Metropolitan Climate Crisis-impacts Adaptation, Resilience-building & Eco-security (C.A.R.E.) Management Challenges facing Extreme Events

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W-SMART 2019 International Experience Sharing Workshop *for* Local Governments, Water & WasteWater Management Utilities

Hosted by the CILE, November 5 & 6, 2019, LIEGE, Belgium

VAN DER VALK Hotel, Esplanade de l'Europe 2, 4020 LIEGE, Tel: +32 4 244 12 00; https://www.congreshotelliege.be/

Purpose - The purpose of the W-SMART 2019 International Workshop on ***"Metropolitan Climate C.A.R.E. Management Challenges"*** is to promote experience sharing among governments' officials, water utilities' executives and the research community on climate change impacts on water security challenges, crisis management, adaptation strategies and resilience capacity building of local governments and metropolitan utilities. Focusing on lessons learned from recent events its goal is to provide a discussion forum for interactive assessment of their current climate impacts adaptation, crisis management, and resilience capacity-building strategies facing challenges of extreme events.

Organization – The Workshop is hosted by the C.I.L.E. Water Company of Liege, and is co-organized with the W-SMART Association with the support of its member utilities and the participation of Local Governments and Research institutions. It will precede the UNESCO "Metropolitan **ECO - RISE** R2020" Colloquium, which will be hosted by UNESCO at its H.Q. in Paris, on November 7 & 8.

Main Workshop Themes - The workshop will include a Cyber Attack Crisis Management Exercise, and a Post-Exercise panel discussion on crisis management, cyber security and recovery challenges. Focusing on lessons learned from recent events its goal is to promote experience sharing on crisis management and recovery challenges, including corporate preparedness, public education and assessment of current capacity building programs of local governments and metropolitan utilities to face growing climate change impacts and urban water security challenges, including:

i. **Upgrading crisis management capabilities and preparedness for extreme events**, including corporate preparedness, regulatory measures, customer-system interaction, cyber-security challenges, inter-agency coordination, inter-state collaboration, public education, etc.;
ii. **Planning and Implementing urban infrastructure resilience building programs** to ensure water service eco-security facing extreme events, river floods, sea-level rise, other eco-risks;
iii. **Monitoring, assessment and forecasting climate change impacts** on water and wastewater utilities operational challenges and their adaptation measures for sustaining water service, quality, safety and eco-security;
iv. **Post-Disaster environmental impacts assessment and recovery challenges** – lessons learned from recent events – the way forward on local level and regional scale;
v. **Promoting innovative technology solutions and smart management and control systems** to improve eco-resilience capacity building in "smarter" cities, upgrade wastewater treatment process control for water reuse and energy recovery, and address other eco-security issues;
vi. **Upgrading cyber-security** to meet new regulatory measures and ISO requirements;
vii. **Improving integration efficiency of renewable and recovered water and energy resources** facing water stress situations and challenges of eco-sustainable energy-water-food security;

W-SMART Workshop, Hosted by CILE, Nov 5 &6, LIEGE

Extreme Event (Alexandra Cristóvão, EPAL, 2018)

"Metropolitan Climate C.A.R.E. Management Challenges"

Workshop Agenda & Pre-Program (Oct. 2, 2019)

November 5	**Location: Château de Colonster http://www.colonster.ulg.ac.be/** **Transportation from the Hotel to be courteously provided by CILE** **Agenda:** ○ **Welcome & Workshop Agenda** ○ **Crisis Management Exercise with W-SMART Observers** ○ **W-SMART General Assembly Meeting**
8:00 PM	**Registration**
8:30 – 9:00 am **Welcome Session**	**Welcome** - Alain PALMANS, CEO, CILE **Workshop Agenda** – Bruno NGUYEN & Prof. Ilan JURAN **Organization of the Crisis management Exercise** – William De ANGELIS, Cyber Security Officer, CILE;
7:30 – 12:00 pm **Crisis management Exercise**	**Crisis Management Exercise** – including Cyber Security challenges with invited W-SMART members as Observers
12:00 – 13:00 pm	**Post Exercise Meeting of invited W-SMART Observers with CILE Officers;**
13:00 – 14:00 pm	**Lunch**
14:00 – 16:00 pm	**W-SMART General Assembly & Planning Meeting**
16:00 – 17:00 pm	**CILE - W-SMART Post Exercise Summary & Next Year Planning Meeting**
21:00 pm	**Welcome Diner -** Mr. Marc MINET Resilience Officer of the City of Liege **Welcome Introduction –** Mr. Alain PALMANS, CEO, CILE
November 6	**Location: VAN DER VALK Hotel, Esplanade de l'Europe 2, 4020 LIEGE** **Agenda: Workshop Program**
8:00 am	**Registration**
8:30 - 10:00 am Session I	**Session I** **Crisis Management– Post Exercise Lessons learned & Experience Sharing;** **Chair:** Eric ADAMSE, Security Policy Officer, VITENS; **Panel Experts:** ○ **CILE Crisis Management Exercise – Key Lessons Learned –** • Alain PALMANS, CEO • William De ANGELIS, Cyber Security Officer • Crisis Management Exercise – Planning, Execution & Lessons Learned - Bruno NGUYEN, President, W-SMART & Erich SHAW; ○ **Corporate Awareness Building & Exercise Planning –** • Alexandra CRISTOVAO, Director, Sustainability Division, EPAL • Eric ADAMSE, Security Policy Officer, VITENS;
10:00 - 10:20pm	Coffee Break
10:20 - 11:40pm **Session II**	**Session II** **Cyber Security, Emergency Response & Resilience Building Challenges -** **Chair:** Avraham Ben Yossef, Deputy CEO, MEKOROT; **Panel Experts** ○ **Cyber Security Challenges & Regulatory Measures –** • Georges ATAYA, Professor, Academic Director (Solvay.edu/it), Vice President of the Belgian Cyber-security Coalition • Jozef van BRUSSEL, Program Manager Cyber-security, Ministry of Infrastructure and Water, Netherlands; • Ehud ROTH, Cyber Security Expert, MEKOROT ○ **Operation: Tejo River 2018 - Unpolluting the Waterbody** • Alexandra CRISTOVAO, Director, Sustainability Division, EPAL ○ **Societal Resilience Building Challenges of a City in a Conflict Zone** • Dr. Benny VAKNIN, Former Mayor of the City of Ashkelon

11:40 – 13:00 pm	**Lunch with Mr. Marc Minet, Resilience Officer of the City of Liege** **Introduction: Alain PALMANS, CEO, CILE;**
13:00 – 14:20 pm **Session III**	**Session III** **Climate Change Impacts Monitoring & Adaptation Strategies** **Chair:** Conceição Soares ALMEIDA, Director, Maintenance Division, EPAL; Secretray General, W-SMART Association; **Panel Experts:** ○ Patrick FAUVET, Director, Regional Development, SIAAP ○ Avraham BEN YOSSEF, Deputy CEO, MEKOROT; ○ Laurent BRUNET, Technical Director, SUEZ Eau France; ○ Laurna KAATZ, Director, Climate Science Program, Denver Water ○ Amit CHANAN, Director, Infrastructure, City of Sydney ○ **Resilience Benchmarking** - Peter DANE, Benchmarking Foundation, NL;
14:20 – 14:40	**Coffee Break**
14:40 – 16:00 **Session IV**	**Session IV** **Innovation Workshop on R&D Challenges for Smart Eco-Resilience Building:** **Chair:** Prof. Ilan Juran, Executive Director, W-SMART Association Panel Experts: ○ **Urban Agriculture –** Jean Michel TIBERI, Business Partner Middle East-Africa & Italy, Development, Innovation & Markets Department, VEOLIA; ○ **Drinking Water Restrictions facing Water Scarcity** - Dr. Robin van LEERDAM, Advisor, Drinking Water, National Institute for Public Health & Environment, Netherlands; ○ **Towards Smart Optimization of Waste Water Treatment Management – Olivier ROUSSELOT**, Director, Laboratories & Environment, SIAAP; ○ **Urban Energy-Water Nexus Challenges for Data Science & Energy Recovery Innovation** - Dr. Josh SPERLING, US-DOE, NREL, Colorado; ○ **From Defense Applications to Smart Infrastructure Management –** Brig. General (Ret.) Doron GAVISH;
16:00 – 16:30 pm	**Concluding Remarks** ○ Alain PALMANS, CEO, CILE ○ Bruno NGUYEN, President, W-SMART Association

We would like to extend our thanks for accepting the invitation to the W-SMART Workshop Metropolitan Climate C.A.R.E. Management Challenges.
We would appreciate if you could kindly make your reservation to the

- **Workshop**,
- **General Assembly**,
- **Crisis Management Workshop**

through the **W-SMART** site at https://www.w-smart.fr/

Looking forward to a productive experience-sharing workshop.
With our thanks for your participation and contribution

Texte d'invitation de la CILE à l'attention des observateurs étrangers pour l'exercice de crise

Dear colleagues, the CILE is happy to welcome international water experts in Liège at the occasion of the annual W-SMART workshop.

As it is the case for each W-SMART annual event, a water security exercise has been prepared and will take place in conjunction with the workshop. This security exercise, under the form of a tabletop exercise, will see the CILE operational teams being confronted with severe events requiring difficult decisions and effective global coordination. The scenario and the details of the exercise have been prepared with the support of W-SMART experts; and as it is also generally the case, some of the water experts from the W-SMART network are invited to take part as observers in the exercise.

The exercise is scheduled on Tuesday November 5th from 8:00 am to 1:00 pm, and it is our pleasure to invite you to join our exercise as observer. For this purpose, a shuttle will pick you up at your hotel and will take you to the place where the exercise will be played (40 minutes transfer). Translation will be provided on site from French to English in order to allow you to follow the events; explanations will also be available when needed should you have any question. As observers, you will be strongly required not to interact with the players but you will be able to give your precious personal feedback during the hot debriefing which will take place in the afternoon the same day.

Coffee, refreshments and lunch will be served on site and you will receive a portfolio including documents with presentation of the exercise, list of participants and roles, as well as special logistical rules for the exercise. All actors involved in the exercise (players from different divisions of the CILE, game masters, local observers and international observers) will wear badges and visual identification according to their role.

We hope that you'll enjoy this water security exercise which is the very first in this format organized at CILE. Our staff has been informed about your presence during the day and it has to be noted that during the exercise observers from the CILE who have taken an active role in the design and preparation of the scenario will also be there.

Participants

Alain PALMANS

CEO, CILE

BIO: Alain Palmans has a double degree in Political Science and Public Administration from the universities of Liège (BE) and Bradford (UK). He strengthened his knowledge in Politics and International Relations while studying a master at Dublin University. Mr Palmans has been working for more than 20 years as administrator in various public services, holding high-level positions. He developed extensive knowledge and expertise in water management and established an important network of contacts with the EU and other international institutions. On top of that, for the last ten years, he has been teaching several public administration courses at Liège University. Since 2008, he works as CEO of CILE, one of the main water utilities companies in the Walloon region (BE). CILE produces and supplies drinking water to more than half a million people in the Greater Liège area. As a member of the World Water Council, CILE shares its experience with other water public bodies abroad. In 2009, he became Board member of several organisations: the regional water treatment company (AIDE), a key regional financial company (ECETIA Finances), a renowned Belgian IT group (Network Research Belgium) and the regional water company in Wallonia region (Société Wallonne des Eaux). Since 2011, Mr Palmans is member of the Board of Directors and Management Committee of AQUAWAL (an association representing the producers, distributors and purifiers of water). In addition, in 2012, he has been appointed chairman of the experts Committee of the regional water management public company.

Amit CHANAN

Director, Infrastructure Projects, City of Sydney
Vice President, IWA-S2WM

Bio: Dr Amit Chanan is an experienced senior executive with a career spanning over two decades within the international water industry and infrastructure services.

Amit is currently the Director City Projects and Property with The City of Sydney in Australia. Amit leads the City's centre of excellence in infrastructure delivery, responsible for developing and delivering major infrastructure projects to realise Council's strategic intent. Amit is also responsible for ensuring sustainable performance of the City's multi-billion dollar property portfolio, balancing return on investment with community and social objectives.

Prior to this role, Amit was the Chief Operating Officer with the New South Wales State Water Corporation. In this role Amit represented the state of New South Wales on the River Murray Water

Committee, an inter-jurisdictional entity comprising Commonwealth and State Governments to manage operational aspects of the Murray-Darling Basin.

Amit is a Fellow of the Australian Institute of Engineers. With a PhD in Engineering, Amit has strong academic interests and is currently an Adjunct Professor at the Faculty of Engineering, University of Technology Sydney. He has published several academic papers and book chapters on the topics of water management and environmental engineering. He is a member of the Editorial Board of UK's Institute of Civil Engineers' Journal of Municipal Engineering.

Amit is a Member of the Advisory Board to UNESCO, under its International Hydrological Program. He is also the Vice Chairman of the International Water Association's Specialist Group on Water Security and Safety Management. Amit is also a member of the Board of Trustees for WaterLinks, a Philippines based NGO focussed on water sector capacity building through collaboration in the Asia-Pacific region.

Title: Water Security for Resilient Cities

Abstract: Sydney 2030 is The City of Sydney's ambitious masterplan to achieve a resilient city for its people by the year 2030. Sydney like most global cities has some prominent high rises, high density office towers mixed with residential apartments within the central business district. Physical evidence has demonstrated that high density urban areas, such as Sydney's central business district has a significant higher ambient temperature due to a microclimate consisting of an urban heat island (UHI) and street canyon effects. Recent climate modelling indicates that by 2050 the ambient temperature in summer within the City of Sydney Local Government Area (LGA) could reach 38°C, almost seven degrees higher than current urban conditions.

To meet the City's 2030 master plan, The City of Sydney aims to create a water and climate sensitive city with growing green and cool spaces to mitigate the UHI effect and to deal with a climate change related rise in ambient temperatures. Water is obviously a crucial factor in this plan and as such innovative and effective water management strategies are crucial to the City's continued growth and success.

With water needed not only for critical human needs but also for greening our cities, fit for purpose water use is rapidly becoming a necessity. Intense investigations into existing water reuse schemes and opportunities for new water reuse schemes are underway. The City's urban renewal development projects provide an ideal opportunity to incorporate new water saving and reducing schemes such as stormwater harvesting, sewer mining and roof water runoff catchment systems that can be used in high density areas.

Survival of our city depends on the progressive shift towards a sustainable approach as we address climate extremities while operating under continuous pressure to provide and maintain green spaces and keep waterways clean.

Alexandra CRISTÓVÃO

Director, Sustainability, EPAL, Portugal

BIO: Alexandra Cristóvão has a degree in Materials Science and Engineering and is the head of the Corporate Sustainability Division in EPAL, the largest water supplier in Portugal. With 15 years of experience in the field, she is the liable for issues regarding compliance with the requirements of the management systems: quality, health & safety, environment and energy, social accountability, information security and business continuity.

Managing several cross-cutting projects regarding risk management and ensuring crisis management, emergency and contingency, she is also responsible for coordinating crisis cabinet in order to enable business continuity.

She is the authorised interface with various external entities (e.g.: governmental organizations, police, municipalities, civil protection, environmental and security officials, NGO´s, occupational H&S services, etc.).

Created in 1868, EPAL is the oldest water supplier in Portugal, with a daily demand of 170.000 m^3. Currently, the area served by EPAL covers 87 municipalities, including Lisbon, regarding water supply and wastewater collection and treatment, in an area corresponding to 33% of the Portuguese mainland and serving 3.8 million inhabitants.

Title: EPAL – Empresa Portuguesa das Águas Livres, S.A

Abstract: In less than a year, EPAL, Portugal's largest water company, experienced extreme drought situations, devastating wild fires and floods that caused water ash contamination. These events caused EPAL to question, and improve, its ability to prepare for, protect, mitigate and recover from disruptions. As a result, the company also developed its crisis communication skills and deepen relationships with stakeholders.

Dr. Joshua SPERLING

Urban Futures and Energy-X Nexus Engineer / Senior Researcher / Project Leader

BIO:

National Renewable Energy Lab

Dr. Joshua Sperling is an 'Urban Futures and Energy-X Nexus' engineer and multi-disciplinary senior researcher at the National Renewable Energy Lab. He is a former Fulbright Scholar, holds a PhD from

the interdisciplinary Sustainable Urban Infrastructure program at UC-Denver, and co-leads the 'Urban Nexus Science & Innovation / Smart Cities & Energy-X Nexus' thrusts in several R2D, DOE and other consortiums, after joining NREL's New Concepts Incubator, Joint Institute for Strategic Energy Analysis, Mobility Systems and International teams in 2015.

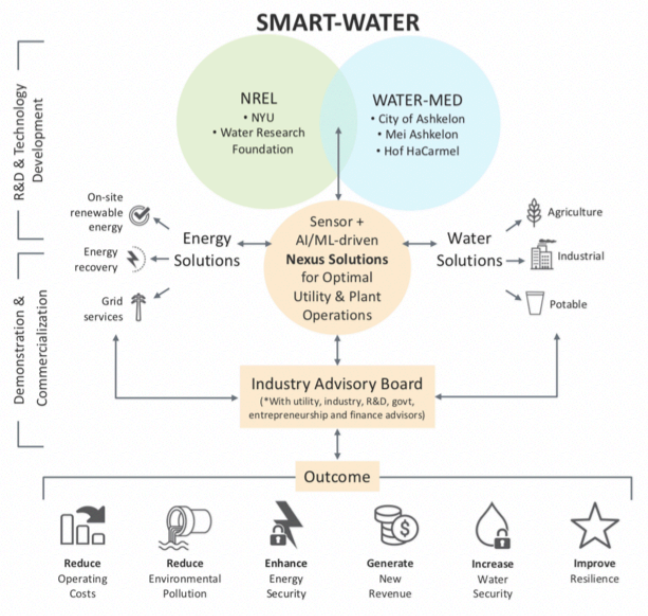
Josh Sperling: Dr. Sperling is an 'Urban Futures and Energy-X Nexus' engineer and interdisciplinary senior researcher at the National Renewable Energy Laboratory in Colorado. He is a former Fulbright Scholar, holds a PhD from the Sustainable Urban Infrastructure program at UC-Denver, and co-leads the Urban Nexus Science & Innovation thrusts - initially launched out of the NREL New Concepts Incubator, Joint Institute for Strategic Energy Analysis, and Integrated Mobility Systems teams. His research combines engineering, planning, policy, behavioral science, and PPP finance/ infrastructure delivery approaches to emerging mobility technologies and services, energy and related infrastructure systems, and decisions for quality of life with energy and other co-benefits in cities and communities. Recent DOE- and National Science Foundation-funded research has focused on interdisciplinary, human-centered, and systems-oriented approaches to 'SMART-WATER'; 'urban nexus science'; developing innovative, healthy, and resilient cities in the USA, China and India and on 'Sustainable Cities: People, Infrastructures and the Energy-Water-Climate Nexus'. He's had invitations to the White House, World Energy Forum, MIT Urban Studies & Planning Department, the Future Earth Urban Platform-Working Group, and the U.S. Government Delegation to Habitat III (an every-twenty-years cities and urban innovation global summit hosted by UN Habitat); worked professionally on urban infrastructure systems development with global firm, ARUP, in New York, San Francisco, Sydney, and Melbourne; volunteered for 15+ years with Engineers Without Borders; and contributed as co-lead author to the 'energy transformations in cities' chapter of an assessment report including >350 urban researcher and practitioner authors from over 100 cities, globally. He co-leads DOE and NYSERDA smart cities work, strategic partnerships, and supports various urban, behavioral and decision science efforts at NREL & beyond.

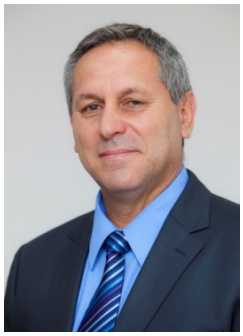
Title: "SMART-WATER" for Urban Energy-Water Nexus Management: Enabling Resilient, Secure, and Sustainable Communities

Abstract: The objective of this presentation is to share a concept for developing and harnessing "intelligent" water / wastewater treatment processes as Integrated Systems-of-Systems (I-SOS) with artificial intelligence (AI) based control, machine learning algorithms, data-driven operation support systems and reuse-enabling technologies for tailored "fit to purpose" water reuse, energy efficiency and renewable energy strategies. The project includes research to technology development, pilot demonstration, and commercialization applications with up to four wastewater utilities (two in Israel and two in the US). It is focused on integrating Smart Monitoring, Automation & Reuse-enabling Technologies for Wastewater Advanced Treatment with Energy Recovery and Renewables ("SMART-WATER") in order to promote economic operations, service resilience and security for sustainable water and energy systems solutions (see Figure 1 below). More specifically, the team will target water and wastewater utility and water recycling to wastewater treatment plant (WWTP)-specific monitoring, data integration, processing, and AI-applications for process optimization, effluent quality control, and new grid/customer services. The water security objective will be approached in tandem with energy consumption optimization and identification of potential new revenue streams through grid services that may also enhance power grid reliability. In addition to reducing the financial burden associated with wastewater treatment, the SMART-WATER concept will improve the sustainability, resilience, and security of infrastructure, thereby limiting the negative externalized impacts of human activities. Urban water-energy nexus management and utility engagement, via the networks engaged, will enable

selection and advancement of demonstration sites utilizing the I-SoS platform, informing utilities and markets in enabling new upgrades to economic, operational, environmental, societal and service quality impacts.

Figure 1. Schematic of SMART-WATER project and conceptual framework.





Avraham Ben Josef

V.P of System Integration Engineering
Mekorot, the national water company

BIO: Mr. Avraham Ben Josef is an engineering and water technology expert who has held multiple senior positions within Mekorot Israel's national water company. He has many years of experience in multi-million-dollar infrastructure project management within the water sector and in-depth knowledge of various water technologies and disciplines.

Mekorot, Israel's national water company is a unique company that supplies water and provides solutions for Israel's water industry. Mekorot operates under the Ministry of Energy and Water Resources and the Government Authority for Water and Sewage.

Mr. Avraham Ben Josef heads all seven engineering divisions of the company: Water Resource Management, Water and Environmental Quality, Desalination, Engineering Services, WaTechTM (entrepreneurship and partnership center for water technologies), Management and Control and Safety. He has full professional responsibility for all the company's engineering activities.

Avraham Ben Josef earned a M.Sc. – Faculty of Environmental Engineering And B.Sc. – Faculty of Water Engineering, Technion Israel Institute of Technology, Haifa.

Job Highlights

- Vice President of Engineering & Technologies.
- Head of Engineering division which responsible on maintenance and operational of ISRAEL water supply system.
- Manager of planning (regional & specific) of Southern District.
- Head of Project of water desalination plant near Ashkelon (LAHAT) value 80 million shekel project. Operated 2011.
- Regional Process Engineer responsible for the planning and operation of water treatment plants in the southern district, including Desalination, Filtration, Disinfection, Reservoir treatment, Sewage treatment.
- Multi – disciplinary activity on communication, operation, process and operation guidelines.
- Southern Regional Engineer responsible for the operational instructions and guidelines for 16 desalination plants.
- Operation manager of 2 laboratories for water and engineers.

Conceição Soares Almeida

Head of the Maintenance Department of EPAL,
Empresa Portuguesa das Águas Livres, SA.

BIO: Conceição is a Civil Engineer, graduated at the Instituto Superior Técnico (IST) of Lisbon with two post-graduate qualifications in business management.

She joined EPAL in 1989, as an engineer in charge of several projects. In 1997, she was appointed as Deputy Director of Water Distribution System, prior to occupying the same position within the Water Production Division. In 2003, as Head of Production, she was responsible for water production system operation and maintenance, as well as customer relations with the company's municipal clients. Between 2009 and 2014, she supervised several major investments related to the design and rehabilitation of several of EPAL's main infrastructures as Head of the Project Management Division, before becoming Advisor to the Board of Directors of EPAL. In 2016, she was appointed as Head of the Maintenance Department and she is now responsible for the maintenance of all infrastructures belonging to EPAL and AdVT water production and distribution systems and wastewater systems.

Since 2012, Conceição has been the General Secretary of W-SMART Association.

EPAL – Empresa Portuguesa das Águas Livres, is the oldest and largest water supply utility in Portugal. Founded in 1868, EPAL supplies drinking water to around 3 million people in 35 municipalities of Greater Lisbon. Since 2015, EPAL is also responsible for managing AdVT – Águas do Vale do Tejo, a concession providing water and wastewater services to around 1 million people in the central region of Portugal.

Erich Shaw
Chief Environmental Engineer,
Mekorot, EPAL and CILE

BIO: Erich Shaw, a certified professional engineer, has been involved in the design, operation and management of water systems and wastewater treatment plants for the last 37 years including Crisis Management Preparedness for large water utilities – Mekorot, EPAL and CILE (the latter two through the auspices of WSMART).

Following the award of his bachelors and masters' degrees from Technion, Israel Institute of Technology (civil and environmental engineering respectively), Erich served as the Chief Environmental Engineer in the Israeli Defense Force for five years (rank: major) and latterly, spent six years with Mekorot as the Regional Environmental and Desalination Engineer where he managed the operation of many different water and waste water treatment plants. In 1993 he formed together with two partners a successful Engineering Design Company – Agat Engineering. From 2001 Erich is a private Engineering Consultant for large water utilities and entities including the World Bank (working together with the Palestinians on creating sustainable wastewater solutions) , WSMART, Tahal (Israel's largest water engineering firm), Agat Engineering, Water Companies and Associations including Mekorot, EPAL, CILE, Hof HaCarmel, Mei Ashkelon, Mei Sheva, Yuvalim Ashdod and industrial clients including Intel and Carlsberg. Erich has worked in over 17 countries on 5 continents. Erich has been involved on the design (both general and detail) of 22 medium size WWTP - with daily flows of between 20,000 m3/day (5.3 MGD) and 200,000 m3/day (53 MGD) flows, and over 150 water treatment plants - with hourly flows of between 100 m3/hr (440 gpm) and 25,000 m3/hr (110,000 gpm).

Jozef van Brussel Msc

Program Manager Cybersecurity and Critical Water Infrastructure
Ministry of Infrastructure and Water Management

BIO: Jozef van Brussel is a program manager with 35 years of international experience in the environmental safety field. Since 2012 he has been active for the Ministry of Infrastructure and Water Management (IenW) in the area of drinking water safety and security. Recently he was appointed as the program manager for cybersecurity and critical infrastructure in the Ministry's water domain: flood management, drinking water and waste water. His current projects include the:

- drafting and implementation of the national legislation for the implementation of the European NIS Directive
- implementation of a government agreement with the aim to stimulate cooperation between water partners in the field of cybersecurity
- policy development and management of the Ministry's cybersecurity strategy for the water sector, including sectoral cyber security risk assessments
- management of critical infrastructure projects in the water domain

Prior to 2012 he was retained by the Ministry of Internal Affairs as a transition manager for the Dutch Caribbean Islands, where he contributed to the crisis management of a major tank fire (Bonaire, NL). Between 2006 and 2009 Mr. Van Brussel was a senior inspector, where he coordinated the design of a drinking water crisis management expert team.

In the nineties Mr. Van Brussel was a certified environmental auditor in Vancouver, BC (Canada) active in the field of environmental safety management. He earned his BSc. in Environmental Sciences from IJselland University in 1985 (Deventer, NL) and received his MSc. in Environmental Sciences from the University of Greenwich in 1998 (London, GB).

Title: Cybersecurity Framework The Netherlands (with a focus on the Water Domain)
Abstrat: Mr. Van Brussel will present a broader picture of the cybersecurity framework in The Netherlands, while focussing on the water sector (in particular the drinking water sector). The presentation will address:

- Methodology of critical infrastructure assessment and appointment
- Governance of cybersecurity
- Legal framework of cybersecurity
- Cybersecurity policy, strategy, agenda and cooperation instruments
- Primary cybersecurity risks and incidents
- Design of risk based measures based on international standards
- Challenges

Patrick FAUVET
Director of territorial Strategy at SIAAP (DST)
PARIS 75 012 - FRANCE

BIO:

January 27, 1960,

Higher School of Public Works of Paris

Joined SIAAP in 2001, Chief Engineer

Married, 2 children

Previous job:

- Director of Networks (2010 – 2017)
- Factory manager (2009 – 2010)
- Deputy Director of Major Works (2005 – 2009)
- Head of the Project Management Department of the Major Works (2001 – 2005)

SIAAP is the Great Paris Sanitation Authority in charge of transporting and purifying wastewater from the Paris conurbation (9 million inhabitants - 2.5 million m3 per day), before returning them to the Seine and Marne rivers. SIAAP operates 6 wastewater treatment plants and a sewerage network of more than 240 km over an area of 1,800 km2.

The Territorial Strategy Department is in charge of relations with the upstream unions of the SIAAP network, which transport the effluents of the 288 municipalities for 9 million inhabitants.

She is in charge of relations with the Seine Normandy water agency, with whom SIAAP has a territory and climate contract for a period of 7 years.

She deals with relations with our international peers to exchange know-how.

She deals with the policy of the strategy for an ecological transition towards a sustainable development

Abstract: After a presentation of the SIAAP, the watershed of Seine and its specificities of the Seine, the role of Seine Grands Lacs, we will address the impact of climate change through reference studies showing changes in temperature, precipitation, of flows in a scenario to 2065.

The impact of uncertainties on the risk of failure during low-water and flood events.

On these study hypotheses, the impact on the SIAAP master plan on water quality by testing the robustness on rains of references with these new climatic conditions

How to approach the impact of NH4 on the environment and the capacity of dilution of discharges compared to the standards

Finally, a point will be made on the adaptations to be made to respond to the impacts of climate change in an average time.

Olivier ROUSSELOT

Director of Laboratories and Environment, at SIAAP (DLE)

Colombes 92 700 - FRANCE

BIO:

August 5, 1964,

School of Engineers of the City of Paris

Joined SIAAP in 1994, Chief Engineer

Married, 3 children

Previous job:

- Director Innovation and Environment, at SIAAP (2017-2019)
- Director Development and Prospective, at SIAAP (2011-2017)

SIAAP is the Great Paris Sanitation Authority in charge of transporting and purifying wastewater from the Paris conurbation (9 million inhabitants - 2.5 million m3 per day), before returning them to the Seine and Marne rivers. SIAAP operates 6 wastewater treatment plants and a sewerage network of more than 240 km over an area of 1,800 km2.

Department of Laboratories and Environment (DLE) realizes, develops and guarantees the environmental analytical measurement of reference for :

- the activity of the SIAAP sanitation system (water, sludge, waste, air);
- its impact on the environment (aquatic and atmospheric).

It provides in its laboratories and by its samples, the production of analyzes (200 000 per year) COFRAC accredited (ISO17025) and approved by the Ministry of the environment, for the SIAAP. DLE also coordinates the public analysis policy at SIAAP (5 other off-site lab).

It offers other SIAAP sites and departments, particularly operations, projects and works, scientific and technical expertise and measurements on these environmental issues and presents them to authorities and neighboring populations.

In addition to the self-monitoring of SIAAP WWTP and sewer network, DLE carries out in particular the regulatory monitoring of natural environments (aquatic: Seine / Marne and atmospheric: air / odor / noise) for the whole sanitation system of SIAAP.

Laurent BRUNET

Directeur Technique SUEZ Eau France
Technical Director SUEZ Water France

Bio(French):

Directeur Technique de SUEZ Eau France depuis 2015, Laurent Brunet a une longue expérience et expertise acquises en 30 ans dans la gestion du grand cycle de l'eau - production et distribution d'eau potable, collecte et traitement des eaux usées et pluviales, mais aussi management de projets.

Diplômé de l'Ecole Centrale de Paris, Laurent a exercé dans de grands groupes d'ingénierie-construction et d'exploitation, aussi bien en France (Métropole et Outre-Mer) qu'à l'International (Amérique du Sud, Europe du Sud), dans des régions confrontées à des enjeux climatiques majeurs.

Laurent est également Président de la Commission Scientifique et Technique de la Fédération Professionnelle des Entreprises de l'Eau (FP2E) et Membre du Conseil d'Administration et de la Commission eau potable de l'Association Scientifique et Technique de l'Eau et de l'Assainissement (ASTEE)

Bio(English):

Technical Director of SUEZ Water France since 2015, Laurent Brunet has a long experience and expertise acquired in 30 years of practice in the management of the "large" water cycle - production and distribution of drinking water, sanitation, but also project management.

Graduated from the Ecole Centrale de Paris, Laurent has worked in famous engineering-construction and operating companies, both in France (incl. overseas) and abroad (South America, Southern Europe), in regions facing major climate challenges.

Laurent is also President of the Scientific and Technical Commission of the Professional Federation of Water Companies (FP2E) and Member of the Board of Directors and the Drinking Water Commission of the Scientific and Technical Association for Water and Sanitation (ASTEE).

Title: The resilience of water supply in the face of climate change – The case of rechargingaquifer in Paris Region

Abstract:

2019 is a very exceptional year in terms of drought and floods everywhere in the world. The question is no more to know if this situation is going to be "normal" for the coming years, but when and with which intensity.

In France, water scarcity has been dramatic for farmers and even for cities during the summer. Some had to be supplied with water by tanker trucks. If the solidarity has been possible for many, this "crisis management solution" is not sustainable.

There is no miraculous, or universal solution. But a lot of actions can be done, both on demand or resources management. Each one is specific to a local context.

As climate change is accelerating the great water cycle, it is worth working on the way to help nature do its work: for example, acting to restore wetlands and helping nature to store water in the ground, and treating it by the way. This is what SUEZ is doing to supply water to a large urban area near Paris by means of an environmentally-friendly water filtration process for artificial aquifer recharging that does not require any chemicals and address the increasing pressure on water resources.

On Le Pecq site (which supplies water to 400.000 inhabitants of Paris Area), about 50% of the water withdrawn every year comes from the artificial recharge.

This alternative water process is an element of response to water stress, but requires a favorable hydrogeological context, preliminary studies and rigorous operation to ensure its durability.

ERIC ADAMSE

Security Policy Officer, VITENS

BIO: Since 2006, Eric Adamse (1960) is Corporate Advisor for Business Continuity & Security at Vitens Water Utility. Vitens, established in Zwolle, is the biggest water company in the Netherlands that provides 6 million customers with excellent tap and process water. Eric is responsible for the policy and implementation of all necessary measures against terror, (cyber)crime, fraud, hijacking and all types of natural disasters (all hazards approach) and interdependencies including crisis- and consequence management. Eric studied Chemical Engineering at Amsterdam University and has a background as a manager for R&D and Investment Planning at Vitens, Hydron and WMN. Eric started his career as a quality control manager at UTD (Unilever). Eric has further professional qualifications at The Hague University (Security Management), Neijenrode Business University (Management Development), Tel Aviv University (Homeland Security), Trimension Institute (Professional Crisis Management), Control Risks (Crisis Management Training & Exercising) and IE Madrid (Executive Management for Security). Eric is married and has four children. His favourite sports and hobbies are tennis, snooker, fishing and photography. Since 2011 Eric is chairing the W- SMART Taskforce Emergency Response Exercise & Training. Eric, as Chair of the Crisis Management Taskforce, and Jean-Pierre Tabuchi, Change manager at SIAAP Direction Santé Environnement, would like to invite you to observe an crisis management exercise organized the 3rd of December at SIAAP at Paris. As a AMWA and W-SMART observer you can help to assess and advice SIAAP during the successive Exercise Assessment & Debriefing Session.

Jean-Michel TIBERI
Business Partner Middle East-Africa & Italy
Development, Innovation & Markets Department

Bio - A graduate of France's HEC business school, Jean-Michel Tiberi has been working in Veolia since 1988 period during which he developed deep international experience in managing water and electricity utilities and in launching new business under challenging conditions. His work in Veolia has led him to destinations such as Mexico, Colombia, Chile, Puerto Rico and the Caribbean area. Between 2011 and 2014, Jean- Michel Tiberi hold the position of CEO of Veolia in Morocco, heading 25/30 years PPP contracts in Rabat, Tangier and Tetouan: electricity supply, water supply, waste water collection and treatment services, customer service, asset management and construction program. In 2014, he joined the newly created Innovation & Markets Department at Veolia's headquarters, as Vice President of Business Development Cities.

Eco Sustainability Challenges and Strategies Adapted By Veolia to Face the Effects of Global Climate Change - (1). Circular economy and water: reuse - Reintroducing wastewater into agricultural and industrial cycles, and even domestic consumption, is one solution for overcoming water shortages – Windhoek. Seawater desalination provides a precious alternative resource. The world leader for desalination, we have extensive expertise in the very latest filtration technology and are working actively on limiting its environmental footprint. (2) City resilience to withstand water shocks and stresses - Floods: a good real time flow management (sewage network management, water basin management) allows limiting the overflows and the impacts of flooding to the neighboring population. Proactive management of the rain event leads to significant CAPEX savings. In case of extreme rain events, Veolia can provide flood forecast services for big cities that allow the City to warn the population at threat and contain the damage - Copenhagen +

La Bièvre - Acts of terrorism New smart equipment allows detecting in real time any potential damaging intrusion in the water network - London Olympic Games - Natural disasters Veolia has the capacity to deploy means in emergency situations - Earthquake and tsunami rescue effort in Japan (3) Towards new business models related to resilience - Resilience issues may be a fertile ground for new Performance Based Contracts.

Title: URBAN AGRICULTURE

Abstract: Cities and agriculture seem two incompatible worlds. Yet the early 21st century is seeing renewed interest in urban agriculture. Irrespective of the food produced, it is a concept that builds resilience to climate change, improves biodiversity, creates employment and strengthens social bonds. By allowing nature back, urban agriculture helps to regreen the city and reincorporate it into the major natural cycles.

Are these attempts to feed citydwellers, who will account for three quarters of our planet's population by the middle of the century? Far from it. Urban and peri-urban agriculture will never produce enough

and will, at best, account for a few percent of global food production. But these few percentage points could make the difference locally in the event of a farming sector crisis. Moreover, bringing producers and consumers closer to each other is a sustainable model with the smallest possible environmental footprint and strong social positive impacts. Urban agriculture recovers all of these generally unused resources: runoff water; the organic matter embodied in its household and green waste; vacant spaces... This presentation tries to shine a light on the renaissance of urban and peri-urban agriculture, its changing forms and technologies, its potential and limitations.

Peter DANE

Benchmarking Foundation, NL

Title: Benchmarking resilience: a 'must do' for W-SMART utility members

Abstract: For water utilities, 'resilience' means securing the continuity of services, now and in the future, during normal operations as well as in case of disturbances. Resilience may be a fairly new concept, but has been part of the core business of water utilities ever since. Benchmarking resilience can help utilities understanding the level of preparedness in all relevant areas, how you are doing compared to peers and what you can learn from your peers. As resilience is a key topic for W-SMART and members claim to be at the top of developments in this area, they should be eager to benchmark their resilience, within the W-SMART utility group and preferably also outside the group, for external references. As an example, the presentation will show what is done in this area within the EBC-programme and propose a possible benchmarking effort with W-SMART utility members.

Robin Van Leerdam, PhD

Advisor drinking water at the National Institute for Public Health and the Environment, The Netherlands

BIO:

- 2002-2007: PhD in Environmental Engineering, Wageningen, The Netherlands
- 2007 – 2016: Scientific researcher at several institutes, topics:

– drinking water treatment

– waste water treatment

– pesticides in the environment

- Since 2016: Advisor drinking water at the National Institute for Public Health and the Environment

- Topics, a.o:

– Disturbance risk assessments

– Climate effects on drinking water: floodings and drought

– Emerging compounds in drinking water sources

Title: Drinking water restrictions in periods of water scarcity

Abstract:
Lengthy dry periods occur in countries such as France, Spain, England, South Africa and Australia. These can lead to shortages of drinking water. To prevent that, the authorities or the water companies can limit the use of drinking water by households and companies. This emergency measure often consists of several phases in which water usage is increasingly restricted.

Hot and dry summers will probably also occur more frequently in the Netherlands. The National Institute for Public Health and the Environment (RIVM) has therefore drawn up an escalation system for the Netherlands based on experiences abroad. This was done on instructions from the Ministry of Infrastructure and Water Management. The Dutch government still has to decide whether they want to introduce a system of drinking water restrictions.
The suggested system consists of four phases. There are no restrictions in the normal situation (phase 1). In the 'caution phase' (phase 2), the general public and companies will be asked to save on drinking water, especially during peak periods in the morning and the evenings. From the high-alert situation (phase 3) upwards, certain activities may no longer be permitted. In a crisis situation (phase 4), tap water may only be used for based needs.

In extreme cases, a shortage of drinking water can occur due to a combination of high demand and a limited supply. Demand for drinking water is much higher than normal in hot and dry summers. When this comes together with pollution of the source of the drinking water, this can mean that drinking water companies are temporarily unable to produce the required amounts of drinking water. Water can for example be polluted after a chemical accident on a river and become unusable for purification into drinking water.

The period of drought in the summer of 2018 meant that several Dutch water companies were almost no longer able to deliver the required amounts of water during the peak periods. Various water companies then asked households and companies to use as little water as possible, particularly during the evenings. It was however not a crisis situation.

Doron Lipkonski
General manager for the Water Treatment Company,
Hof HaCarmel

BIO:

1994 M.A. Tel Aviv University – Geography and Archeology

1992 B.A. Tel Aviv University – Geography and Urban Planning + archeology

1987 Instituto de Cultura Italiana per Stranieri – Pisa Italy

Doron is a natural leader for innovation and technology. His company AES LTD developed various technologies in applied geophysics. The two wastewater treatment plants in Hof HaCarmel were the leading platform in Israel for applying new wastewater treatment process where the Technion, Fluence, Grant Institute, and many other start-ups were tested and even applied. His leadership and openminded thinking allows Doron to be the ultimate technology test bed provider and coordinator.

2006 – Current Position: General manager for the Water Treatment Company for Hof HaCarmel. Hof HaCarmel is responsible for supplying water and collecting and treating the wastewater for the Hof HaCarmel Regional Council (28 villages). This includes also collecting and treating sewage from adjacent municipalities such as Southern Haifa neighborhoods, Tirat HaCarmel, Caesarea, Dalyat HaCarmel and Ussifiya. This network includes two wastewater treatment plants

– the Nir Etzion and the Mayan Zvi Plant. The Nir Etzion plant is now undergoing expansion and renewal where state-of-the-art technologies are implemented so that where Artificial Intelligence will be implemented.

1997 – 2006: A.E.S LTD – a start-up company for applied geophysics. The company was successful with both local and global clients. This included working with the Highway 6 on quality control, finding tunnels for the IDF and other projects.

1991 – 1997: Head of Archeology for the Northern District of Israel

1989 – 1991: Archeology supervisor for the Northern District

1980 – 1984: IDF – Tank Corps – Officer – reserve duty to 2014 – last position – Battalion

Commander – rank: major(res.)

Ehud(Udi) Roth

Cyber Security Expert, MEKOROT

BIO: Cyber Security, Computer and software development expert with 35 years of experience in design and operate an enterprise Cyber security operation, secured communication networks ,secured data centers and Secured Software development.

Work experience

- CISO @ Mekorot Water Co. - 16 Years
- Network & infrastructure manager @ Mekorot Water Co. – 10 Years
- Application & System programming @ Mekorot Water Co. 9 Years.

Education

- Cissp, Cyber Security Certification
- BSc. , Computer Information technology
- Practical Engineer, Computer

* CISO(chif information security officer)

Abstract: Cyber Regulation on critical infrastructure in Israel

The Cyber Challenges of Mekorot Regarding IT/OT Network

Dr. Benny VAKNIN
Former Mayor, City of Askelon

BIO:

Date of birth: 05\01\1950

Family: Married + 4

Address: Hatayasim 42 Ashkelon, Israel

Phone: +972-503737373

Education:

1974-1971 - B.A. Economics and Business Administration – Hebrew:

University of Jerusalem.

1988-1986 - Diploma in Land Assessment and Property Management:

Technion (Israel Technological Institute)

1990-1994 - LL.B – Bachelor of Law, Tel Aviv University (qualified lawyer)

2007-2009 - LL.M - Master of Commercial Law, Bar Ilan University.

2013-2019 - Doctorate in Urban Economic Development, Lille University, France in co-operation with the Civil and Urban Engineering Department, New York University (NYU)

- Business English – Israel Open University.
- Program for Young Leaders in the USA - US Government.
- Course for Chairman of the Board of Directors – Israel Center for Management
- Negotiation management - Israel Center for Management Languages Hebrew, English , French Arabic (working knowledge)

Awards:

- Kaplan Prize Economic efficiency
- Prime Minister's prize for quality and excellence

Work Experience:

2014-2019 – Owner and Chairman of Communication Companies

Economic Adviser.

Lawyer

2013 – 2008 Mayor of Ashkelon

2008 – 2005 Chairman – NTA Metropolitan Mass Transit System Ltd

(The light train for Tel Aviv and the Dan Metropolitan Area).

2005 – 2004 Chairman of Board of Directors – Pelephone Communications. Pty. Ltd.

2003 – 1991 Mayor of Ashkelon

1991 – 1979 Deputy Mayor of Ashkelon

1979 – 1976 Senior economist, Baxter Travinol (US based company.(

1976 – 1974 Factory economist, Yuval Gad

1974 – 1973 Bank Hapoalim, Assistant to head of investment department.

Board Members of Companies:

Profession:

Economist and Lawye

Bruno Nguyen

Senior Consultant, UNESCO-IHP & President of W-SMART

BIO: Bruno is since 2015 Senior Consultant at UNESCO-IHP (International Hydrological Programme), Water Sciences Division, based in Paris HQ where he his particularly in charge with IHP Theme 4 on "Water and Human Settlements of the Future". Bruno has an Engineer background in the corps of « Ingénieurs de la Ville de Paris ». As civil servant he worked 26 years for the Water Utility of Paris; his last positions there were Director of Operations and Director of Security & International. He is auditor of the Institut National des Hautes Etudes de Sécurité (institute of the French Ministry of Interior), and is very active within the International Water Association (IWA) as elected member of the Strategic Council, Chair of the Specialist Group on Water Security & Safety Management (W2SM), former Governing Member for France and former Member of the Programme Committee. Bruno gives lectures at Sciences-Po in Paris on Water Management.

Laurna Kaatz

Director, Climate Science Program, Denver Water

BIO: For over a decade, Laurna Kaatz has directed Denver Water's climate science, policy, and adaptation program. She is chair of the Water Utility Climate Alliance and lead practitioner of the Decision Making under Deep Uncertainty Society. Laurna is extensively engaged in climate adaptation, resilience, and long-range planning. Before her career at Denver Water, Laurna was a Professor of Physics at Sweet Briar College and went on to work as a climate scientist with Aurora Water. Laurna has a Master's degree in physics and a Bachelor's in physics and mathematics.

Title: Building Adaptative Capacity to Address a Changing Climate: Examples from North America

Abstract: Water utilities are at the front lines addressing climate change and many are actively implementing new adaptation actions to address current challenges and prepare for future changes. A group of forward thinking water utilities called the Water Utility Climate Alliance (WUCA) is working together to directly address and prepare for an inevitable and uncertain future driven by a warming climate. WUCA is an alliance of 12 of the nation's largest water providers that together supply drinking water for over 50 million people. Through collaborative action, WUCA provides leadership and practical information for water agencies on issues related to climate change, including developing leading practices, knowledge sharing, and trainings. This presentation will highlight the wide variety of adaptation actions implemented by Denver Water, WUCA and others throughout North America to build the adaptation capacity necessary to continuously provide reliable and quality water services.

Doron Gavish

General (Res.) Doron Gavish

BIO: General (Res.) Doron Gavish engages in technology and business development for the privet sector. This involves a wide range of fields, including cyber, automotive, and medical, among others. Representing two European commercial groups in Israel.

In 2012 and until August 2016, General (Res.) Doron Gavish served as the Director General of the European Mission of the Israeli Ministry of Defense in Paris, France, the most senior position within the Israeli Defense establishment in Europe.

Prior to his current duties, Gen. Gavish completed a 30-year military service in the Israeli Air Force. In his last position as Commander of the Air Defense Forces, Gen. Gavish was in charge of the world pioneer multiple-layered Missile Defense Structure for Israel, thereby leading the successful integration of the "Iron Dome" system in the Defense of Israel. In is role General Gavish took a major part in the design of Israel national missile de Defense concepts. In addition, Gen. Gavish was responsible for the cooperation with the American Task forces' deployment in Israel which is still his role as a reserve officer for the IAF. Doron is married to Ruth and they have three children

Education and Skills:

- 2008: MSc in Political Science, Haifa University and the College of National Security, Israel.
- 2005: Executive Program: "Leading Changes in a Complex Organization", MIT Sloan School of Management, Boston, USA.
- 1999: MSc in Strategic Studies at Air University AWC, US Air Force, Montgomery AL)
- 1993: BA, Middle Eastern Studies, Ben Gurion University, Israel.

Awards:

- Recognition for the Operational Integration of the Iron Dome system in the Defense of Israel, awarded by the Israeli Minister of Defense, Tel Aviv, Israel (2011)
- Recognition for contribution to Israel National Defense, awarded by the Israeli Minister of Science at the International Aerospace Conference, Jerusalem, Israel (2011)
- David R. Award for International Contribution in the field of Missile Defense as part of a joint US-Israeli team, awarded by the American Institute of Aeronautics and Astronautics, BMD World Conference, Berlin, Germany (2005)

PROF. ILAN JURAN Executive Director of W-SMART

Director, Urban Infrastructure Systems Graduate Program, NYU Tandon School of Engineering
Member of the Board of Experts of UNESCO-IHP

BIO - Prof. Juran's expertise covers areas related to urban infrastructure engineering and innovative technologies for upgrading infrastructure performance, lifecycle management and resiliency. He earned his Doctorate of Engineering, in 1977, and Doctorate Es Science from the University of Paris VI, in 1987. Prof. Juran is the Executive Director of W-SMART, the International Alliance of Water and Wastewater Utilities for Sustainable water Security established in the aftermath of 9/11, at the initiative of the Commissioner of NY City Department of Environmental Protection. He is presently the Secretary of the Specialists Group on Water Safety & Security Management of IWA and served as the Associate Editor of the International Journal on Water Technology & Science published by IWA. Former Head of the Civil & Environmental Engineering Department at the Polytechnic Institute of New York University, Dr. Juran's responsibilities included development of educational programs and research initiatives relevant to the urban infrastructure priority needs. As the Executive Director of the Urban Infrastructure Institute Prof. Juran's R&D projects have involved demonstration and assessment of infrastructure technology solutions in a variety of emerging fields, including: waste recycling for polymeric construction composites; seismic retrofitting; infrastructure asset management; infrastructure rehabilitation technologies; post-disaster urban recovery; water safety and security; and water infrastructure monitoring and management systems. Working with the city infrastructure agencies and utilities these projects involved field assessment and demonstration of innovative technologies for NYC underground Infrastructure rehabilitation projects. Prof. Juran served as Chair of the Civil Society Initiative, which from 2006 to 2010 was supported by the UN General Secretariat, and is currently serving as a member of the Board of experts of UNESCO-IHP.

LIST OF ATTENDEES

Name	Title	Affiliation
Alexandra CRISTÓVÃO	Director, Sustainability	EPAL,Portugal
Conceição Soares Almeida	Director, Maintenance Division; Secretray General;	EPAL,W-SMART Association
Erich Shaw	Chief Environmental Engineer	Mekorot, EPAL and CILE
Jozef van BRUSSEL	Program Manager Cyber-security	Ministry of Infrastructure and Water, Netherlands;
Ehud ROTH	Cyber Security Expert	MEKOROT
Georges ATAYA	Professor; Vice President	Academic Director (Solvay.edu/it); Belgian Cyber-security Coalition
William De ANGELIS	Cyber Security Officer	CILE
Benny Vaknin	Former Mayor	Ashkelon
Patrick FAUVET	Director, Regional Development	SIAAP
Olivier ROUSSELOT	Director, Laboratories & Environment	SIAAP
Laurent Brunet	Technical Director	SUEZ Eau France
Bruno Nguyen	President	W-SMART Association
Eric ADAMSE	Security Policy Officer	VITENS
Avrum Ben YOSSEF	Deputy CEO Deputy CEO,	MEKOROT, Israel
Laurna KAATZ	Manager, Climate Science, Policy & Adaptation Program,	Denver Water; Chair, WUCA
Amit CHANAN	Vice President	City of Sydney, IWA-W2SM
Peter DANE	Benchmarking Foundation	NL
Jean Michel TIBERI	Business Partner Middle East-Africa & Italy	Development, Innovation & Markets Department
Robin van LEERDAM	Advisor, Drinking Water, National Institute for Public Health & Environment	Netherlands
Joshua Sperling	US-DOE	NREL
Doron GAVISH	Brig. General (Ret.)	
Doron Lipkonski	General manager for the Water Treatment Company	Hof HaCarmel
Alain PALMANS	CEO	CILE
Ilan Juran	Executive director; Professor, Director	W-SAMRT, NYU
Marc Minet	City Resilience Officer	Liege