CV EMANUELE FERRETTI

PERSONAL INFORMATION	
Name	FERRETTI EMANUELE ()
Address	Istituto Superiore di Sanità (ISS) – (Italian Institute of Health, www.iss.it) National Center for Water Safety (CeNSiA)
E-mail	emanuele.ferretti@iss.it
WORK EXPERIENCE	
 Dates (from – to) Name and address of employer 	From 2003 to date Istituto Superiore di Sanità (ISS) – (Italian National Institute of Health) Dept. of Environment and Primary Prevention (2003-2023) / National Center for Water Safety (CeNSiA) (2023 to date) Viale Regina Elena, 299 – 00161 Rome, Italy.
 Type of business or sector 	<u>Water for human consumption</u> : development and implementation of regulatory acts, standards, and guidelines, analytical research and control activities for protection and monitoring of drinking water within the framework of dir 98/83/EC (Drinking water directive, DWD).
	<u>Water Framework Directive (dir 2000/60/EC) and ancillary legislation</u> : development and implementation of regulatory acts, standards, and guidelines, analytical research and control activities.
	Water Safety Plan. Italian adaptation strategies to address the implementation issues related to the Directive (EU) 2015/1787 Amending Annexes II and III of Directive 98/83/EC on the Quality of Water Intended for Human Consumption. Project leader (No. 7 research projects on WSP development and implementation in Italy. WHO Italian expert at the Global Water Safety Plan (WSP) Training of Trainers (ToT) Event, organized by the World Health Organization from 23-27 January 2017.
	<u>Climate change and water</u> . Italian adaptation strategies and water scarcity and droughts to address the implementation issues related to the current EU policy framework.
	<u>Recreational water</u> . In Italy: development and implementation of regulatory acts, standards and guidelines, analytical research and control activities.
	Environmental Impact Assessment: Commissioner in the Technical Committee PNRR-PNIEC for Environmental Impact Assessment (from 4.3.2022 until to date at the Ministry of Environment and Energy Security).
Occupation or position held	Researcher at the Italian National Institute of Health (ISS).
Main activities and responsibilities	The activities are addressed to different issues concerning the quality of water intended for human consumption for protecting the human health, within the <i>acquis communautaire</i> related to DWD, Water Framework Directive (dir 2000/60/EC) and ancillary legislation, climate change and water, water for recreational purpose. Main specific tasks and responsibilities are the following.
	Italian National Activities
	- Technical-scientific support to Regulatory Activities for the Ministry of Health: Ministerial Decree 14.06.2017. Implementation of Directive (EU) 2015/1787 Amending Annexes II and III of Directive 98/83/EC on the Quality of Water Intended for Human Consumption.

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- Technical-scientific support to Regulatory Activities for the Ministry of Health: preparing and revising Legislative acts belonging to transposition and implementation of DWD into the Italian Decree Law 31/2001 and 27/2002
- Decree Law 174/2004, Regulation concerning materials and objects to be used in permanent plants for the collection, treatment and distribution of water for human consumption;
- National Decrees for derogations (Decree Law 22.12.2004, Health Ordinance of 30.12.2009);
- Proposal of Decree establishing minimum requirements and creating an Official list of laboratories in charge of drinking water monitoring;
- Development and harmonization of criteria and methods for drinking water monitoring, standards and guidelines:
- Security of water supply systems: critical aspects of water systems and distribution relating to security incidents, responses to biological, radiological and chemical intentional contamination of water systems, emergency response plans (guidelines produced);
- Reference analytical methods for sampling and monitoring of water intended for human consumption according to the Italian Legislative Decree 31/2001. Collection on paper and database freely accessible on-line;
- Management and technical requirements for laboratories in charge of water monitoring by according to Decree 31/2001 also taking into account the criteria stated by the standard UNI CEI EN ISO/IEC 17025 (guidelines produced);
- Methodological approach to the screening and identification of unknown contaminants in water destined to human consumption (operative instructions produced);
- Risk management in the prevention and control of toxic cyanobacterial blooms within the chain of water destined to human consumption (guidelines produced);
- Reference analytical methods for sampling and monitoring of water intended for recreational purposes according to the Italian regulations (guidelines in preparation).
- Risk assessment/management, decision making and reference values, for drinking water contaminants directly relevant to health and other parameters related to deterioration in quality, not included in the decree 31/01 (more than 70 reasoned opinions on request of Regional and Local Governmental Authorities);

EC and International Level

- Italian Representative within the European Network of Drinking Water Regulators (ENDWaRe) (participation in n. 1 meeting).
- Italian Representative on the review of Annexes I and II of the Groundwater Directive 2006/118/EC CIS WG Groundwater of the European Commission DG Environment
- Italian Representative in the subgroup Watch List on the review of Annexes I and II of the Groundwater Directive 2006/118/EC - CIS WG Groundwater - European Commission DG Environment
- Italian Representative in the subgroup Group DWD GW on the review of Annexes I and II of the Groundwater Directive 2006/118/EC - CIS WG Groundwater - European Commission DG Environment
- Italian Representative in the Working Group "Chemicals" (WFD 2000/60/EC and ancillary legislation) European Commission DG Environment
- Italian Representative in the subgroup PFAS Working Group "Chemicals" (WFD 2000/60/EC and ancillary legislation)- European Commission DG Environment
- Italian Representative in the in the subgroup "Emissions" Working Group "Chemicals" (WFD 2000/60/EC and ancillary legislation) European Commission DG Environment

- Member of the Scientific Committee of the International Conference of Swimming Pool and SPA (ICSPS) since 2011.
- IWA Subgroup Water policy and regulation (participation to The International Water Regulators Forum Buenos Aires 2017; Tokyo 2018)
- Contributor to WHO International norms on water quality and human health.
- Contributor to Guidelines for drinking-water quality, third edition, incorporating first and second addenda (GDWQ);
- Co-Author of Guidelines on Water safety in Buildings (supporting report on implementing the WHO DWQ.

Expert in International and EC Phare Twinning Projects (TP) / TAIEX

- Short-term expert within the TP PL2005/IB/EN/03 "Extension of the Sanitary Supervision System in the Area of Water Quality" (Poland) - performed tasks: setting of national training program, training courses and guidelines and proposals for secondary legislation).
- Short-term expert within the TP PL2004/IB/EN02 "Management System on Drinking Water Monitoring in Chief Sanitary Inspectorate" (Poland) - performed task: training on chemical risk assessment, water quality, detailed presentation of Italian legislation corpus and Drinking Water surveillance system and practices based on standards of DWD.
- Short-term expert within the TP EE04/IB/SO/01 "Working out Methodology and Technical Specifications for Computerised Communicable Disease Surveillance System" (Estonia) performed tasks: training on water quality and waterborne diseases.
- Short-term expert within the TP EE04-IB-SO-02 "Implementation of computerised communicable diseases surveillance system". (Estonia) Performed tasks: training on water quality and waterborne diseases.
- Short-term expert within the TP BG 06 IB EN 01 "Strengthening of surface water monitoring network operation". (Bulgaria) - Performed tasks: guidelines and standards to enhance practice of water quality monitoring, setting of National training program and training courses on water quality.
- Short-term expert within the TP RO 06 IB EN 10 "Support the national environmental guard (NEG) to strengthening its capacity on inspection and control" (Romania) performed tasks: guidelines and standards to enhance practice of water quality monitoring
- Short-term expert within the EG/07/AA/EN09 "Water Quality Management" (Egypt) performed tasks: terms of reference for acquiring advanced instruments for water quality monitoring, training, guidelines and standards to enhance practice of water quality monitoring.
- Key expert within the TLP TR 09 IB EN 04 TWL 'Emergency case management and risk analysis in drinking water for the protection of public health'
- Main expert of the component "Water quality assessment" within the study on "Health and social conditions in the districts of Galle, Matara, Kalutara, Trincomalee, Sri-Lanka" (Sri Lanka, Co-financed project Department of Civil Protection & ISS) - performed tasks: establishment of a full equipped laboratory and training for water quality monitoring.
- TAIEX Expert in Croatia, (EU Commission, DG Enlargement) organized in co-operation with Ministry of Health and Social Welfare, Department of sanitary inspection (2010 -2011).
- No. 4 Workshops on Official Controls of Waters (Natural Spring, Mineral and Bottled Waters)
 performed tasks: training on chemical risk assessment, water quality, detailed presentation of Italian legislation corpus and Drinking Water surveillance system and practices based on standards of DWD.
- TAIEX Expert in Jordan, (EU Commission, DG Enlargement) "Water Quality: Monitoring, Assessment, and Management" (Aqaba, 2013, November 18-19) - performed tasks: training on dir 98/83/EC and secondary legislation) and regulatory guideline on safety in swimming pool.
- TAIEX Expert in Turkey (EU Commission, DG Enlargement) Workshop on "Chemical Monitoring of Sediment and Biota", Ankara 25-26/19/2017- ETT 62719

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- TAIEX Expert in Turkey (EU Commission, DG Enlargement) Workshop on "Pre-Assessment of Water Quality Data", Ankara - Turkey - 07 - 08 November 2018 – 64836 INT MARKT
- TAIEX Expert in Belarus (EU Commission, DG Enlargement) on "Implementation of International Standards on Quality Management of Drinking Water and Prevention of Water-Borne Diseases" - Minsk, Belarus 28-31 May 2019 - AGR IND/EXP 67759
- TAIEX Expert in North Macedonia (EU Commission, DG Enlargement) on "Water Safety Plans in the Drinking Water Directive", Skopje North Macedonia -16-17/07/2019 ETT 67377.
- TAIEX online "Workshop on wastewater use in Sanitation systems" (ETT 70685), 23-24 July 2020, Turkey
- TAIEX Online "Regional Workshop on COVID-19 in Wastewater and Sanitation Systems",(ETT 80279) 01 – 02 December 2020, Albania, Bosnia and Herzegovina, Kosovo* and Serbia
- TAIEX Online "Regional Workshop on COVID-19 in Wastewater and Sanitation Systems",(ETT 80280) 18 19 November 2020, Egypt, Jordan and Palestine
- TAIEX Expert (EU Commission, DG Enlargement) Regional Workshop on "COVID-19 in Wastewater and Sanitation Systems" - (online, Serbia, Kosovo, Bosnia and Herzegovina, Albania 12/2020) - ETT 80279
- TAIEX Expert (EU Commission, DG Enlargement) Regional Workshop on "COVID-19 in Wastewater and Sanitation Systems" - (online, Armenia, Azerbaijan, Georgia, Moldova, Ukraine 4-5 May 2021) - ETT 80267
- TAIEX Expert (EU Commission, DG Enlargement) Workshop on Drinking Water Directive (26-27 July 2021) ETT 80627
- TAIEX Expert Mission on tackling water losses. Mitrovica Regional Water Company Kosovo May 2021 TAIEX Case ID ETT IND/EXP 82849
- TAIEX Expert Mission on the revision of the Kosovo Water Strategy 2017-2 Taiex No 03682578 Nov. 2022
- TAIEX Workshop on water safety plan for improving drinking water safety and wastewater surveillance 26-27/6/2023 Albania, ETT 83824
- TAIEX Multi-country Workshop on Microplastics and One-Health: what's next! Priorities for research and actions in the SEEHN Member States (Israel, Kosovo, Moldova, Montenegro, North Macedonia, Serbia, Turkey and Western Balkans 82015 – 02 – 2020)
- TAIEX expert Workshop on water safety plan for improving drinking water safety and wastewater surveillance part I - 84349 (Tirana, 12-13 July 2023)
- TAIEX Expert mission on water safety plan for improving drinking water safety and wastewater surveillance 84845 (Tirana, Vlora, Burat 18-22 September 2023)
- TAIEX Study visit coordinator on water safety plan for improving drinking water safety and wastewater surveillance 85208 (Rome, 27 November – 01 December 2023).

Other activities:

Other activities were mainly focused on the areas of water quality assessments, environmental contaminants and endogenous compounds in environmental and food matrices and analytical chemistry. Main research areas deal with drinking water contaminants, water treatment and materials and products in contact with water, disinfection by products, phycotoxins in microalgae and seafood, risk assessment associated with the recreational use of swimming pools; risk assessment related to consumption of matrices potentially containing residues or environmental contaminants

From 1991 to 2003

Name and address of employer
 Istituto Superiore di Sanità (ISS) – (National Institute of Health)
 Dept. of Food Safety and Veterinary Public Health
 Viale Regina Elena, 299 – 00161 Rome, Italy

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 • Type of business or sector

Public Health / Environmental and Food Hygiene

· Occupation or position held

· Main activities and responsibilities

Researcher technician at the Italian National Institute of Health (ISS).

- Expert in National working groups of the on problems relating control of food products of animal origin, regulation of the prohibition of use of anabolic hormones.
 - Italian delegate within European (EU Commission) workgroups concerning the safety of food products, conventional and new analytical methodologies for food control, drug and anabolic residues in foods.

Other activities:

Other activities has been focused on designing and managing procedures and on developing new, advanced chemical analytical methods, based on HPLC coupled with conventional detectors, GC and LC coupled with mass spectrometry and tandem mass spectrometry (GC-MS, LC-MS, LC- MS- MS) for the <u>chemical elucidation of drinking water contaminants</u>, aquatic toxins and biologically active <u>metabolites in marine and freshwater areas</u>, antimicrobial in foods; evaluationof the chemical safety of xenobiotics in environment and food; risk assessment associated with the recreational use of swimming pools; <u>risk assessment related to consumption of matrices potentially containing residues or environmental contaminants</u>.

The activities were mainly carried out within a number of financed research projects (funding provided by ISS, Ministry of Health, Ministry of University and Scientific and Technological Research – MURST, Ministry of Agriculture) concerning safety of consumers, to support the risk assessment process for contaminants and residues.

EDUCATION AND TRAINING

Date Name and type of organisation providing education and training	2000 University of Rome "La Sapienza", Rome, Italy.
• Principal subjects/occupational	Analytical Chemistry
Title of qualification awarded	Master Degree
 Date Name and type of organisation providing education and training 	2016 University of Rome "Roma Tre", Rome, Italy.
 Principal subjects/occupational Title of qualification awarded 	Commodity Science PhD

PERSONAL SKILLS

AND COMPETENCES

Acquired in the course of life and career but not necessarily covered by formal certificates and diplomas.

MOTHER TONGUE

TALIAN

OTHER LANGUAGES

ENGLISH Excellent

Excellent

Fluent

- Reading skills
- Writing skills
- Verbal skills

ORGANISATIONAL SKILLS

AND COMPETENCES

Coordination and administration of people, projects and budgets; at work, in voluntary work (for example culture and sports) and at home, etc.

Quality Assurance and Audit

Environmental expert operating within the task force for the sanitary emergencies of Sarno River (Campania region) also involving environmental inspection activities on industrial plants.

Cooordinator of web-site content for the Section of Inland Water Hygiene (National Institute of Health).

Quality Assurance and Methods

Inspector within the Italian organization for the accreditation of food laboratories.

Expert in the management and establishment of laboratory's Quality System, Internal Audit programme for our laboratories as required by International Standard ISO/IEC 17025.

Main expert of the National task force (ISS, Ministry of Health and Federgasacqua) concerning the security of water treatment plant, operators and utility managers in reducing risks from, and providing protection against intentional terrorist attacks (National Guidelines).

Trainer activities

Basic and advanced training activities on drinking water, recreational water and food hygiene, also involving risk assessment, laboratory quality assurance systems, chemical analyses for contaminants, residues and toxicants monitoring, addressed to personnel of the National Health Service.

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TECHNICAL SKILLS AND COMPETENCES

With computers, specific kinds of equipment, machinery, etc.

- Analytical methods developments and validation;
- chromatographic techniques and mass spectrometry detection;
- spectroscopy;
- extraction and analysis of organic pollutants for aquatic matricesion chromatography;

B level

- management and implementation of conventional and advanced chemical analytical methods (e.g LC-MS-MS) for water and food;
- operating systems, networking and applications.

DRIVING LICENCE(S)

Additional information	Extensive knowledge of:
	Exterior knowledge of.

water hygiene issues;

- water treatment;
- materials and products remaining in contact with water;
- disinfection by products;
- chemical hazards associated with the recreational use of swimming pools;
- risk assessment of organic pollutants.

Teacher in several Training Courses (Water hygiene issues, recreational water, analytical techniques, laboratory Quality System and supervisor during the preparation of doctoral thesis in Chemistry).

Inspector for the National Institute for Health for laboratories in charge of official control in food.

Author/co-author of more than Author/co-author of more than 90 national and international research paper concerning food and environmental hygiene (algal toxins in environment and food) inland and wastewater and particularly water intended for human consumption.

Personal Data: "I authorize the processing of personal data in compliance with the specific provisions of Legislative Decree No. 196 of June 30, 2003, and Article 13 of the General Data Protection Regulation (GDPR) EU 2016/679".

Roma, 17.1.2024

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