

EUROPEAN
CURRICULUM VITAE
FORMAT



Name

Address

Telephone

Web

E-mail

Nationality

Date of birth

CURRENT EMPLOYMENT

- Dates (from – to)
- Name and address of employer
- Type of business or sector
- Occupation or position held
- Main activities and responsibilities

**CURRENT RESEARCH
ACTIVITIES**

PERSONAL INFORMATION

Paolo VEZZA

Politecnico di Torino,
Department of Environment, Land and Infrastructure Engineering
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paolo.vezza@polito.it

Italian

14/06/1981

04/2017 – To present

Politecnico di Torino

Department of Environment, Land and Infrastructure Engineering (DIATI)

Corso Duca degli Abruzzi, 24, 10129, TORINO (Italy)

University

Associate professor

Teaching in the course of fluid mechanics, hydraulics, applied hydrology, adaptation to climate change

Personnel management: interviews, employment and contracting, referent to local and national institutions for environmental flows assessment

Tutoring: 2 research assistants and 6 master-students

Budgeting & Finance project planning, writing proposals, budgeting, financial control;

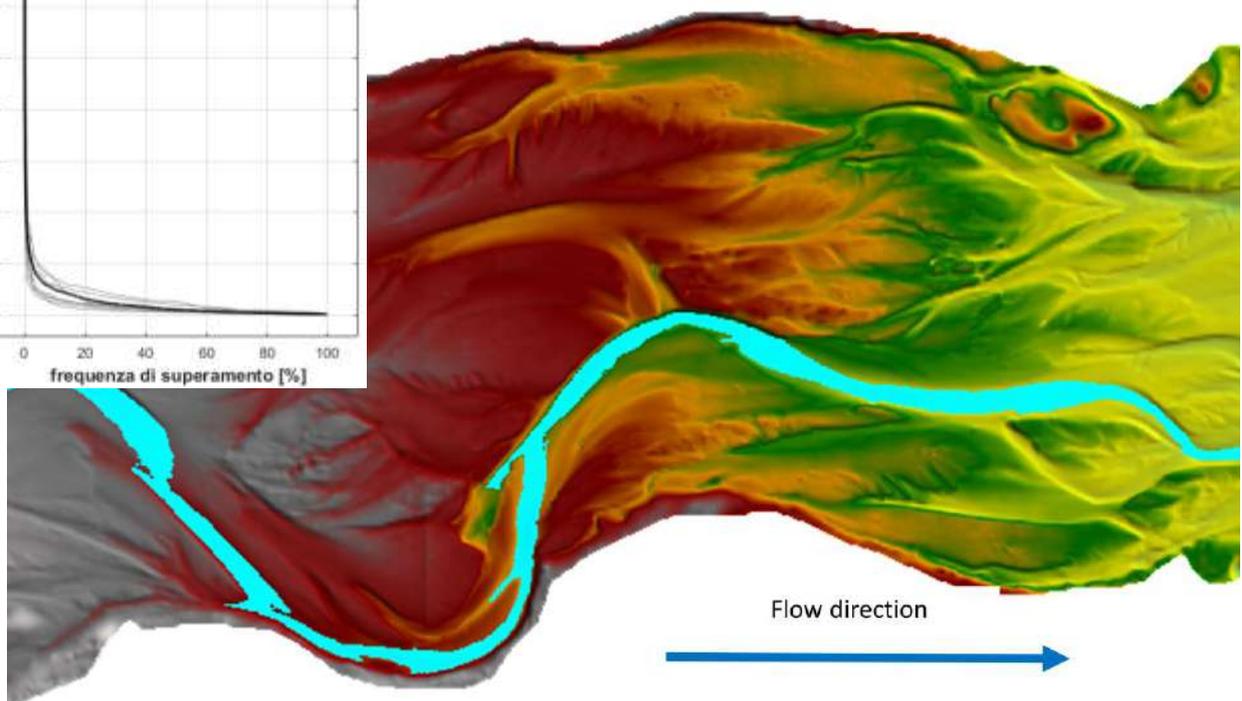
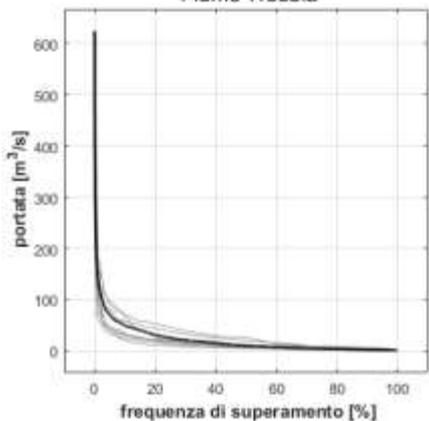
External/Internal Relations: with Universities, Research Institutes, Local authorities, Regional and National Parks and Private Companies; report locally to the research group; external and internal meetings and seminars, public presentation at workshops, national and international conferences

Logistics/Purchasing: purchase of instruments, field data collection in Italy and abroad

HYDROLOGICAL AND HYDRAULIC MODELLING

Idrometro di Rivergaro

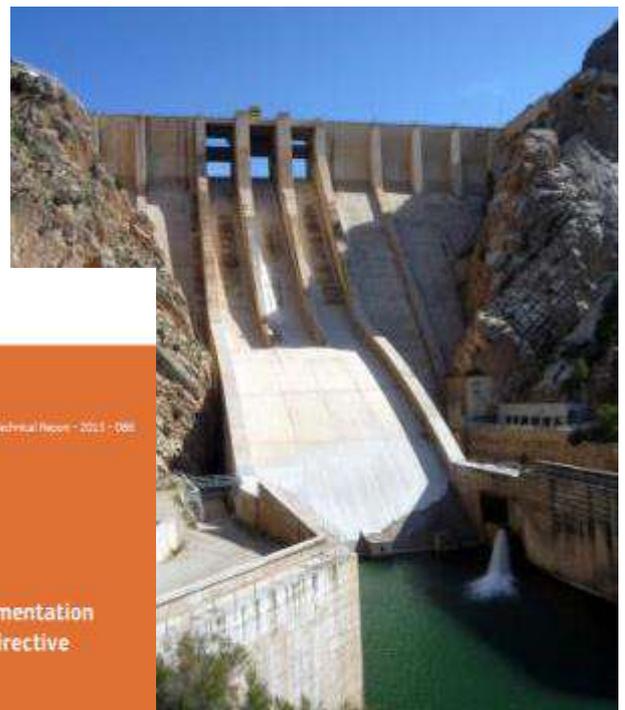
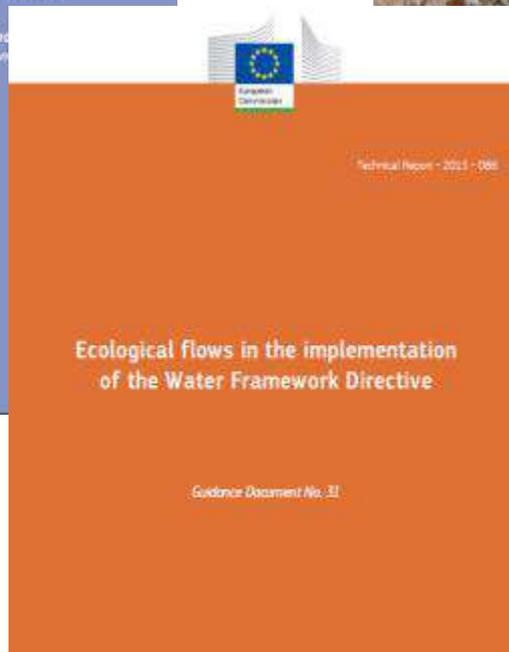
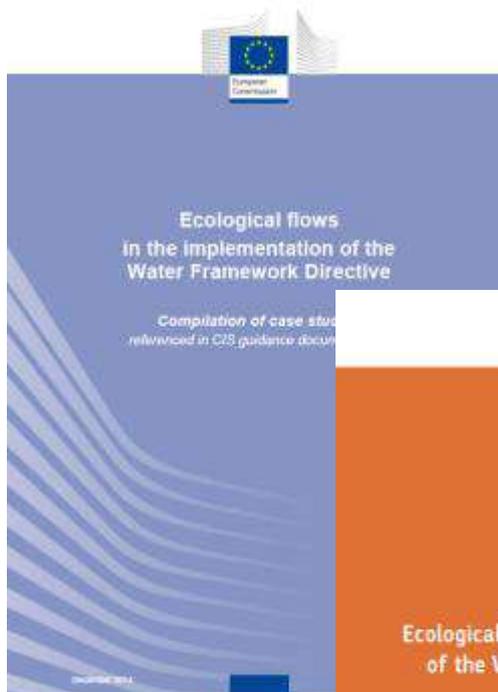
Fiume Trebbia



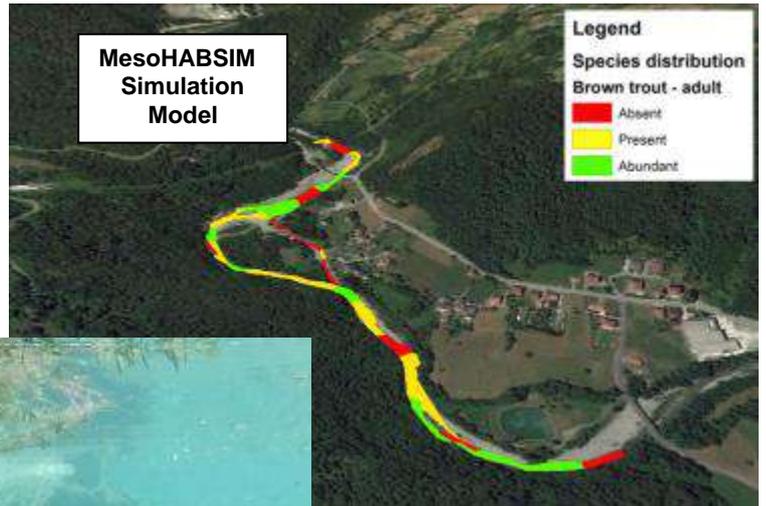
FLUVIAL HYDRAULICS



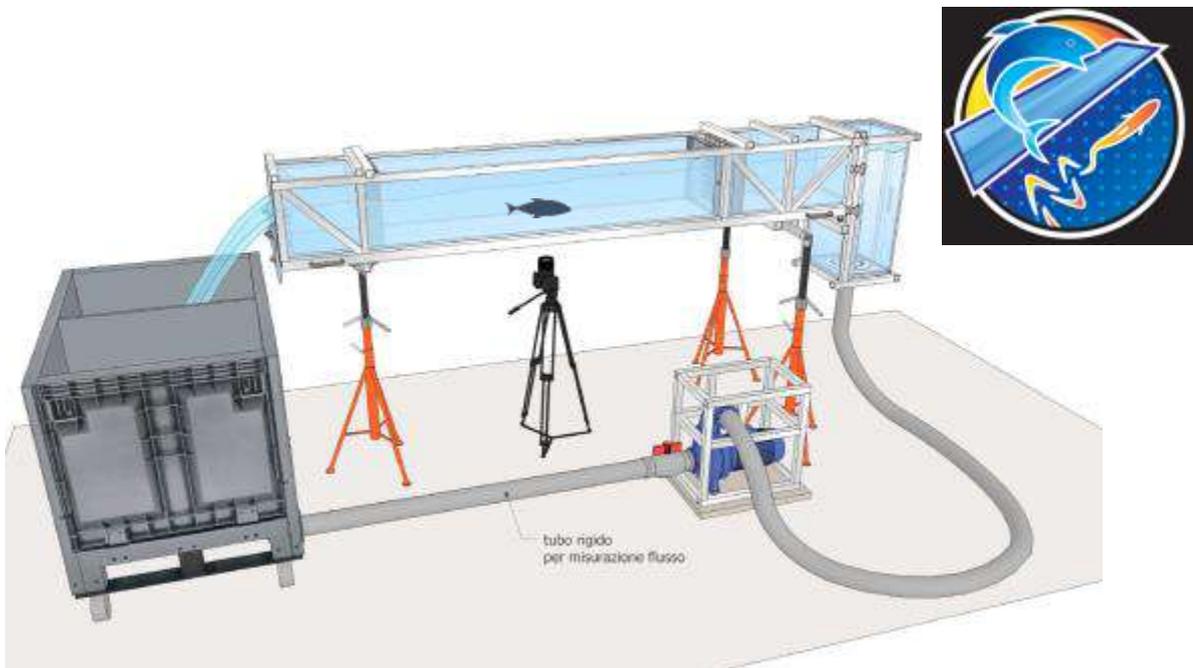
ENVIRONMENTAL AND ECOLOGICAL FLOWS



HABITAT EVALUATION AND MODELLING



FISH SWIMMING PERFORMANCE AND BEHAVIOURAL RESPONSE TO HYDRAULIC STIMULI



WORK EXPERIENCE

- Dates (from – to)
- Name and address of employer
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- Occupation or position held
- Grant
- Main activities and responsibilities

11/2015 – 02/2017

University of Southampton

University Rd, Southampton SO17 1BJ

University

Research fellow

Water, Energy and Food: Vaccinating the Nexus - EPSRC Programme Grant

Research activities, in laboratories and in the field, to describe freshwater fish response to hydrodynamic signals experienced in rivers at artificial barriers. Research activities are carried out in the hydraulic laboratories of the University of Southampton, whereas field work is focused on data collection for specific case studies located in Sweden (River Åtran, Herting power station). The “Vaccinating the Nexus” project aims at building an agent based model (ABM) that predicts fish behavior and ecological response to alternative river infrastructure projects (e.g., construction of new hydropower plants).

Research activities

Quantification of response of fish to hydrodynamics

Development of hydrodynamic models

Integration of the hydrodynamic model with Agent Based Models

Laboratory experiments to reproduce typical hydrodynamic flow field (i.e., flow velocity gradients, flow separation and large scale eddies) experienced by fish at hydropower plants as well as to quantify fish response to that. Lab activities include designing and building physical models that modify flow fields in flumes, fish collection in the wild with traps and electrofishing, fish husbandry, water quality analysis.

Field data collection at hydropower plants to describe local bathymetry, flow field, water levels in order to calibrate 2D and 3D hydrodynamic models.

Tutoring: 2 undergraduate students, 2 master-thesis students

External/Internal Relations: with Universities, Research Institutes, Local authorities, and Private Hydropower Companies involved in the project; report locally to the research team; external and internal meetings and seminars, public presentations

Budgeting, Logistics and Purchasing (budget around 580.000€): purchase and budgeting planning, in collaboration with the University of Southampton personnel and the involved partners.

• Dates (from – to)

- Name and address of employer
- Type of business or sector
- Occupation or position held
- Grant
- Main activities and responsibilities

12/2013 – 10/2015

Politecnico di Torino

Corso Duca degli Abruzzi, 24, 10129, TORINO (Italy)

University

Research team leader

Regione Valle d'Aosta (PD 4619/2013) - FESR funds

Team leader of the ResEAU research unit (Aosta, Italy) focusing on management and restoration of aquatic ecosystems. The project included 4 main work packages related to habitat simulation and modelling in river corridors; software development in QGIS environment; field data collection; project management.

Main duties and responsibilities:

Research activities in the field of hydrological and hydraulic modelling, habitat simulation modelling, hydro-morphological survey of rivers, water resources management in the Alpine area; environmental flow assessment and implementation, design of river restoration actions; fisheries management.

Field data collection using Unmanned Aircraft Systems, RTK GPS, mobile mapping, total station, ADCP M9 Sontek river surveyor, flow meters, data loggers, electrofishing gears, fish telemetry, pit-tags, elastomers

Personnel management: interviews, employment and contracting, referent to local institutions

Tutoring: 3 master-students

Budgeting & Finance (budget around 100.000€): project general planning, budgeting, financial control;

External/Internal Relations: with Universities, Research Institutes, Local authorities, National Parks and Private Companies involved in the project; report locally to the research team; external and internal meetings and seminars, public presentation at workshops, national and international conferences

Logistics/Purchasing: purchase and budgeting planning, in collaboration with the Regional Fisheries Management Agency and the involved partners;

<ul style="list-style-type: none"> • Dates (from – to) • Name and address of employer • Type of business or sector • Occupation or position held Grant • Main activities and responsibilities 	<p>09/2011 – 10/2013</p> <p>Universidad Politecnica de Valencia C/ Paranimf 1, 46730 Grao de Gandia, VALENCIA (Spain) University</p> <p>Marie Curie Fellow FP7-PEOPLE-2010-IEF Marie Curie Actions - 2755277</p> <p>Coordinator of the HolRiverMed project focusing on the environmental management of Mediterranean streams. Main research activities carried out in Spain, Italy and Greece on (i) modelling aquatic and riparian habitat; (ii) environmental river classification; (iii) understating the biological behaviour of intermittent streams.</p> <p>Main duties and responsibilities: <u>Research activities</u> in the field of hydrological and hydraulic modelling, habitat simulation modelling, hydro-morphological survey of rivers, water resources management; environmental flows, river restoration, aquatic ecology, fish migration, upstream and downstream fish passes <u>Field data collection</u> using Unmanned Aircraft Systems, RTK GPS, mobile mapping, total station, ADCP M9 Sontek, flow meters, data loggers, electrofishing gears, visual underwater census, fish telemetry <u>Tutoring</u>: 1 PhD student, 2 graduate students and 4 undergraduate students <u>Budgeting & Finance</u> (budget around 170.000€): project general planning, budgeting and management, financial control; financial reporting to the EU <u>External/Internal Relations</u>: with the Research Executive Agency (European Union), Universities and Research Institutes in EU and USA; Local authorities; National Parks; report locally to the research team and to the scientist in charge; external and internal meetings and seminars <u>Logistics/Purchasing</u>: purchase planning in loco and abroad; research material delivery;</p>
<ul style="list-style-type: none"> • Dates (from – to) • Name and address of employer • Type of business or sector • Occupation or position held Grant • Main activities and responsibilities 	<p>08/2010 – 07/2011</p> <p>Politecnico di Torino Corso Duca degli Abruzzi, 24, 10129, TORINO (Italy) University</p> <p>Post-Doctoral Fellow Politecnico di Torino, ADR 198/2010</p> <p>Fellow researcher in the framework of 3 research projects in Italy focusing on fish migration and rehabilitation of river longitudinal continuity (Dora Baltea River, Pesio River and Chiusella Stream)</p> <p>Main duties and responsibilities: <u>Research activities</u> in the field of habitat modelling, hydro-morphological survey of rivers, aquatic ecology, fish migration, upstream and downstream fish passes <u>Field data collection</u> using total station, mobile mapping, ADCP M9 Sontek river surveyor, ADV-field Sontek, flow meters, data loggers, fish traps, nets, electrofishing gears, fish telemetry, pit-tags, elastomers <u>Tutoring</u>: 2 graduate students <u>Budgeting & Finance</u> (total budget for the three project around 220.000€): project general planning, budgeting, and financial control; <u>External/Internal Relations</u>: with Universities and Research Institutes involved in the project; Local authorities; report locally to the research team and to the scientist in charge; external and internal meetings and seminars <u>Logistics/Purchasing</u>: field campaign planning; purchase planning;</p>
<ul style="list-style-type: none"> • Dates (from – to) • Name and address of employer • Type of business or sector • Occupation or position held • Main activities and responsibilities 	<p>01/2007 – 12/2009</p> <p>Politecnico di Torino Corso Duca degli Abruzzi, 24, 10129, TORINO (Italy) University</p> <p>PhD student in “Water and land management”</p> <p>PhD student in the framework of the research project “Modelling hydrological behaviour of small alpine catchments and definition of guidelines for environmental flow release”</p> <p>Main duties and responsibilities: <u>Research activities</u> in the field of hydrological and hydraulic modelling, habitat simulation and modelling, aquatic ecology <u>Field data collection</u> using RTK GPS, mobile mapping, ADCP M9 Sontek river surveyor, data loggers, electrofishing gears, fish telemetry, pit-tags, elastomers <u>Tutoring</u>: 2 undergraduate students <u>Budgeting & Finance</u> (total budget for the project around 120.000€): project general planning, budgeting, and financial control; <u>External/Internal Relations</u>: with Universities and Research Institutes; Local authorities; report locally to the PhD supervisor; external and internal meetings and seminars <u>Logistics/Purchasing</u>: field campaign planning; purchase planning;</p>

PARTICIPATION IN RESEARCH PROJECTS (SELECTION)

<ul style="list-style-type: none"> • Dates (from – to) • Project name <li style="padding-left: 20px;">Funded by <li style="padding-left: 40px;">PI • Occupation or position held 	<p>2019 – To present</p> <p>Meso-scale habitat modeling to evaluate and design ecological flows in the Trebbia, Taro and Enza rivers River Po Basin Authority Prof. Pierluigi Viaroli and Prof. Paolo Vezza</p> <p>Project coordinator</p>
<ul style="list-style-type: none"> • Dates (from – to) • Project name <li style="padding-left: 20px;">Funded by <li style="padding-left: 40px;">PI • Occupation or position held 	<p>2017-To present</p> <p>Euro-FLOW: European training and research network for environmental flow management in river basins H2020-MSCAITN-2017 – Marie Curie Actions Innovative Training Network (ITN) Prof. Lee Brown</p> <p>Scientific member</p>
<ul style="list-style-type: none"> • Dates (from – to) • Project name <li style="padding-left: 20px;">Funded by <li style="padding-left: 40px;">PI • Occupation or position held 	<p>2017-2020</p> <p>ECOFLOW - Ecological flow rates in Latvian-Lithuanian cross-border river basins Interreg V-A Latvia – Lithuania Programme 2014-2020 Dr. Tatjana Kolkova</p> <p>Scientific member</p>
<ul style="list-style-type: none"> • Dates (from – to) • Project name <li style="padding-left: 20px;">Funded by <li style="padding-left: 40px;">PI • Occupation or position held 	<p>2016-2019</p> <p>FHARMOR - Fish habitat in Alpine rivers: integrating monitoring, modelling and remote sensing Grant n. 183 under the 3rd Call for Scientific Research Project - Autonomous Province of Bozen/Bolzano. Prof. Guido Zolezzi</p> <p>Scientific member</p>
<ul style="list-style-type: none"> • Dates (from – to) • Project name <li style="padding-left: 20px;">Funded by <li style="padding-left: 40px;">PI • Occupation or position held 	<p>2015-2019</p> <p>Water, Energy and Food: Vaccinating the Nexus EPSRC Programme Grant Prof. Paul Kemp</p> <p>Research fellow</p>
<ul style="list-style-type: none"> • Dates (from – to) • Project name <li style="padding-left: 20px;">Funded by <li style="padding-left: 40px;">PI • Occupation or position held 	<p>2013-2015</p> <p>ResEAU – Research for aquatic ecosystems European Regional Development Fund Dr. Paolo Vezza</p> <p>Research team leader</p>
<ul style="list-style-type: none"> • Dates (from – to) • Project name <li style="padding-left: 20px;">Funded by <li style="padding-left: 40px;">PI • Occupation or position held 	<p>2011-2013</p> <p>HolRiverMed - Environmental River Management: An Innovative Holistic Approach for Mediterranean Streams. FP7 - PEOPLE – 2010 - IEF Marie Curie Actions [Grant 275577] Dr. Paolo Vezza</p> <p>Project coordinator</p>
<ul style="list-style-type: none"> • Dates (from – to) • Project name <li style="padding-left: 20px;">Funded by <li style="padding-left: 40px;">PI • Occupation or position held 	<p>2009-2015</p> <p>SCARCE - Assessing and predicting effects on water quantity and quality in Iberian rivers by global change The Spanish National Research Council (CSIC) Prof. Damià Barceló (Catalan Institute for Water Research - ICRA, Spain)</p> <p>Scientific member</p>
<ul style="list-style-type: none"> • Dates (from – to) • Project name <li style="padding-left: 20px;">Funded by <li style="padding-left: 40px;">PI • Occupation or position held 	<p>2012-2013</p> <p>Modeling the ichthyological response to hydro-morphological changes for an efficient river restoration Vicerektorat de Investigació. Universidad Politécnica de Valencia Prof. Francisco Martínez Capel (Universidad Politécnica de Valencia, Spain)</p> <p>Scientific member</p>

<ul style="list-style-type: none"> • Dates (from – to) • Project name <li style="padding-left: 20px;">Funded by <li style="padding-left: 20px;">Project leader • Occupation or position held 	<p>2009-2015 CRAINat - Conservation and Recovery of Austropotamobius pallipes in Italian Natura2000 Sites EU LIFE+ 2008 program [Grant LIFE08 NAT/IT/000352] Dr. Giancarlo Moca (Director of the Environmental Sector, Province of Chieti, Italy) External adviser</p>
<ul style="list-style-type: none"> • Dates (from – to) • Project name <li style="padding-left: 20px;">Funded by <li style="padding-left: 20px;">PI • Occupation or position held 	<p>2011-2013 Innovative methodologies for protection and environmental management of the aquatic ecosystems in Alpine streams and lakes European Regional Development Fund Prof. Claudio Comoglio (Politecnico di Torino, Italy) Scientific member</p>
<ul style="list-style-type: none"> • Dates (from – to) • Project name <li style="padding-left: 20px;">Funded by <li style="padding-left: 20px;">PI • Occupation or position held 	<p>2010-2011 Research study to restore river longitudinal continuity and to protect trout populations in the Pesio River Piedmont Regional Government Prof. Claudio Comoglio (Politecnico di Torino, Italy) Scientific member</p>
<ul style="list-style-type: none"> • Dates (from – to) • Project name <li style="padding-left: 20px;">Funded by <li style="padding-left: 20px;">PI • Occupation or position held 	<p>2011-2013 Environmental knowledge and definition of restoration measures aimed at creating a River Park for the Noce River (Val di Sole, Trento Italy) Municipalities consortium - Comunità di Valle, Val di Sole (Trento, Italy) Prof. Guido Zolezzi (Università di Trento, Italy) Scientific member</p>
<ul style="list-style-type: none"> • Dates (from – to) • Project name <li style="padding-left: 20px;">Funded by <li style="padding-left: 20px;">PI • Occupation or position held 	<p>2009-2010 Rehabilitation and monitoring of river longitudinal continuity for the Chiusella stream, Piedmont, Italy Piedmont Regional Government Prof. Claudio Comoglio (Politecnico di Torino, Italy) Scientific member</p>
<ul style="list-style-type: none"> • Dates (from – to) • Project name <li style="padding-left: 20px;">Funded by <li style="padding-left: 20px;">PI • Occupation or position held 	<p>2009-2010 Restoration of river longitudinal connectivity for fish migration - Dora Baltea river basin, Valle d'Aosta, Italy Valle d'Aosta Regional Government Prof. Claudio Comoglio (Politecnico di Torino, Italy) Scientific member</p>
<ul style="list-style-type: none"> • Dates (from – to) • Project name <li style="padding-left: 20px;">Funded by <li style="padding-left: 20px;">PI • Occupation or position held 	<p>2011-2013 Eels in Atran - A case study of Swedish eel management E.ON hydropower Sweden Dr. Olle Calles (University of Karlstad, Sweden) External adviser</p>
<ul style="list-style-type: none"> • Dates (from – to) • Project name <li style="padding-left: 20px;">Funded by <li style="padding-left: 20px;">PI • Occupation or position held 	<p>2009-2013 The re-opening of the old river-bed at Herting power station: improving the opportunities for fish passage from sea to source Swedish Environment Protection Agency Dr. Olle Calles (University of Karlstad, Sweden) External adviser</p>
<ul style="list-style-type: none"> • Dates (from – to) • Project name <li style="padding-left: 20px;">Funded by <li style="padding-left: 20px;">PI • Occupation or position held 	<p>2009-2018 Nature like design of fish-passes as habitats for both animals and plants, Eldforsen, Sweden Fortum Environmental Fund Dr. Olle Calles (University of Karlstad, Sweden) External adviser</p>

<ul style="list-style-type: none"> • Dates (from – to) • Project name <li style="padding-left: 20px;">Funded by <li style="padding-left: 40px;">PI • Occupation or position held 	<p>2009-2011</p> <p>Depth references of down-stream migrating silver eels in Alster River</p> <p>Alsters kraftverk</p> <p>Dr. Olle Calles (University of Karlstad, Sweden)</p> <p>External adviser</p>
<ul style="list-style-type: none"> • Dates (from – to) • Project name <li style="padding-left: 20px;">Funded by <li style="padding-left: 40px;">PI • Occupation or position held 	<p>2009-2011</p> <p>The impact of hydroelectric power plants and restoration of fish migration routes in River Emån, Sweden</p> <p>Elforsk, the Swedish Energy Agency</p> <p>Dr. Olle Calles (University of Karlstad, Sweden)</p> <p>External adviser</p>
<ul style="list-style-type: none"> • Dates (from – to) • Project name <li style="padding-left: 20px;">Funded by <li style="padding-left: 40px;">PI • Occupation or position held 	<p>2009-2013</p> <p>Modelling hydrological behaviour of small alpine catchments and definition of e-flow guidelines</p> <p>Piedmont Regional Government</p> <p>Prof. Maurizio Rosso (Politecnico di Torino, Italy)</p> <p>PhD student</p>