2	B1	A2	A2
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Communication skills

- Team work: Board Member of Ingegneria Senza Frontiere (Engineering Without Borders) O.N.L.U.S.(2009 - 2010 and 2013) ISF is a no-profit Organization that intends to carry on training activities on the themes of appropriate technologies and sustainable development and to establish sustainable and durable connections between technicians and students from Italian Universities and beneficiaries in Developing Countries
- Moderator skills
- Inter cultural communication skills acquired on the field during the work activities held in Middle East countries (Palestine and Lebanon) and during LLP ERASMUS Program
- Public speaking gained through my experience as speaker in different seminars/conferences/ lessons

Organisational / managerial skills

- Research
- Meeting and Seminar Organisation
- Participatory discussion (organization of focus groups)

Job-related skills

- Ecosystem Services Assessment
- Nature based Solutions
- Hydrologic Engineering
- Applied Hydraulics
- Remote Sensing Analysis
- Project writing, budgeting, reporting
- Participatory design and planning
- Academic writing

Digital skills

Expert in hydrological modelling software (SWAT, Hec-Hms)
 Expert in GIS (Qgis, ArcGIS, Global Mapper)
 Expert with Microsoft Office programs
 Knowledge of LCA software (Simapro)
 Knowledge of Matlab and Simulink software
 Knowledge of hydraulic simulation software: Hec-ras (Usace), Epanet (Usepa)
 Experience with GIS and CAD software, both developed during university courses
 Limited experience with Mike 21(DHI), Mouse (DHI), Sobek (Deltares), Iric (Usgs), Statistica (Statsoft)
 Capable of using both Windows and Linux - Ubuntu OS

Other skills

- Classical guitarist

Driving licence

B Driving Licence

ADDITIONAL INFORMATION

- Publications**
- Pacetti, T., Castelli, G., Bresci, E. et al. (2020) Water Values: Participatory Water Ecosystem Services Assessment in the Arno River Basin, Italy. *Water Resour Manage* 34, 4527-4544 (2020).
 - Pacetti T., Lompi M., Petri C. & Caporali E. (2020) Mining activity impacts on soil erodibility and reservoirs silting: evaluation of mining decommissioning strategies. In: *Journal of Hydrology*, 2020
 - Castelli, G., Pacetti, T., Foderi, C., Castro Magnani, M., Kempff, Y. & Salbitano, F. (2018, April). Towards Landscape Ecohydrology: linking historical landscape patterns and ecosystem services provision in Bolivian sub-Andean region. In *EGU General Assembly Conference Abstracts* (Vol. 20, p. 12558).
 - Pacetti, T., Willaarts, B., Caporali, E., & Schroeder Esselbach, B. (2017). Evaluating the hydrological functioning and the supply of water provisioning services to support the ecosystem-water-food-energy nexus in the Arno river basin. In *EGU General Assembly Conference Abstracts* (Vol. 19, p. 13951).
 - Pacetti Tommaso, Enrica Caporali and Maria Cristina Rulli (2017). Floods and food security: A method to estimate the effect of inundation on crops availability. In: *Advances in Water Research 2017*
 - Pacetti Tommaso, Enrica Caporali and Boris Schroeder Esselbach (2017). valuating the supply of hydrologic ecosystem services to support the water-food-energy Nexus in the Arno river basin. *SWAT 2017 Conference Proceedings, Varsavia*
 - Pacetti Tommaso, Enrica Caporali and Boris Schroeder Esselbach (2017). Trade-off analysis of water ecosystem services at the watershed scale. *Atti convegno IDRA 2016, Bologna*
 - Pacetti, T., Lombardi, L., & Federici, G. (2015). Water-energy Nexus: a case of biogas production from energy crops evaluated by Water Footprint and Life Cycle Assessment (LCA) methods. *Journal of Cleaner Production*.
 - Pacetti, T., Federici, G "History and geography of water": an online interdisciplinary course on water value (2015). *World Engineering Education Forum*. Florence, 20-24 September
 - Tommaso Pacetti, Enrica Caporali, Laura Zanchi, Giorgio Federici (2015) Comparing Water Footprint impact methods: a case study on biogas production from energy crops. *EXPO 2015 conference, LCA for "Feeding the planet and energy for life"*
 - Water-Energy Nexus: the Water Footprint of biogas production in a changing climate.(2015) *Rome 2015 - Science symposium on climate, FAO, Rome*
 - Pacetti, T., Lombardi, L., & Federici, G. (2014) L'integrazione di Life Cycle Assessment e Water Footprint per la valutazione delle bioenergie in "I nuovi orizzonti dell'LCA: verso un approccio sistemico e integrato alla progettazione di prodotti, processi e servizi". *Atti del VIII Convegno Scientifico dell'Associazione Rete Italiana LCA, Firenze, 19-20 giugno 2014* " ENEA 2014. (ISBN 978-888286-306-7)
- Conferences**
- EGU 2020 (May 2020, online) - Flood risk and water resources management with nature-based solutions on Florence city environment
 - CUCS 2019 (September 2019, Trento) - The effects of flood on food security in Pakistan and Bangladesh
 - EWRA 2019 (July 2019, Madrid) - Participatory assessment of water related ecosystem services
 - EGU 2019 (April 2019, Wien) - WaterValues participatory water ecosystem services assessment for watershed management
 - River Adapt Conference (December 2018, Madrid) Water related ecosystem services assessment to support Arno river basin integrated management
 - COWM 2018 (November 2018, Venice) Participatory water ecosystem services (WES) mapping and assessment
 - EGU 2018 (April 2018, Wien) - Towards Landscape Ecohydrology: linking historical landscape patterns and ecosystem services provision in Bolivian sub-Andean region
 - SWAT conference 2017 (July 2017, Warsaw) Evaluating the supply of hydrologic Ecosystem services to support the Water-food-energy nexus in the Arno River basin
 - FAO - Science Symposium on climate (November 2015, Rome) Water-Energy Nexus: the Water Footprint of biogas production in a changing climate
- Honours and awards**
- Feltrinelli prize "Smart and Sustainable Communities" for the activities carried out within the project WaterValues
- Associations**
- Ecosystem Services Partnership
 - Engineering without borders - Firenze