

# BIODATA



**Family Name:** **HUKKA**

**First Names:** Jarmo Juhani

**Sex:** Male

**Education:** Doctor of Science in Technology (CivEng)

**Academic Qualifications:** Adjunct Professor (Futures research in water sector), Tampere University, Finland: 2000)

**Place and Date of Birth:** Varkaus, Finland, 20 February 1951

**Date of Birth:** 20 February 1951

**Nationality:** Finnish

**Mother Tongue:** Finnish

**Marital Status:** Married: TUOMAINEN, Tarja Hannele (Ms.)  
LSc(CivEng), MSc(CivEng), BSc(Arch)

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## A: Professional Experience: total 39 years, long-term overseas 12 years

### **Main area of specialization**

- Institutional frameworks and innovations for water services;
- Water services policy, regulatory governance, provision and production;
- Water sector reforms and regulatory framework;
- Resilience of water utilities;
- Asset management and business development in water services (public utilities and user associations);
- Vulnerability of water infrastructure, and critical infrastructure protection (CIP)
- Institutional and organisational arrangements and innovations;
- Institutional and capacity building processes;
- Public-private partnerships (PPPs); Public-Public Partnerships (PUPs);
- Water services pricing;
- Supramunicipal co-operation (regional and inter-municipal) in water services;
- Sanitation strategies and programme development processes and implementation;
- Green economy, water and sanitation services nexus;
- Project management in WatSan sector (incl. financial management)
  - Task Manager/Team Leader in AfDB (African Development Bank: AfDB WatSan Sector Portfolio in West Africa EUR 225 million (2007-09).
  - Long-term Technical Assistance (TA) field experience in MFA (Ministry for Foreign Affairs, Finland) projects: 8 years (6 yrs as Deputy Team Leader, responsible for administration and financial management in Sri Lanka 1986-87, Kenya 1994-96, and Kosovo 2000-02).
  - Involvement in other 17 MFA funded projects (TL/PM in 5 MFA funded projects; Home Office Coordinator in 2, and Professional Backstopping Team Coordinator in 3), and in 4 EU-, 1 WIDER-, 1 UNRISD, 1 NDF-funded projects.
- Long-term overseas TA field experience 12 yrs (Cayman Islands, Sri Lanka, Kenya, Kosovo, AfDB-Tunisia);
- Project cycle management; Logical Framework Approach; Results-based Management;
- Project identification, analysis, preparation of tenders, coordination and quality assurance (ISO 9001) of the Information Society, Science, Technology and Innovation, ICT, Biotechnology, Capacity Development, and Water and Sanitation sector projects.
- Planning, design, implementation, performance evaluation and quality management of rural and urban water and sanitation services programmes/projects;
- Development of decision support systems (DSSs) - incl. financial management and accounting for water undertakings and user associations-for monitoring, performance evaluation (M&E) and decision making;
- Water and sanitation programmes and projects portfolio management;
- Periurban water and waste infrastructure management; Supra-municipal cooperation in water services;
- Strategic decision-making; Strategic Thinking and Visionary Leadership and Management;
- New Institutional Economics; Scenario Working Processes; Soft Systems Methodology; Theory of Constraints; Decision Support Systems;
- Long-term university experience (higher education and scientific research): 31 years
- Supervision of 9 MSc-, and 10 DSc theses;
- Futures research, technology assessment and technology foresight;
- Development and implementation of higher education programmes and continuing engineering and management training in water and environmental sector;
- R&D financing in the Finnish and EU contexts;
- Development and management of multidisciplinary network universities (in futures research and in development co-operation);

### **1. Major Relevant Publications**

Water policy and governance; water sector reforms; Green economy, water and sanitation services nexus; Vulnerability and resilience of water services and critical infrastructure protection; Public-private partnerships; Strategic development and capacity building of water utilities; Sustained institutional and management options for water and sanitation services; Viability, commercialization and competitiveness of public utilities, and financial, economic and technical performance of utilities (see the complete list of publications in the end of biodata).

Articles in international scientific journals with referee practice: 27

Articles in international scientific compilation works and international conference proceedings with referee practice: 62

Articles in Finnish journals with referee practice: 5

Articles in Finnish scientific compilation works and Finnish conference proceedings with referee practice: 7

Scientific monographs: 7

Other scientific publications: 22

Other publications: 63

## **2. Employment Record**

01.09.2018-

Visiting Senior Research Fellow and Adj. Prof. in Capacity Development in Water and Environmental Services Research Team (CADWES), Tampere University; Futures Researcher; Nonfiction Writer; Vice Chairperson, Tampere Grand Old Water Professionals (registered association, 22.03.2019)

- Responsible for the research project (2019-2023): Towards Sustainable Water Services: Subsidiarity, Multi-level Governance and Resilience for Building Viable Water Utilities.
- Institutional frameworks and innovations for water services.

01.01.2013-30.08.2018

Project Manager/Adjunct Professor (Futures studies in water sector) in Capacity Development in Water and Environmental Services Research Team (CADWES), Construction Management and Economics, Department of Civil Engineering, Faculty of Business and Built Environment, Tampere University of Technology (TUT);

Freelance Consultant, Senior WATSAN Services Advisor

- Project Manager (01.10.2015-30.06.2017) in the research project funded by the Academy of Finland: Renewing Water Services Management and Governance in the Built Environment (2015-18). Responsibility area: Aging infrastructure, the Green Economy and water services.
- Responsible for the research project: Kenya water sector reforms from 1963-2018.
- Co-responsible for the research project: Pricing of water services
- Responsible for the research project funded by Maa- ja vesitekniikan tuki ry. and Emil Aaltonen Säätiö: Water utilities into the era of the Green Economy.
- Member of the working group for the development of supramunicipal water services in Tampere Region
- Supervision of MSc- theses: Community managed project (CMP) approach in implementing rural water supply in Amhara region of Ethiopia; Asset valuation principles for water and wastewater networks.
- Supervision of DSc -theses: Role of water cooperatives in Kenya; Community managed project (CMP) evolution in Ethiopia; Risks of the new technology for the built environment; Water and sanitation sector reforms in India; Access to Water? Dynamic Capacity Change for Sustainable Rural Water and Sanitation Services for All.

01.08.2012-23.11.2012

Senior Researcher at Capacity Development in Water and Environmental Services Research team (CADWES), Tampere University of Technology (TUT)

Adjunct Professor (Futures studies in water sector)

- Responsible for a research proposal writing for the Academy of Finland: Institutional innovations for water and sanitation sector reforms: Reshaping the future (2INNOWAT); Principal investigator - Dr. Tapio S. Katko, UNESCO Chair in Sustainable Water Services.
- Responsible for a project document writing for CIMO (Higher Education Institutions Institutional Cooperation Instrument): Institutional and Capacity Development of School of Civil and Environmental Engineering, Addis Ababa University, Ethiopia (HEIWASH).

01.04.2009-15.05.2011

Ramboll Finland Oy, International Operations (01.04.2009-31.01.2010 Ramboll Finnconsult Oy)

Senior Consultant, Water and Environment

- Project identification, analysis and preparation of tender decisions in the following sectors: Information Society, Science, Technology and Innovation, ICT, Capacity Development, Water and Sanitation.
- Assessment of sector status and forecasting its possible, plausible, probable and preferable developments.
- Establish and maintain good relations with other domestic and international actors in the sector: ministries, financiers, educational and research institutions, consultancy and other sector companies etc.
- Tender preparation in cooperation with regional directors.
- Identify and recruit in cooperation with the regional directors potential experts for different positions in projects, especially in water and sanitation projects.
- Participate in projects as a short-term specialist.

- Contribute into service area development.
- Contribute into other RF's core competence and priority areas as may be deemed appropriate on the basis of my knowledge and experience.
- Professional Backstopping (Quality Control):
  - Rural Water Supply and Environmental Programme in Amhara Region, Phase IV 2007-2011 (EUR 1,048,813, Ministry for Foreign Affairs of Finland)
- Professional Backstopping (Quality Control):
  - Long Term Technical Assistance for Capacity Development of the Office of the National Authorising Officer of Liberia, 2009-2012 (EUR 1,399,970, The Delegation of the EC to Ivory Coast and Liberia)
- Professional Backstopping Team Coordinator:
  - Programme of Cooperation in Science, Technology and Innovation between Finland and Mozambique 2010 – 2014 (STIFIMO, 4,995,080 EUR, Ministry for Foreign Affairs of Finland)
- Professional Backstopping Team Coordinator:
  - Consultancy Services for the Technical Assistance of the Dar es Salaam Institute for Sustainable Development in Tanzania (1,270,000 EUR, Ministry for Foreign Affairs of Finland).
- Home Office Coordinator:
  - BioFISA - support to the Finnish - Southern Africa Partnership Programme (BioFISA). This programme strengthens the New Partnership for Africa's Development/Southern African Network for Biosciences Network (NEPAD/SANBio) through short-term international technical assistance. The SANBio network covers 12 countries: Angola, Botswana, Malawi, Mauritius, Mozambique, Namibia, Lesotho, Swaziland, Seychelles, Republic of South Africa, Zambia and Zimbabwe. (200,000 EUR, Ministry for Foreign Affairs of Finland).
  - The Implementation of the Preparatory Phase of the Project "The Information Society and ICT Sector Development Programme in Tanzania" (500,000 EUR, Ministry for Foreign Affairs of Finland).

10.09.2007-13.03.2009

African Development Bank, Water and Sanitation Department (OWAS.1)

Principal Water and Sanitation Engineer

- Task Manager: Gambia - Water Supply and Sanitation Study (ADB Portfolio EUR 1.32 million)
- Task Manager: Ghana - Rural Water and Sanitation Sub-Program (ADB Portfolio EUR 14.34 million; water for 420,000 people, sanitation for 380,000 people)
- Task Manager: Ghana - Accra Sewerage Improvement Project (ADB Portfolio EUR 51.52 million; construction of 2 sewage treatment plants, 8 pumping stations, 32.8 km of sewer mains, 1 outfall pumping station, a 1.25 km marine outfall, rehabilitation and extension of 63.1 km sewerage network, rehabilitation and extension of 4,184 house connections, 147 public toilet blocks and 37 seepage/night soil tanks)
- Task Manager: Ghana - Three Towns Water Supply and Sanitation Study (Wa, Yendi and Damango; ADB Portfolio EUR 0.683 million)
- Task Manager and Co-task Manager: Nigeria - RWSS Sub-Programmes in Yobe and Osun States (ADB Portfolio EUR 57.12; target population is 3.32 million with water facilities and 2.98 million with sanitation services)
- Task Manager and Co-task Manager: Nigeria – Urban Water Supply and Sanitation Project in Ibadan (3.2 million people) and Jalingo (200,000 people) (ADB Portfolio USD 75 million)
- Co-task Manager: Liberia - Monrovia Water Supply and Sanitation Rehabilitation Programme (ADB Portfolio EUR 4.04 million; rehabilitation of Monrovia water and sanitation infrastructure up to min. 50% of pre-war capacity)
- Co-task Manager: Liberia - Sector Reform Study (ADB Portfolio EUR 1.257 million: Objective-oriented capacity building plan, Finalization of draft water policy, Institutional restructuring plan, Investment plans)
- Co-task Manager: Liberia - Water Supply and Sanitation Study for Monrovia Expansion and Rehabilitation of Three County Capitals (Kakata, Zwedru and Buchanan; ADB Portfolio EUR 1.52 million)
- Co-task Manager: Liberia – Urban Water Supply and Sanitation Project (ADB Portfolio USD 32 million)
- Task Manager and Co-task Manager: Sierra Leone - Water Supply and Sanitation Study: (i) Water Supply and Sanitation Project for Makeni, Bo and Kenema Towns and (ii) a Rural Water Supply and Sanitation Programme (ADB Portfolio EUR 0.9 million)
- Member of the Bank's Task Force for the preparation of the bank's policy on PPP (public-private partnerships)

- Apply the Bank's sector policy for water and sanitation and the existing Bank rules and procedures in project portfolio management.
  - a) Contribute to preparing sector policies concerning projects, programmes and initiatives in the water, sanitation and solid wastes sectors.
  - b) Participate in project preparation and implementation phases: identification, preparation, appraisal and supervision, including the preparation of the relevant reports.
  - c) Formulate and review proposals in relation to the Bank's priorities and operations strategies in Borrower countries.
- Contribute to the Division's annual programme of activities in the context of water and sanitation sector project/programme portfolio management
- Contribute to the definition of the Bank's operations strategy in the water and sanitation sectors in Borrower countries in the West and Central regions in the context of the preparation and/or updating of Country Strategy Papers (CSP).
  - a) Contribute to the drafting of the analysis of the Water and Sanitation Sectors, in particular the state of infrastructure, drinking water supply and distribution services and sanitation, implementation performances, the level of operating performances, past and current investments and the constraints that impede the sectors' sustainable development, development policies and strategies and their implementation, as well as the projects and programmes retained.
  - b) Propose a Bank operations strategy in the above-mentioned sectors in keeping with the Bank's sector policy and the Borrower's priority development projects and programmes.
- Identify development projects and programmes which could be financed by the Bank Group in the water and sanitation sectors, particularly in rural areas.
- Analyse requests proposed by Governments for Bank financing for projects, programmes and studies.
- Assist RMCs to develop national rural water supply and sanitation programmes based on the demand responsive approach with implementation and procurement guidelines with built-in fast track mechanisms for implementation in line with the principles of RWSSI.
- Appraise projects/programmes, prepare appraisal reports and review documents for their presentation to the Board of Directors.
- Participate in the monitoring and implementation of projects/programmes for the water and sanitation sectors.
- Participate in project/programme completion report preparation missions in order to draw lessons for the implementation of future similar Bank projects.
- Participate in the review of the Department's internal reports and documents, represent the Bank at international meetings on the financing of drinking water supply and sanitation infrastructure.
- Maintain relations with the other donor agencies with a view to co-financing of the Bank's operations.

#### 1.1.2003-5.8.2007

Tampere University of Technology (TUT)-Institute of Water and Environmental Engineering (IWEE), Tampere, Finland:

Senior Research Engineer and Adjunct Professor (Futures studies in water sector) in:

Capacity Development in Water and Environmental Services Research Group (CADWES)

- Responsible for TUT activities in "Network for the development of Sustainable Approaches for large scale implementation of Sanitation in Africa". NETSSAF is a Coordination Action funded by the European Commission within the 6th framework programme, starting in June 2006 with a total duration of 2.5 years. The consortium is composed of 19 partners from 12 different West Africa and European nations: Austria, Burkina Faso, Côte d'Ivoire, Finland, Germany, Ghana, Mali, Senegal, Spain, Sweden, Switzerland and United Kingdom. The aim of the proposed network will be to develop a variety of innovative, adaptable and replicable approaches to sustainable sanitation, integrating appropriate low-cost technologies with community-based management and their relevant governance, institutional frameworks and socio-economic constraints.
- Vulnerability of municipal infrastructure and critical infrastructure protection: The research project funded by the Foundation for Municipal Development.
- WaterTime: The EU -funded project addresses the issue of how to improve the quality of urban life by reaching economically, socially and environmentally sustainable strategic decisions on water systems in cities. The team of partners is drawn from different parts of Europe - Spain, Italy, UK, Germany, Finland, Hungary - and with a range of expertise, including economics, political science, environmental science and law, water institutions. The project studied current decision-making on water systems in 29 European cities, and long-

term historical experience. Responsibility area: National policy, administrative and legislative framework. Preparation of Finnish and Estonian national context papers on integrated water resources and services management.

- National Context Report Finland – Water Resources and Services Management
- National Context Report Estonia – Water Resources and Services Management
- Case study: Tampere (Tavase: Regional artificial groundwater recharge project)
- Case study: Hämeenlinna (Establishment of Hämeenlinna Region Water Ltd.)
- Case study: Tallinn (Privatisation of Tallinn Water Ltd.)
- PRINWASS: Barriers and Conditions for the Involvement of Private Capital and Enterprise in Water Supply and Sanitation in Latin America and Africa: Seeking Economic, Social, and Environmental Sustainability - An interdisciplinary research project supported by The European Commission under the Fifth Framework Programme 1998-2002. Responsibility areas: International policies with regard to private sector involvement & National policy and legislative framework in Finland.
- Vaasa Water, member of steering committee for strategy process, and supervision of MSc thesis on the scenarios for future water services operating environment.
- Vakka-Suomi, supervision of MSc thesis on organizational options in water services supramunicipal cooperation (Southwest Finland Regional Environment Centre, Vakka-Suomi sub-region, municipalities of Askainen, Lemu, Masku, Mynämäki, Nousiainen, Rusko, Vahto, and Velkua)
- Supervision of DSc thesis: Visionary Management in Water Services: Reform and Development of Institutional Frameworks.
- Supervision of DSc thesis: Role of Municipalities in Water Services.
- Supervision of LSc thesis: Knowledge management and networking in a water utility – The case of Pori Water.
- Supervision of DSc thesis on the sustainable water services assets management, pricing and economic regulation.
- Supervision of MSc thesis "Municipal water service development plans and related legislation" (Pirkanmaa Regional Environment Centre)
- Supervision of MSc thesis "Development of water associations" (Southwest and Pirkanmaa Regional Environment Centres).

#### 1.11.2000-31.12.2002

Kemwater Services Ltd (presently Kemira/Municipal&Industrial) /Water and Sanitation Institution Building in Kosovo –Project; Department of Water Technology, Faculty of Civil Engineering and Architecture, University of Pristina, Kosovo (A project under UNMIK Pillar 4 "Reconstruction, recovery and economic development" led by the European Union)

Senior Academic Advisor/Deputy Team Leader: Advisor for the university level water and environmental management MSc programme at Faculty of Civil Engineering and Architecture, University of Pristina, Kosovo, and responsible for:

- Leadership and management of the Consultant's team in the absence of the Team Leader.
- Assessment of water and environmental sector training needs in Kosovo.
- Provision of permanent advisory services to the Faculty of Civil Engineering and Architecture of the University of Pristina, including selection of students for PG training and defining individual training needs.
- Board Member of the Faculty of Civil Engineering and Architecture.
- Curriculum development for PG training and identification of suitable institutions to provide training abroad, and organisation and supervision of the PG training and other activities related to university level education.
- Assistance in the curriculum development in the Faculty.
- Pro-actively contributing to project's training events, and participating, as in workshops and seminars organized by other water sector stakeholders.
- Lecturing the courses: WEM1.1 Fundamentals of Water and Environmental Management (0.50 ECTS); WEM1.4 Introduction to Science and Research (1.00 ECTS); WEM6 Integrated Water Resources Management (Strategic thinking, planning and management in IWRM, a case study by using GWP IWRM ToolBox; together with Mr Osmo Seppälä, 5.00 ECTS)

#### 1.1.2000-31.10.2000

Tampere University of Technology (TUT)-Institute of Water and Environmental Engineering (IWEE), Tampere, Finland:

Adjunct Professor (Futures studies in water sector) at Department of Environmental Technology (TUT) from 1.3.2000.

## Senior Research Engineer

- Responsible for the project: Tampere Regional Solid Waste Management Company: Strategy 2010
- Co-responsible for the project: Privatization of water services? (Publication for IRC)
- Responsible for the project: Water supply and sanitation strategy plan for Southwest Finland Environment Region
- Responsible for the project: Finnish Water Partnership- prefeasibility study (Tekes-Finnish Funding Agency for Technology and Innovation)
- Responsible for the project: Business Strategy of Kemwater Services Oy-prefeasibility study
- Member of the Task Force: Client-producer processes (Feasibility study for infracluster research programme, Tekes-Finnish Funding Agency for Technology and Innovation, Technology Review 101/2000)
- Team Leader: External Evaluation on Joint Financing Programme in Higher Education (MHO). Water Resources Engineering. MHO/MU/TUD/WRE I. KEN/112. MHO/Moi University/ Delft University of Technology at the Department of Civil and Structural Engineering (DCSE) of Moi University.
- Lecturing at Tampere Polytechnics, European Construction Management Course: Management of water infrastructure systems

1998-1999Finland Futures Research Centre, Turku School of Economics and Business Administration:

## Acting Director 1.1.1999-31.5.1999

Coordinator 1.1.1998-31.12.1999 - Finland Futures Academy (Network of 15 Finnish Universities for the futures research education)

- Development and coordination of a national higher education and research network in the field of futures studies
- Responsible for the management of FFA
- Responsible for the development of the structure and the content of 15 study week educational programme in the futures studies for MSc students
- Lecture in futures studies scientific methods -course on soft systems methodology (10.4.1999)
- Member of the Project Group: Export Promotion of the Finnish Water Industry (Water Services Technology Programme 1997-2001, Tekes-National Technology Agency, Technology Review 86/2000)
- Responsible for a research project: Water Supply and Sanitation in the 21st century/Identification of research topics/Tekes Technology Review 80/99-TEKES (Finnish Funding Agency for Technology and Innovation) Infrastructure Cluster Research Programme/
- Special responsibility areas in research activities: water supply and environmental engineering, institutional and management options, urban development, visionary leadership and strategic planning, systems theory

1996-1998Tampere University of Technology (TUT)-Institute of Water and Environmental Engineering (IWEE), Tampere, Finland:

## Senior Research Engineer

- Project Director: The First Sino-Finnish Environment Program Conference and Workshop on Industrial Wastewaters, Beijing, China, 22-25 October, 1997 (DIDC/Ministry for Foreign Affairs, Ministry of Education, Ministry of Trade and Industry)
- Project preparation: Haiphong Water Supply and Sanitation Programme Phase III and Hanoi Water Supply Programme Phase IV, Vietnam 1.10-30.11.1996 (12-26.10.1996 in Vietnam, DIDC/Ministry for Foreign Affairs)
- responsible for TUT/IWEE research project: Development Programme for Hollola and Lahti Water and Wastewater Works Supramunicipal Co-operation (Research report, 23 p.)
- responsible for Tampere University of Technology/Institute of Water and Environmental Engineering (TUT/IWEE) research project: Institutions, organizations and viable water systems: A future model for drinking water provision and production in Kenya, which is a part of a research programme: Quality management of water services-development of sustainable economic infrastructure, co-financed by the Academy of Finland
- responsible for TUT/IWEE research project: Economic performance of water supply organizations: The implications for institutional framework and development cooperation, funded by the United Nations University/World Institute for Development Economics Research (UNU/WIDER) under the Finnish Special Project Fund (24 July 1995-23 July 1996)

1994-1996KEFINCO (YIT Corporation and Finnconsult Oy)/Kenya-Finland Western Water Supply Programme, Kakamega, Kenya:

(supported by the Department for International Development Cooperation/Ministry for Foreign Affairs)

Financial and Management Advisor/Deputy Project Manager, KFWWSP

- responsible for technical assistance for development of the capacity, institutional, financial management and accounting, and management affairs in ministry (MOLRRWD) and consumer operated piped water supplies (1,000,000 consumers served)
- responsible for Project Manager's duties during her absence (project management and financial management)
- responsible for Management By Results (MBR) training for the senior officers of the Programme, Provincial and District Water Engineers Offices (MOLRRWD)
- preparation of the manual: Decision support system covering monitoring and evaluation for piped water supplies performance improvement. 49 p., and the manual: Decision support system for community water supply management. 39 p.
- preparation of the model by-laws for water user association. 10 p.
- preparation of the study: Institutional and management options for Kenyan water supplies. 71 p.
- preparation of the model code of ethics for water supply employees. 1p.
- preparation of the manual: Capital costs and depreciation of fixed assets in water supply systems. 21 p.
- responsible for overseas procurement, clearing and forwarding for the KFWWSP

1988-94Tampere University of Technology (TUT)-Institute of Water and Environmental Engineering (IWEE) and Centre for Development Cooperation (1990-94) and EDUTECH (1988-90), Tampere, Finland:

Research Engineer (1988 -92), Project Manager (1989, 1992), Senior Research Engineer 1992-94

- responsible for the project: Identification of institutional alternatives for a proposed regional water and sewerage utility in Kouvola area, Finland
- in charge of the planning and implementation of a 12 months training course in water and environmental management (WEM) for participants from the Baltic countries, Ethiopia, Kenya and Finland
- lecture in WEM-courses (1992-93 and 1993-94) on urban water infrastructure management
- responsible for the project: Identification of possibilities to export Finnish environmental technology to India-baseline study on environmental management in India (Ministry for Trade and Industry)
- responsible for the project: Project Document for the Sanitation and Water Supply Component of the Primary Health Care Project in Rural Bani Suef, Egypt (FINNIDA)
- in charge of the research project: Development of Peri-Urban Water Services in Developing Countries (FINNIDA)
- coordinate the implementation of the identification mission for a water development programme in Arusha and Dodoma Regions, Tanzania, organize the LFA workshop, and finalize the Project Brief (FINNIDA)
- preparation of the Kenya Water Sector Position Paper to FINNIDA
- lecture in the 6th and 7th Postgraduate Course in Water Supply and Sanitation on water treatment, rural sanitation, and urban water infrastructure management
- supervise MSc -participants in the 6th and 7th Postgraduate Course in Water Supply and Sanitation in their seminar paper and thesis preparation. The eighteen-month master's courses were planned for the participants from Eastern African countries, and they were financed by Finnish International Development Agency (FINNIDA).

Project Manager (1988-1990, EDUTECH, formerly Centre for Continuing Education, TUT)

- responsible for the implementation of 1st IAWPRC Eastern Africa Regional Conference on Industrial Wastewaters, Nairobi, Kenya, 25-28 October 1989, and the post conference workshop 30 October - 1 November, 1989. (FINNIDA)
- coordinate the planning of 3rd IAWPRC Symposium on Forest Industry Wastewaters, Tampere, Finland, 5-8 June 1990
- coordinate the preparation of UNEP Training Course on Environmental Control for Industrial Managers and Engineers from Asia and the Pacific (FINNIDA, Ministry for Trade and Industry, UNEP, UNIDO), 1989



1984-1988

Plancenter Ltd. Consulting Engineers (presently FCG Finnish Consulting Group), Kandy, Sri Lanka: Harispattuwa Water Supply and Sanitation Project, and Udunuwara Water Supply and Sanitation Programme (supported by FINNIDA)

Deputy Project Manager (January- November 1987)

Sanitation Coordinator (1986- November 1987)

- responsible for the sanitation programme within the Harispattuwa Water Supply and Sanitation Project (140,000 consumers served)
- formulate long term policies and programmes regarding sanitation for the Kandy District Water Supply and Sanitation Project

Design & Coordination Engineer (1985-1986)

- participate in and coordinate the preparation of the feasibility study, general plan and project document for the Udunuwara Water Supply and Sanitation Programme
- supervise the planning for the Udunuwara piped water supply system rehabilitation (80,000 consumer served)
- prepare immediate and long-term rehabilitation plans for the Udunuwara-Yatinuwara Water Supply System
- prepare the O&M manuals for the Harispattuwa piped water supply systems
- responsible for overseas procurement

Construction Engineer (1984-1985)

- supervise contractors and force labour engaged in construction of the Harispattuwa piped water supply systems (80,000 consumer served)
- collaborate with National Water Supply and Drainage Board regarding designs and implementation of the piped water supply systems
- participate in the planning and design of the piped water supply systems and in the preparation of the contract documents
- responsible for overseas procurement for water works equipment and materials

1982-1984

United Nations Department of Technical Co-operation for Development (UNDTCD), Georgetown, Cayman Islands, British West Indies:

Caribbean Smaller Island Water Resources Assessment, Development and Management Project

UN Associate Expert/Sewerage Engineer (Cayman Islands Water Authority, 1983-1984)

- assist in formulating of long and short term policies and programmes regarding municipal wastewater disposal and sewerage systems
- assist in planning and design of the sewerage and wastewater treatment systems
- carry out field investigations regarding the sewerage systems

UN Associate Expert/Water Supply Engineer (Cayman Islands Water and Sewerage Project Office, 1982-83)

- assist in formulating long and short term policies and programmes regarding water supply systems
- plan, direct and control all aspects of design, construction and field surveys for water supply systems
- implement the groundwater resources assessment, development and management pilot programme
- participate in the training of technicians, artisans and drilling contractors regarding ground water resources exploration and inventory, and implementation of the well-field systems

1981

Soil and Water Ltd. Consulting Engineers (presently Poyry) (a partner in Devecon Ltd.), Helsinki, Finland: Project Engineer

- prepare a master plan for Tajoura Municipality combined sewerage system, Libya (70,000 consumer served)
- prepare contract documents and bill of quantities for overseas projects

1980-1981

Helsinki University of Technology, Department of Environmental Architecture: Project Engineer, Helsinki, Finland

- guide and supervise undergraduate students and assist lecturers regarding the matters related to environmental engineering

1978-1979

Kouvola Municipality Water and Sewerage Works: Project Manager, Kouvola, Finland

- develop and implement a municipality sewerage system infiltration and leakage detection pilot programme
- formulate long and short term policies regarding sewerage system management

### 1976-1978

Kokkola Water District: Project Engineer, Tampere, Finland; Hyvinkää Municipality Water and Sewerage Works: Project Engineer, Tampere, Finland; and Kannus Municipality Water and Sewerage Works: Project Engineer, Kannus, Finland

- Responsible for the project: The effects of temperature on effluent quality at extended aeration-simultaneous precipitation of wastewater

### **3. Short Term International Assignments Abroad**

- 22-28 February 2010, Quality control field mission, Liberia
- 16-23 September 2009, Quality control field mission, Liberia
- 2007-2009, Principal Water and Sanitation Engineer, AfDB, several field missions to Nigeria, Ghana, Liberia and Sierra Leone
- 29 November – 4 December 2004, Participant, 1st Global WASH Forum (Water Supply and Sanitation Collaborative Council), Dakar, Senegal
- 27 April – 16 May 2003, Senior Research Fellow, Visionary and knowledge management in water services, Jenny and Antti Wihuri Foundation, Kenya
- 8-23 December 1999, Mission team leader of the external evaluation, Joint Financing Programme in Higher Education - MHO/Moi University/Delft University of Technology/Water Resources Engineering at Department of Civil and Structural Engineering of Moi University, Eldoret, Kenya
- 16-20 November 1998, Participant, Africa Consultative Forum on Water Supply and Sanitation, Water Supply and Sanitation Collaborative Council, Abidjan, Côte d'Ivoire.
- 8-14 November 1997-DIDC, Invited Speaker, Ministry for Foreign Affairs-Seminar on water supply and sanitation sector policies and strategies. Hanoi and Haiphong, Vietnam, 10-12.11.1997.
- 3-7 November 1997-DIDC, Participant, Ministry for Foreign Affairs-Water Supply and Sanitation Collaborative Council Fourth Global Forum, 3-7 November 1997, Manila, the Philippines.
- 20-27 October 1997-Team Leader, The First Sino-Finnish Environment Program Conference and Workshop on Industrial Wastewaters in conjunction with Finland Day-Pulp&Paper Technology from Finland Seminar and China Paper97 International Exhibition. Beijing, China. 3-17 March 1997-TUT/IWEE/Tsinghua University-Preparation mission/The First Sino-Finnish Environment Program Conference and Workshop on Industrial Wastewaters, Beijing, China.
- 12-26 October 1996-TUT/IWEE/DIDC, Team member, Ministry for Foreign Affairs-Project Document preparation: Haiphong Water Supply and Sanitation Programme Phase III and Hanoi Water Supply Programme Phase IV-Hanoi and Haiphong, Vietnam.
- 1 February-31 March 1996-Senior Research Fellow, TUT/IWEE-research project: Institutions, organizations and viable water systems: A model for Kenya and supervision of the research project: Economic performance of water supply organizations: The implications for institutional framework and development cooperation-Kakamega, Kenya.
- 23-27 October 1994-Team Leader, KFWWSP/Kefinco/Leasing a KFWWSP drilling rig to UNHCR for water supply development in Kibumba refugee camp-Goma, Zaire.
- 25-28 April 1993-Participant, Water Supply and Sanitation Collaborative Council/Working Group on Urbanization-Meeting in Siena, Italy-Preparation of guidelines for action and review of the strategy outline for the provision and management of water supply and sanitation and related services in the peri-urban sector.
- Several field missions in 1992-1993-Team Leader, TUT/IWEE/Training Programme on Water and Environmental Management-Denmark, Estonia, Latvia and Lithuania.
- 24 November-13 December 1991-Project manager, TUT/IWEE/Ministry of Trade and Industry, Finland-Project Manager-Identification of Environmental Technology Transfer to India-New Delhi and Saharanpur, India.
- 23 September-20 October 1991-Team Leader, Helsinki University Knowledge Services Ltd/FINNIDA-Preparation of the project document on the Sanitation and Water Supply Component of the Primary Health Care Project in Rural Bani Suef-Bani Suef and Cairo, Egypt.
- 18-26 August 1990-Team member, TUT/IWEE/FINNIDA-Organizing and conducting the Workshop on Water Development Programme during the identification mission for Water Development Programme in Arusha and Dodoma Regions-Arusha, Tanzania.
- One week in August 1990-Team Leader, TUT/IWEE/FINNIDA-Preparation of Kenya Water Sector Position Paper-Nairobi, Kenya.
- Three weeks study tour in 1990-Team Leader, TUT/IWEE/FINNIDA-Preparation of a study on peri-urban water and waste management-Nairobi, Kenya and Addis Ababa, Ethiopia.

- Several field missions in 1988-1989-Team Leader, TUT/IWEE/FINNIDA-Preparation and implementation of Industrial Wastewaters'89, Nairobi, Kenya-1st IAWPRC Eastern Africa Regional Conference on Industrial Wastewaters from October 25 through October 28,1989, and the post conference workshop from October 30 through November 1, 1989-Nairobi, Kenya.
- 2 months in 1986-Plancenter Ltd./FINNIDA-Design engineer-Preparation of the general plan for the water supply system consisting of a water reservoir, a booster unit and a distribution network for Ceylon Fisheries Corporation Mutwal Complex-Colombo, Sri Lanka.
- 3 months in 1985-1986-Plancenter Ltd./FINNIDA-Design and coordination engineer-Design of the treatment process, preparation of the contract documents, and supervision of the construction for National Milk Board Digana Factory Water Treatment Plant-Digana, Sri Lanka.

## B: Education:

Tampere University of Technology, Finland, 1996-1998

**Doctor of Science in Technology** (Civil Engineering: 115 credit points/study weeks, 172.5 ECTS, May 29, 1998, 1 study week is equal to 40 hours of work)

Doctoral thesis 1998: Institutions, organizations and viable water systems: A capacity development model for drinking water provision and production. Tampere University of Technology. Publications 230. 175 p. (Focus on the water sector reform in Kenya)

Assessors: Adjunct Professor, Dr. Tapio Katko, Prof. Pentti Malaska and Dr. Patts M.A. Odira.

Opponents: Prof. Heikki Kiuru and Assoc. Prof. Damas A. Mashauri.

Custos: Adjunct Professor, Dr. Tapio Katko.

Tampere University of Technology, Finland, 1988-1994

**Licentiate of Science in Technology** (Civil Engineering; tekniikan lisensiaatti, 80 credit points/study weeks, 120 ECTS)

Pre-doctoral study: Sustainable peri-urban water and waste management infrastructure: A model for the future. LicTech (PhD) thesis. Tampere University of Technology. Institute of Water and Environmental Engineering. Publication No. A 49. 203 p. (35 credit points/study weeks, 52.5 ECTS)

- Field of research: Water services management and engineering (Prof. Matti Viitasaari)
- Subsidiary subject: Futures research (Prof. Jarl-Thure Eriksson)

Tampere University of Technology, Finland, 1979-80 (11 months)

The 2nd Post Graduate Course in Water Supply and Sanitation (for developing countries)

Tampere University of Technology, Finland, 1972-77 (5 years and 5 months)

**MSc in Civil Engineering** (diplomi-insinööri), 1977 (180 credit points/study weeks, 270 ECTS)

- Water and Waste Waters Engineering
- Construction Economics and Management
- Traffic Engineering

## C: Language Abilities:

English	excellent
Swedish	fair
German	fair
Finnish	mother tongue

## D: References:

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### **E: Professional Societies and Associations:**

American Water Works Association, AWWA (1982-2019)  
 Finnish Association of Civil Engineers, RIL (1972-1994, 1997-)  
 Finnish Association of Graduate Engineers, TEK (1994-2018)  
 The Association of Finnish Nonfiction Writers (2023-)  
 Finnish Red Cross

- Member of Working Group on Provision of Water Supply and Sanitation in Relief Actions (1993)

Finnish Society for Development Studies (1992-1994, 2013-2019)

- Member of Governing Board (1992-94)

Finnish Society for Futures Studies (1992-2018)

- Member of Governing Board (1999-2000)

Institutional Development Topic Network, GARNET (Global Applied Research Network in Water Supply and Sanitation, 1994-)  
 International Water Association (1989-2022)

- Member of Specialist Group on Management & Institutional Affairs; Water Treatment & Management in Developing Countries; Environmental Engineering Education; Strategic Assets Management; Institutional Governance and Regulation (IGR)

SIFE Governing Board (Sino-Finnish Environment Programme, a network of 5 Finnish and 6 Chinese universities and institutes, 1998-1999)  
 Water Association, Finland (1988-2018)

- Sub-council for Developing and Transition Economies (the representative of Water Association in the Global Water Partnership) (1996-, Chairman, 1996-2000)
- Governing Board (Vice member, 1998-2000)

WaterFinns (2003-)  
 Water Supply and Sanitation Collaborative Council (WSSCC)

- Member of Network on Services for the Urban Poor (formerly Working Group on Urbanization, 1992-); Member of Working Group on Institutional and Management Options (1995-)

Member of the national working group-Preparation of the freshwater initiative for CSD6 (Ministry of the Environment 1997-1998)  
 Member of the Finnish IWSA (International Water Services Association) Committee (Finnish Water and Wastewater Works Association and Water Association, Finland, 1997-2000)  
 Member of the Finnish IWA (International Water Association) Committee (2000-2002)  
 Member of UniPID Steering Committee 2004-2005 (Finnish Universities Partnership for International Development, TUT representative in the Board of Directors of UniPID 2006-2007)  
 Member of the Finnish International Water Task Force (2004-)  
 Member of Organizing Committee IWHA 2007 Conference, Tampere, Finland  
 Member of Scientific Council of Journal Futura (2006-)  
 Member of the Board of Directors of the International Centre for Research on Environmental Services and Governance (ICES), Tampere, Finland  
 Finnish Water Forum (Ramboll representative from 27.04.2009-15.05.2011, Member of Working Group for Developing Countries from 2012-)

### **F : Interests and Hobbies:**

Basketball; tennis; golf; gym; fishing; Rotary Club of Tampere Kaleva, Finland (2004-7; Sergeant-at-Arms 2005-6; 1<sup>st</sup> Secretary 2006-7)

### **G: Countries visited professionally:**

The Bahamas, Barbados, Belgium, The Cayman Islands, China, Denmark, Egypt, England, Estonia, Ethiopia, Germany, Ghana, India, Italy, Ivory Coast, Jamaica, Japan, Kenya, Kosovo, Latvia, Liberia, Lithuania, Nigeria, The Philippines, Russia, Senegal, Sierra Leone, Singapore, Sri Lanka, Sweden, Tanzania, Tunisia, Uganda, The United States of America, Vietnam, Zaire

## H: Research funds and awards 1994-2013:

Academy of Finland, 1994-1996: (FIM 110,000)

- Doctoral dissertation (as a part of TUT/IWEE research programme: Capacity development of water-services)

United Nations University/WIDER, 1994-1995: (FIM 300,000)

- Economic performance of water supply organizations: The implications for institutional framework and development cooperation (as a part of doctoral dissertation)

Jenny and Antti Wihuri Foundation, 1995: (FIM 30,000), Doctoral dissertation

Foundation for Construction Industry Advancement, 1997: (FIM 8,000), Doctoral dissertation

Tampere City Science Foundation, 1998: (FIM 4,000), Doctoral dissertation

Jenny and Antti Wihuri Foundation, 2002: (EUR 20,000)

- Visionary and knowledge management in water services

The Finnish Association of Non-fiction Writers

- Water Services Management, 2004 (EUR 1,800)

Water Association, Finland

- Publication Award, 2005 (EUR 670)

Maa-ja vesitekniikan tuki ry

- The Green Economy, water and sanitation services nexus, 2012 (EUR 10,000)

Emil Aaltonen Säätiö

- Participation in the IWA Development Conference in Nairobi, Kenya, 14-17 October 2013 and expert visit to UNEP (The Green Economy, water and sanitation services nexus, 2013; EUR 5,000)

Maa-ja vesitekniikan tuki ry

- Towards Building Multi-level Governance for Sustainable and Resilient Water Services: Subsidiarity Approach, 2019 (EUR 15,000)

## I: MSc- and DSc- thesis supervision

1<sup>st</sup> supervisor: Ms Lucy Macharia, MSc student TUT/IWEE (1992)

1<sup>st</sup> supervisor: Mr Ilkka Metsälä, MSc student, TUT/DCE (2001)

2<sup>nd</sup> supervisor: Ms Katja Rasi, MSc student, TUT/IEEB (2000)

2<sup>nd</sup> supervisor: Mr Osmo Seppälä, DSc student TUT/IEEB (2004)

2<sup>nd</sup> supervisor: Mr Pekka Pietilä, DSc student TUT/IEEB (2006)

2<sup>nd</sup> supervisor: Ms Sirpa Sandelin, LSc and DSc student TUT/IEEB (2006)

1<sup>st</sup> supervisor: Ms Milja Hahto, MSc student TUT/IEEB (2004)

1<sup>st</sup> supervisor: Ms Eija Vinnari, DSc student TUT/IEEB (2008)

1<sup>st</sup> supervisor: Mr Antti Rynänen, MSc student TUT/IEEB (2005)

External examiner: Mr Daniel Barasa Kidwoli, MSc student, University of Nairobi, Kenya (2005)

1<sup>st</sup> supervisor: Ms Sara Poijärvi, MSc student TUT/IEEB (2005)

1<sup>st</sup> supervisor: Ms Annina Takala, MSc student TUT/IEEB (2007)

2<sup>nd</sup> supervisor: Mr Francis Kimani, DSc student TUT/IEEB (2010)

1<sup>st</sup> supervisor: Ms Riitta Molarius, DSc student TUT (2011)

Supervisor: Mr Nabin Sharma, MSc student TUT (2012)

Supervisor: Mr Beshah Behailu Mogesse, DSc student TUT (2012)

Supervisor: Ms Laura Inha, DSc student TUT (2012)

Supervisor: Mr Samuel K. Ngari; DSc student TUT (2014)

Supervisor: Mr Jyrki Laitinen, DSc student TUT (2013)

Supervisor: Ms Suvi Yli-Siuru, DSc student TUT (2013)

Supervisor: Ms Karin Lepola, MSc student TUT (2013)

Supervisor: Ms Sanna-Leena Rautanen, DSc student TUT (2013)

Opponent:

Mr Richard Windischhofer

University of Tampere, Faculty of Economics and Administration (2 November 2007)

Doctoral thesis: Municipal Entrepreneurialism and the Commercialization of the Finnish Water Sector

Custos:

Ms Eija Vinnari

Tampere University of Technology, Faculty of Science and Environmental Engineering, Department of Chemistry and Bioengineering, Laboratory of Environmental Engineering and Biotechnology Tampere University of Technology (9 May 2008)

Doctoral thesis: Vinnari, Eija M. 2008. Public service or Public Investment? An Assessment of the Consequences of New Public Management in the Water Sector. Tampere University of Technology. Publication 726. <http://URN.fi/URN:NBN:fi:tty-200903061036>

Ms Sanna-Leena Rautanen

Tampere University of Technology, Faculty of Business and Built Environment, Department of Civil Engineering (18 March 2016)

Doctoral thesis: Rautanen, S-L 2016, Access to Water? Dynamic Capacity Change for Sustainable Rural Water and Sanitation Services for All. Tampere University of Technology. Publication, vol. 1373, Tampere University of Technology.

[http://tutcris.tut.fi/portal/en/publications/access-to-water-dynamic-capacity-change-for-sustainable-rural-water-and-sanitation-services-for-all\(a1877206-c692-454d-8267-facf49016207\).html](http://tutcris.tut.fi/portal/en/publications/access-to-water-dynamic-capacity-change-for-sustainable-rural-water-and-sanitation-services-for-all(a1877206-c692-454d-8267-facf49016207).html)

**LIST OF PUBLICATIONS**

**Family Name:** HUKKA

**First Names:** Jarmo Juhani

**ResearchGate:** Research Interest Score 47.8

**ORCID ID:** 0000-0002-8500-4056

**Articles in international scientific journals with referee practice:**

1. Hukka, J.J. and Katko, T.S. 1997. Towards viable drinking water services. *Natural Resources Forum. A United Nations Sustainable Development Journal*. Vol. 41, No.3. pp. 161-167.
2. Rämö, J., Hukka, J.J. and Katko, T.S. 1997. Economic performance of water supply organizations: the implications for institutional framework and development cooperation. *Journal Water Science Research and Technology-Aqua*. Vol. 46, No. 2. pp. 106-116.
3. Juhola, P., Hukka, J.J. and Katko, T.S. 1999. Water and sewage utilities as community service producers in Finland-development trends and needs. *European Water Management*. Vol. 2, No 2. pp. 46-54.
4. Hukka, J.J. and Katko, T.S. 2000. Privatisation of water services – Puzzling experiences, yet little discussion. *European Water Management. Official Publication of the European Water Association*. Vol. 3, No 3. pp. 43-44.
5. Seppälä, O.T., Hukka, J.J. and Katko, T.S. 2001. Public-Private Partnerships in water and sewerage services–Privatization for-profit or improvement of service and performance? *Journal Public Works Management and Policy*. Vol. 6, No. 1, July 2001. Sage Publications, Inc. pp. 42-58.
6. Katko, T. S., Juuti, P. S. and Hukka, J. J. 2002. An early attempt to privatize – Any lessons learned? *Water International*. Vol. 27, No. 2. pp. 294 – 297.
7. Hukka, J.J. and Katko, T.S. 2003. Refuting the paradigm of water services privatization. *Natural Resources Forum*. Vol. 27, No. 2 May 2003. A United Nations Sustainable Development Journal. A special issue on The Freshwater Challenge: Providing for People and Ecosystems. pp. 142-155.
8. Juuti P.S, Katko T.S. & Hukka J.J. 2006. Revisiting Private Water Proposals and Concessions of the 1870 and 1880s in Finland. *Water International*. Vol. 31, No 3. pp. 288-294.
9. Hukka, J.J., Juuti, P.S., Katko, T.S. and Seppälä, O.T. 2006. Many *Ps* needed for sustainable water services: Expansion of the scope of public-private partnerships. *Public Works Management & Policy*. Vol. 11, No 2. Sage Publications. pp. 104-109.
10. Pietilä P.E., Hukka J.J. and Katko T.S. 2007. The Finnish Experience. *Journal of Comparative Social Welfare*. Vol. 23, No. 2. pp. 167-180.
11. Hukka, J.J., Katko, T.S., Mattila, H.E., Pietilä, P.E., Sandelin, S.K. and Seppälä, O.T. 2007. Inadequacy of positivistic research to explain complexity of water management. *International Journal of Water*. Vol. 3, No. 4. pp. 425-444.
12. Vinnari, E.M. and Hukka, J.J. 2007. Great expectations, tiny benefits – Decision making in the privatization of Tallinn water. *Utilities Policy*. Vol. 15, No. 2. pp. 78-85.
13. Hukka, J.J. and Vinnari, E.M. 2007. Public-public partnerships in the Finnish water services sector. *Utilities Policy*. Vol. 15, No. 2. pp. 86-92.
14. Pietilä, P.E, Katko, T.S. and Hukka, J.J. 2007. Public-Private Partnership in Finnish Water Services. *Journal for Institutional Comparisons*. Vol. 5, No. 2. The international platform of Ludwig-Maximilians University’s Center for Economic Studies and the Ifo Institute for Economic Research, Munich. pp. 27-32.
15. Vinnari, E.M. and Hukka, J.J. 2010. An international comparison of the institutional governance of water utility asset management and its implications for Finland. *IWA Publishing. Water Policy 12 (2010) 52–69*.
16. Hukka, J.J, Katko, T.S, Pietilä, P.E. and Seppälä, O.T. 2010. Towards balanced public private cooperation for urban water services. *Journal of Management & Public Policy*. Vol. 2, No. 1 December 2010. pp. 71-84. <http://www.jmpp.in/>
17. Hukka, J.J. and Katko, T.S. 2015. Appropriate Pricing Policy Needed Worldwide for Improving Water Services Infrastructure. Expanded Summary. *Journal AWWA*. Vol. 107, No 1. pp. 89-90.
18. Hukka, J.J. and Katko, T.S. 2015. Appropriate Pricing Policy Needed Worldwide for Improving Water Services Infrastructure. *Journal AWWA*. Vol. 107, No 1. pp. E37-E46. <http://www.awwa.org/publications/journal-awwa/abstract/articleid/48268706.aspx>
19. Behailu, B.M., Hukka, J.J. and Katko, T.S. 2016. Service Failures of Rural Water Supply Systems in Ethiopia and Their Policy Implications. *Public Works Management and Policy*. July. pp. 1-18.
20. Rajala, R.P. and Hukka, J.J. 2018. Asset Life Cycle Management in Finnish Water Utilities. *Journal of Water Resource and Protection*, 10, 587-595. <https://doi.org/10.4236/jwarp.2018.106033>
21. Laitinen, J., Antikainen, R., Hukka, J.J. and Katko, T.S. 2019 Water supply and sanitation in a green economy society: The case of Finland. *Public Works Management & Policy*. 18 p. <https://doi.org/10.1177/1087724X19847211>.
22. Inha, L. M. and Hukka, J.J. 2019. Policies enabling resilience in Seattle’s water services. pp. 93-120 in: Hein, C., Mager, T. and Rocco, R. (eds.) 2019. *European Journal of Creative Practices in Cities and Landscapes*. Vol. 2, No. 1. *Water Resilience: Creative Practices – Past, Present and Future*. 209 p. <https://doi.org/10.6092/issn.2612-0496/8688>.
23. Sandelin, S.K., Hukka, J.J. and Katko, T.S. 2019. Importance of Knowledge Management at Water Utilities. *Public Works Management & Policy*. 17 p. <https://journals.sagepub.com/doi/full/10.1177/1087724X19870813>

24. Laitinen, J., Kallio, J., Katko, T.S., Hukka, J.J. and Juuti, P. 2020. Resilient water services for the 21<sup>st</sup> century society – Stakeholder survey in Finland. *Water* 2020, 12 p.  
<https://www.mdpi.com/2073-4441/12/1/187/pdf>
25. Katko T. S. and Hukka J.J. 2021. Crisis and Water Services: How a 2007 Public Health Emergency in Finland Helped Shape Its Response to COVID-19. *Public Works Management & Policy*. Vol. 6, no. 1, pp. 63–70. DOI: 10.1177/1087724X20969159
26. Koros, J., Juuti, P., Juuti, R., Hukka, J.J., and Asokan, S. 2023. (Accepted) Leaving no one behind: Prospects for user-owned water utilities in Kenya. *Public Works Management & Policy*.
27. Hukka, J.J. and Katko, T.S. 2023 (Submitted) Reframing SDG 6: Nexus of subsidiarity principle–resilience approach–multi-level governance for water services. *Natural Resources Forum*. A United Nations Sustainable Development Journal.

### Articles in international scientific compilation works and international conference proceedings with referee practice:

1. Morange, H., Katko, T.S. and Hukka, J.J. 1990. (Original in French). *Development and Environment: Role of Local Communities in the Water Sector*. Presented in the 6th General Conference of the European association of Development Research and Training Institutes (EADI), Oslo, Norway, 27-30 June 1990.
2. Hukka, J.J. 1991. *Appropriate Water and Waste Management Infrastructure for the Urban Slums and Squatter Settlements*. pp. 6-40 in: Morange, H. and Mashauri, D.A. (eds). 1993. *Workshop on Management of Urban Services*. Tampere 25.4.1991. Tampere University of Technology. Institute of Water and Environmental Engineering. Occasional Paper No. C 48. 116 p.
3. Katko, T.S. and Hukka, J.J. 1991. *Water Supply and Sanitation Evolution in Finland in the 20th Century: Any Messages for Development Co-operation in the 21st Century? VIIth World Congress on Water Resources (IWRA)*. *Water for Sustainable Development in the 21st Century*. Rabat, Morocco, 13-18 May 1991. 8 p.
4. Hukka, J.J., Mashauri, D.A., Katko, T.S. and Abebe Laike Selassie. 1991. *Urban Environment Upgrading-Basic Infrastructure*. 17th WEDC Conference. *Infrastructure, environment, water and people*. Nairobi, Kenya, 19-23 August 1991. Pre-prints. pp 91-94.
5. Hukka, J., Katko, T., Seppälä, O. and Viitasaari, M. 1992. *A holistic strategy for development cooperation in urban water supply and sanitation*. Paper for oral presentation. Stockholm Water Symposium. August 10-14, 1992. Proceedings. Publication no. 2. Stockholm Water Co. pp 131-143.
6. Katko, T., Hukka, J. and Pietilä, P. 1992. *Paying for water is a must*. 18th WEDC Conference. *Water, Environment and Management*. Kathmandu, Nepal. 30 Aug. - 3 Sept 1992. 3 p.
7. Hukka, J.J., Katko, T.S. and Seppälä, O.T. 1993. *Action needed to secure clean water and adequate sanitation in developing countries. Coherence and Chaos in Our Uncommon Futures-Visions, Means, Actions*. XII World Conference of World Futures Studies Federation. Turku, Finland, August 23-27, 1993. 16 p.
8. Hukka, J.J., Katko, T.S. and Morange, H. 1993. *Institutional Development of Water and Sewage Utilities in Finland-Wider Autonomy and Regionalization? HYDROTOP'94*. Marseille, France. 12-15 April 1994. 4 p.
9. Hukka, J., Katko, T. and Isakow, M. 1993. *Co-operation of water and wastewater utilities in Kouvola area*. Paper for oral presentation. UETP-EEE Short Modular Course Programme. *Sound institutional strategies for water supply and sanitation services*. December 8-10, 1993. Tampere, Finland. pp. 71-76 in: Hukka, J., Juhola, P., Katko, T., Morange, H. and Pietilä, P. (eds.). 1994. *Sound institutional strategies for water supply and sanitation services-Seminar proceedings*. Tampere University of Technology. Institute of Water and Environmental Engineering. Publication No. B 59. 112 p.
10. Hukka, J.J. 1994. *Sustainable peri-urban wwm infrastructure*. pp. 107-110 in: 20th WEDC Conference. *Affordable water supply and sanitation services*. Colombo, Sri Lanka, 22nd-26th August 1994. Conference Pre-prints. 318 p.
11. Hukka, J.J., Nyangeri, E.N., Hedberg, K.W. and Sarkkinen, P. 1995. *Institutional framework, organizations and financial performance: What kind of future for water supplies in Kenya? Conference paper presented in: Futures Beyond Poverty*. XIV World Conference of World Futures Studies Federation. 25th - 30th July, 1995, Nairobi, Kenya. 10 p. Abstract in conference programme p. 31.
12. Mukhwana, J.S. and Hukka, J.J. 1995. *Sustainability of community water supplies*. 21st WEDC Conference. *Sustainability of Water and Sanitation System*. Kampala, Uganda. 4th - 8th September 1995. Conference Proceedings. pp. 179-180.
13. Hukka, J. and Katko, T. 1997. *Long-term development and the futures of water services-the cases of Finland and Kenya*. Specialized conference on the challenges of the next 50 years. IWSA 50 years ahead. Harrogate, Yorkshire. June 16-17, 1997. Conference proceedings. pp. 112-119.
14. Hukka, J.J., Katko, T.S. and Nyangeri, E.N. 1998. *Privatisation or public utilities reforms? Water Africa'98 Conference*. Nairobi, June 30 - July 2, 1998.
15. Hukka J., Katko T., Pietilä P. and Viitasaari M. 1998. *Vital infrastructure: Improvements in urban water supply and sanitation*. pp. 179-199 in: Hjerpe, R. (ed.) 1998. *Urbanization: Its global trends, economics and governance*. Government Institute for Economic Research. VATT Publications No. 26. 221 p.
16. Hukka, J.J. and Katko, T.S. 1999. *WSS as an entry point for human development*. Vision 21 - Knowledge Synthesis Meeting. April 20 - 22, 1999. Wageningen, Holland. [www.wsscc.org/vision21/docs/doc04.html](http://www.wsscc.org/vision21/docs/doc04.html)
17. Hukka, J.J. and Seppälä, O.S. 1999. *Capacity development model for water services*. pp. 181-183 in: 25th WEDC Conference. *Integrated development for water supply and sanitation*. Addis Ababa, Ethiopia. 30th August - 3rd September 1999. Pre-prints. 432 p.
18. Hukka, J.J. and Katko, T.S. 1999. *Public-private partnership for competitive water and sanitation services*. pp. 285-292 in: ENTRÉE 99. *Sustainable Use of Natural Resources-Cooperative Planning and Actions*. Environmental Training in Engineering Education. Conference Proceedings. November 10-13, 1999. Tampere, Finland. 357 p.



19. Seppälä, O.T. and Hukka, J.J. 2000. (Oral presentation) Is the soft systems methodology soft enough? The Quest for the Futures: Methodology Seminar in Futures Studies, Turku, Finland, 13-15, June 2000. 5 p.
20. Hukka, J.J., Katko, T. and Seppälä, O. 2000. Privatisation and commercialisation of water services under municipal administration. 1<sup>st</sup> International Conference of IWA. Paris, 3-7 July, 2000. (poster). 4 p.
21. Pietilä, P., Hukka, J.J. and Katko, T.S. 2000. (Oral presentation) Municipal water utilities in Finland and Lithuania. Water in the Twenty-first Century—Learning from Twentieth Century Experiences, 25-25 October 2000, Berlin. 6 p.
22. Seppälä, O.T., Hukka, J.J. and Katko, T.S. 2000. (Accepted, not presented) P3 in WatSan services. 27<sup>th</sup> WEDC Conference, August 2001, Lusaka, Zambia.
23. Hukka, J.J. and Hedberg, K.W. 2001. Water services for new era in Kosovo. Poster presentation. IWA 2<sup>nd</sup> World Water Congress, Berlin, Germany, 15-19 October 2001. B1165.
24. Hukka, J.J., Seppälä, O.T., and Katko, T.S. 2001. (Oral presentation) Public-private partnerships – the paramount change in the public services paradigm. IWA World Water Congress. Melbourne, Australia. 7-12 April 2002. e21000a.
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## LECTURES AND PRESENTATIONS (from 2004)

### International

1. Hukka, J.J. 2004. (Oral presentation) Futures research in establishment of territorial coalitions for watsan services and hygiene for the urban poor. Parallel Events Session of the WASH Dakar Forum on 30 November 2004. "Territory and Advocacy Partner event of the Network on Services for the Urban Poor" was associated to the Local Government theme of discussion of the main Forum. Dakar, Senegal.
2. Hukka, J.J. 2005. (Oral presentation) PPP in Water and Sewerage Services Sector. Seminar on Public Private Partnerships in Environment Sector. Riga, Latvia, 4 April 2005.
3. Hukka, J.J. and Vinnari, E.M, and Pietilä, P.E. 2006. (Oral presentation) A Quest for Effective Water Governance: Look Who's Leading the WPI. Sustainable Development of Water Resources, Water Supply and Environmental Sanitation. 32nd WEDC International Conference, Colombo, Sri Lanka, 14 November 2006.
4. Hukka, J.J. 2007. (Lecture) Future challenges of water. NordForsk. Nordic-Baltic Interdisciplinary Research Training Course: "Water Governance in Long-Term Perspectives" (WAGOL). 13-19 June 2007.
5. Hukka, J.J. 2007 (Oral presentation) Comprehensive asset management for water supply and sanitation. African Development Bank. Water and Sanitation Department. Tunis, Tunisia. 8 February 2008.
6. Hukka, J.J. 2009 (Oral presentation) Water management - Finland. Finnish Water Forum Presentation to the African Development Bank Delegation. Helsinki, Finland. 19 October 2009.
7. Hukka, J.J. 2010 (Oral presentation) Forgotten Infrastructure – In the Quest for Development, Sustainability and Security. 12th Annual Conference of the Finland Futures Research Centre and the Finland Futures Academy. Security in Futures – Security in Change. 4 June 2010, Turku, Finland.

8. Hukka, J.J. 2011 (Lecture) Research on Strategic and Visionary Management of Water. Research Training Course "Towards more interdisciplinary and diverse research approaches on sustainable water and infrastructures (TISWA)". Tampere University of Technology. 15 June 2011. Available: <http://www.cadwes.org/>.
9. Hukka, J.J. 2015 (Oral presentation in English). Resilient asset management and governance for deteriorating water services infrastructure. 8th Nordic Conference on Construction Economics and Organization. May 28-29, 2015, Tampere, Finland.
10. Hukka, J.J. 2015 (Oral presentation in English). Regulatory Governance, Strategic Asset Management and Sustained Water Services Nexus. IWA LESAM 2015 Leading-Edge Conference on Strategic Asset Management of Water and Wastewater Infrastructures. 17-19 November 2015, Yokohama, Japan.
11. Hukka, J.J. 2016. (Oral presentation in English) Water is a human right, but the services are not. Working Group: Deliberative and responsive alternatives in natural resources governance. Making Alternatives Visible: Resisting and Reshaping the Mainstream. Development Day Conference 2016. 11-12 February 2016, University of Helsinki, Finland.
12. Hukka, J.J. 2016. (Oral presentation in English) Resilient urban water services: Toward the Green Economy. Poverty's Causes and Consequences in the Urban Developing World. August 4-6, 2016. University of Jyväskylä, Finland.
13. Hukka, J.J. 2017. (Oral presentation in English) Poor state of water and sanitation services - One of the biggest barriers to good health and well-being. Global Governance and Responsibility. EADI (the European Association of Development Research and Training Institutes) Collaboration Seminar. Tampere, Finland. 10 April 2017.
14. Hukka, J.J. 2017. (Oral presentation in English) Ignorance of Economics Undermines Water Services - and Our Resilient Future. Futures of a Complex World, 12-13 June 2017, Turku, Finland.
15. Hukka, J.J. 2017. (Oral presentation in English) SDG 6 - Mission impossible without increased investments and better economic resilience? 5th Annual Seminar of the UNESCO Chair in Sustainable Water Services: "Resilience in Water Services". Tampere University of Technology, Tampere, Finland. 25 August 2017.
16. Hukka, J.J., Mattila, H.E. and Katko, T.S. 2018 (A platform presentation) The Quest for SDG6 and Community Water Services Resilience - Factor 3? IWA World Water Congress & Exhibition. 16-21 September, Tokyo, Japan.
17. Hukka, J.J. 2019. (Oral presentation in English) Was everything better in the future? 7th Annual Seminar of the UNESCO Chair in Sustainable Water Services: "Improving Collaboration towards More Resilient Water Services" (Vesihuollon yhteistyön edistäminen kohti kestävyyttä). Tampere University of Technology, Tampere, Finland. 6 June 2019.
18. Inha, L.M., Hukka, J.J. and Katko, T. S. 2022. (Oral presentation in English) Time for a new paradigm for urban water services infrastructure in Kenya. Working Group 2: Urban infrastructure as key to achieving SDG 11: conditions, experiences and perspectives from the Global South. Development Days 2022. Infrastructures, technologies and vulnerabilities in global development. 17. - 18. February 2022, Helsinki, Finland.

## National

1. Hukka, J.J. 2004. Commentary to Managing Director Irina Nordman's presentation "Water acquisition in the hands of competition" World Water Day 2004 Seminar "Is there sand in Finland's water wheels?" Water Association, Finland. Helsinki, 22 March 2004.
2. Hukka, J.J. 2004 (Oral presentation) Water to the People. Tampere Polytechnic. Water Day Event, 23 March 2004.
3. Hukka, J.J. 2004 (Oral presentation) Options for feasible public-private cooperation. Seminar on Water and Environmental Management Issues. Institute of Technology, Oulu Polytechnic, 29 March 2004.
4. Hukka, J.J. 2004 (Oral presentation in Finnish) Global Water Bifurcation. Seminar "Water for All?" Water Association, Finland. Helsinki, 16 September 2004.
5. Hukka, J.J. 2004 (Oral presentation in Finnish) Water and the Development. Course "Development theory and practice" Institute of Development Studies, University of Helsinki, 29 September 2004.
6. Hukka, J.J. 2004 (Lecture in English) Rules of the management game: From rural and local to urban and transboundary waters. Course "Environmental and Water Issues in Developing Countries" Tampere Polytechnic, 28 October 2004.
7. Hukka, J.J. 2004 (Oral presentation in Finnish) Water Services and Development Constraints. Tuesday Seminar in Environmental Policy "Conservation and Sustainable Use of Water Resources" Department of Regional studies, University of Tampere, 5 November 2004.
8. Hukka, J.J. 2005. (Oral presentation in Finnish) Swimming skills for the Streams of the Futures - Futures Research in the Preparation for the Uncertainties. World Water Day 2005 Seminar "Emergency States in Water Resources and Services and Their Management" Water Association, Finland. Helsinki, 22 March 2005.
9. Hukka, J.J. 2005. (Introductory address in Finnish) Impacts of GATS and EU on water services privatisation and PPP. Seminar "Are water services privatized with the help of GATS and EU." Finnish Social Forum, 10 April 2005.
10. Invited expert in the debate on water and Eritrea, Radio Station YleQ, 26 April 2005.
11. Hukka, J.J. 2005. (Oral presentation in Finnish) Katsaus vesihuollon tulevaisuuteen. An overview of the futures in the water services. Porvoo, 3+3 Water Project Closing Seminar. 25 May 2005.
12. Hukka, J.J. 2005 (Lecture in English) Water governance: From international to local. Course "Environmental and Water Issues in Developing Countries" Tampere Polytechnic, 29 September 2005.



13. Hukka, J.J. 2005. (Oral presentation in Finnish) Long term development and the future predictions in water services. A specialist course in water and sewerage engineering. Häme University of Applied Sciences. 11 November 2005.
14. Hukka, J.J. 2006 (Oral presentation in Finnish). Global challenges in water services. Seminar for young professionals. Tampere, 20 January 2006. Finnish Water and Wastewater Works Association.
15. Hukka, J.J. and Vinnari, E. 2006 (Oral presentation in Finnish). Tapaus Tallinna. Case Tallinn. 50<sup>th</sup> National Water Services Symposium, 31 May- 1 June 2006, Joensuu, Finland. [http://www.vvy.fi/koulu/vhp/vhp/2006/Joensuu/Joensuu\\_esitelmat.htm](http://www.vvy.fi/koulu/vhp/vhp/2006/Joensuu/Joensuu_esitelmat.htm).
16. Hukka, J.J. 2006 (Lecture in English). Water governance: From international to local level. Course "Water and Environmental Issues in Developing Countries" Tampere Polytechnic, 12 October 2006.
17. Hukka, J.J. 2006 (Oral presentation in Finnish). Safe water and sound toilet: Elements needed for the Millennium Health Prize. Course on the UN Millennium Development Goals and Health. University of Tampere, 30 October 2006.
18. Hukka, J.J. 2007 (Oral presentation in Finnish). Water services development in slums. Institute of Development Studies. University of Helsinki. 4 April 2007.
19. Hukka, J.J. 2007 (Oral presentation in Finnish). Privatization of water services. Seminar on the realities in the developing countries. Institute of Development Studies. University of Helsinki. 4 April 2007.
20. Hukka, J.J. 2009 (Lecture in English). Institutional issues in water services management. Course "Environmental and Water Issues in Developing Countries" Tampere Polytechnic, 5 November 2009.
21. Hukka, J.J. 2010 (Lecture in Finnish). International benchmarking and activities in water services. Veto – Water services management and development-programme. VI Internationality and water services 2015 -2020. Edutech, Tampere University of Technology, 20 May 2010.
22. Hukka, J.J. 2010 (Lecture in English). Institutional issues in water services management. Course "Environmental and Water Issues in Developing Countries" Tampere Polytechnic, 28 October 2010.
23. Hukka, J.J. 2011 (Oral presentation in Finnish). Water and sanitation challenges in Africa. World Water Day 2011 Seminar. Water for Cities: Responding to the Urban Challenge. Water Association, Finland. Helsinki, 22 March 2011.
24. Hukka, J.J. 2011 (Oral presentation in Finnish). Pecha Kucha-esitys ubiikkijhteiskuntamme vesihuollon investointivajeesta. Pecha Kucha presentation on the lack of rehabilitation investments in water services in our ubiquitous society. 55<sup>th</sup> National Water Services Symposium, 18-19 May 2011, Turku, Finland.
25. Hukka, J.J. 2011 (Oral presentation in Finnish). Vesihuollon järjestäminen ja tuottaminen. Water services provision and production. Veto – Water services management and development-programme. III Organizing, leadership and management in water services. Edutech, Tampere University of Technology, 26 August 2011.
26. Hukka, J.J. 2011 (Lecture in English). Institutional issues in water services management. Course "Environmental and Water Issues in Developing Countries" Tampere Polytechnic, 29 September 2011.
27. Hukka, J.J. 2011 (Oral presentation in Finnish). Vesihuollon painajainen-Afrikan kaupungit? The nightmare of water services-African cities? Water challenges in urban areas. 16 December 2011. University of Tampere. Water and Society – Argumenta seminars 2011-12 in Tampere. <[http://www.uta.fi/yky/tutkimus/historia/projektit/argumenta/haaste/Hukka\\_Argumenta\\_16.12.2011\\_Final.pdf](http://www.uta.fi/yky/tutkimus/historia/projektit/argumenta/haaste/Hukka_Argumenta_16.12.2011_Final.pdf)>
28. Hukka, J.J. 2012 (Oral presentation in Finnish). International benchmarking and operations in water services. Veto – Water services management and development-programme. VI Internationality and water services 2015 -2020. Edutech, Tampere University of Technology, 15 March 2012.
29. Hukka, J.J. 2012 (Oral presentation in English) Roles of public and private sectors in WSS. BIO-5206 International Water Policy and Management. A course for the postgraduate students. Tampere University of Technology, 22 March 2012.
30. Hukka, J.J. 2012 (Lecture in English). Institutional issues in water services management. Course "Environmental and Water Issues in Developing Countries" Tampere Polytechnic, 13 September 2012.
31. Hukka, J.J. 2013 (Lecture in Finnish). Leadership and management of water undertakings in different business environments. Veto – Water services management and development-programme 1.11.2012-7.6.2013. III Organizing, leadership and management in water services. Edutech, Tampere University of Technology, 10 January 2013.
32. Hukka, J.J. 2013 (Oral presentation in Finnish). Water cooperation for the future? The follow-up seminar for the Tampere Region Water Services Development Plan, Tampere, 31 January 2013.
33. Hukka, J.J. 2013 (Lecture in English) Water services and institutional development. BIO-5256 Management options of water services. A course for the postgraduate students. Tampere University of Technology, 14 March 2013.
34. Hukka, J.J. 2013 (Oral presentation in English). Principles for the successful water cooperation. World Water Day, Tampere Polytechnic, 21 March 2013.
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