

UNESCO Metropolitan "ECO – RISE" R2020 Colloquium

"Eco-development, Climate-impacts & service-Operators' challenges for Resilient Infrastructure & Sustainable Ecosystems"

Experience Sharing Colloquium of Local Governments, Water and Wastewater Utilities & the Research Community

November 7 & 8, 2019, Conference Room IX, UNESCO H.Q., Place de Fontenoy, Paris 75007

Purpose - Approaching the horizon of 2020, the purpose of the "*Metropolitan ECO - RISE R2020*" Colloquium is to create an Experience Sharing Forum among Metropolitan governments' officials, water utilities executives, the financial sector, research institutions, media, academic and educational communities as well as other metropolitan stakeholders on the growing climate change impacts on sustainable urban development challenges and on current capacity building strategies adopted by local governments and urban utilities to upgrade their service infrastructure resilience and promote sustainable preservation of the Urban Ecosystems. In this context Eco-development, as defined by OECD, refers to development at regional and local levels that is consistent with the potentials of the urban ecosystems involved, with adequate and rational use of natural resources, technological innovations and organizational systems that recognize and respect the natural ecosystem sustainability and local societal patterns. Focusing on lessons learned from recent events, the goal is to promote experience sharing and regional knowledge bases for policy assessment and impact monitoring of metropolitan water utilities' resilience building strategies.

<u>Organization</u> – This Experience Sharing Colloquium is organized by UNESCO, as its Host Institution, in collaboration with New York University, The University of Lille, the School of Engineering of the city of Paris, The W-SMART International Alliance of Water and Wastewater Utilities for Sustainable Water Security, The SIAAP Greater Paris Sanitation Authority, and the IWA-W2SM Specialists Group of Water Safety & Security Management.

<u>Colloquium Themes</u> will promote experience sharing on climate crisis impacts on metropolitan sustainability issues and resilience capacity building challenges that local governments, water and wastewater management utilities, the research community and other metropolitan stakeholders currently face, including:

- i. Metropolitan Resilience Challenges facing Extreme Events and key lessons from recent events;
- **ii. Planning, financing and Implementing capacity building programs for upgrading urban infrastructure resilience** facing extreme events, river floods, sea-level rise, wildfires, other eco-development challenges;
- iii. Climate Change Impacts Monitoring and Utility Operator's Adaptation Measures for ensuring water service, quality, safety and eco-sustainability facing extreme events in water stress regions;
- iv. Post-Disaster environmental impacts assessment and recovery challenges lessons learned from recent extreme events the way forward on local level and regional scale;
- v. Integration efficiency of renewable and recovered water and energy resources facing water stress situations and challenges of eco-sustainable energy-water-food security;
- vi. Innovative technology solutions including Artificial Intelligence applications for smart utility management and control systems to improve resilience capacity building, upgrade wastewater treatment process control for water reuse and energy recovery, and address other sustainability and operational efficiency issues;
- vii. Corporate Preparedness, Societal Resilience Building & Public Education with media, corporate industry, research and academic community and other stakeholders towards a Climate Crisis Awareness Culture;
- i. Research, innovation and deployment of new technology solutions and smart monitoring and control systems for preemptive risk mitigation, emerging pollutants detection and urban resilience building;





"Metropolitan ECO – RISE R2020" Colloquium UNESCO HQ, Paris, November 7 & 8, 2019

Sea Level Rise Resilience Building Project for Lower Manhattan



UNESCO "Metropolitan ECO-RISE R2020" Colloquium (Pre-Program Oct. 12, 2019)

Nov 7	Opening Session		
8:30 - 9:00	Dr. Alexandros MAKARIGAKIS, Coordinator, Water for Human Settlements, UNESCO;		
	Sébastien MAIRE, Chief Resilience Officer, City of Paris;		
	Bruno NGUYEN, President, the W-SMART Association		
9:00 - 10:40	Metropolitan Resilience Building Challenges		
Session 1	Chair: Prof. Youssef DIAB, Research Director, School of Engineering, City of Paris;		
	Keynote Experts:		
	• UNESCO Global Perspectives – Dr. Alexandros MAKARIGAKIS, UNESCO		
	• Resilience Challenges of the City of Paris & Canacity Building Programs -		
	Sébastien MAIRE, Chief Resilience Officer, City of Paris:		
	 Climate Change Adaptation Strategies of Fau de Paris – Renjamin GESTIN CEO 		
	• Lower Manhattan Sea-Level Rise Resilience Ruilding Challenges - Fric		
	MACEARLANE Deputy Commissioner NYCDDC		
	- Human as a Kay Basiliance Factor - Schastien DAZIANO Head of Executive		
	Connection SUEZ Group		
	Cooperation - SOEZ Group,		
	O Hydro-ulpioniacy for Regional I w Rivi facing Extreme water Stress – <u>Pioi. Faul G.</u>		
10.40 11.00	Coffee Breek		
10:40 - 11:00 11:00 12:40	Collect Dreak		
11:00 - 12:40	Fianning, Financing and Implementing Resilience Capacity Building Programs facing		
Session 2	Chaire Doniamin CESTIN CEO. Fou de Donise		
	Chan: <u>Denjamm GESTIN</u> , CEO, Eau de l'aris,		
	Contraction of the second from 100 Desilient Cities Dr. Michael DEDVOWITZ Former		
	O Lessons Learned from Too Resident Cities - <u>DI. Michael BERROWITZ</u> , Former Dragidant 100 BC Dragram Backafallar Foundation		
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	5 EU water Salety Fian & Resinence Foncy Measures – <u>Mino FIASCONARO</u> , Executive Director Ague Dublice Europe – EU Aggesistion of Dublic Water Operators		
	Water Service Desilionee Puilding & Operational Challenges Diarra CUE7		
	Markating Director, VEOLIA Water France:		
	Desiliance Challenges of a City in a Conflict Zone Dr. Denny VAKNIN Former		
	O Residence Chanenges of a City in a Connect Zone – <u>DI. Benny VARININ</u> , Former Mayor, City of Ashkalon;		
	Mayor, City of Astiketon;		
	Desilionee Building & Financing Challenges Alain DALMANS CEO, CILE:		
	• Desilient schools the VISUS methodology Dr. Joir TOPPES UNESCO Chair on		
	Inter sectorial Safety for DPD and Desiliance University of Udine		
12.40 14.00	I unch		
12.40 - 14.00 14.00 - 15.40	Climate Change Adaptation facing Water Stress & Fee Sustainability Challenges		
14:00 - 15:40	Chaine Amit CHANAN City of Sydney: Vice President IWA W2SM:		
Session 5	Chan: Anni Chanan, City of Syuncy; vice Freshent, IvvA-w25wi,		
	Revioue Experts:		
	• Eco-injurology solutions in an urban setting – Mi. Oluseppe AKDOINO, UNESCO		
	• water industry respectives - Z, President, IWA		
	O Extreme Events - Key Lessons from Recent Events & Recovery Chanenges -		
	North American Climate Change Adaptation Experience Leurne KAATZ		
	Managar Climate Science Deliay & Adaptation Program Denver Weter Cheir		
	Wilca.		
	WUCA, a National Climate Change Adaptation Strategy facing Extreme Water Strage		
	Avraham Ban VOSEE Deputy CEO & Aria AMSALEM Deputy CEO MEKOPOT		
	Isroel:		
15.40 16.00	Coffee Breek		
15.40 - 10.00 16.00 17.40	Climate Change Impacts on Utility Management Challenges & Adoptation Strategies		
10.00 - 17.40	Chair: Bruno NCUVEN President W SMADT Association		
50551011 4	Kownota Exports:		
	Concerning Systems Dr. Abou AAMANI Executive Officer of		
	the Natural Science Sector UNESCO		
	SIAAP Stratagic Climate Adaptation Planning Challenges Davis DENOLIEI		
	Deputy CEO SIAAP.		
	- Blue/Green Infrastructure as a Desiliance Duilding Strategy		
	CHANAN Director Infrastructure Projects City of Sudney, Vice President IVA		
1	<u>Onarran</u> , Director, infrastructure riojects, City of Sydney, vice riesident, IWA-		









	 S2WM; Greater Paris Metropolitan Development Challenges for Infrastructure Agencies & Service Operators - Jean Didier BERTHAULT, Greater Paris Metropolis Councilor; Water Utility Commitment for Resilient Cities - Massimiliano PELLEGRINI, CEO, SUEZ Eau France; 	
	 Climate Impacts Resilience Building Challenges & Measures – The South Korean Experience - Okjoo SOHN, Senior Program Specialist, UNESCO, MOFA, South Korea; 	
17:40 - 18:00	Concluding Remarks	
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November 8	The way Forward - R&D Challenges of Resilience Capacity Building for "Smart'	
9:00 - 10:40 am Session 5	Cities Chaim Deef, Hen, HIDAN, Director, Haben Infracture Institute, NVII Debracheri	
56881011 5	Institute: Executive Director, W-SMART Association:	
	Keynote Experts:	
	o Global Alliance for Disaster Risk Reduction and Resilience in the Education	
	Sector – Mr Soichiro YASUKAWA, UNESCO	
	o Data Science Applications & Artificial Intelligence based Control for Resilient	
	Energy & Water Systems Management – Dr. Cedric AULIAC, CEA;	
	• Integration Challenges of Renewable and Recovered Energy and Water Resources	
	facing water Stress Situations – <u>Dr. Josh SPERLING</u> , US-DUE, NREL, Colorado;	
	SIAAP Strategic K&D Program "MOCOPEL" - <u>Dr. Sam AZIMI</u> , Head, General Study Unit Innovation Department SIAAP	
	 Industry-University R&D Partnership for Smart and Resilient Cities – Prof Isam 	
	Shahrour, University of Lille: Dr. Silvia TINELLL Research Associate. W-SMART:	
	 Innovation Challenges of the City of Paris facing Climate Impacts Adaptation 	
	Needs - Prof. Youssef DIAB, Research Director, School of Eng. of the City of Paris;	
	• The Alliance of Megacities facing Climate Change Impacts on Water Operators'	
	Challenges (MAWAC) - Daniel Marcovitch, President, ARCEAU	
10:40 - 11:00	Coffee Break	
11:00 - 12:40	ECO-METROPOLIS - Public Education & Role of the Media in Promoting Climate	
Session 6	Crisis Awareness Culture for Sustainable Urban Development;	
	Chair: Dr. Alexandros MAKARIGAKIS, UNESCO Program Specialist	
	Keynote experts:	
	• <u>Georges LECLERE</u> , Vice President, The Foundation of the New York Chapter	
	National Academy of Television Arts and Sciences; Former Director, UN-DPI;	
	• François de CLOSETS, Journalist & Author of Inspirational Novels;	
	• George PAPAGIANNIS, Chief Media Services, UNESCO;	
	• Jean Didier BERTHAULT, Greater Paris Metropolis Councilor;	
	O Dr. Benny VAKNIN, Former Mayor, City of Ashkelon;	
12.40 13.00	Concluding Remarks	
12.40 - 13:00	Dr Alexandros MAKARICAKIS LINESCO Program Specialist	
	o Jean Didier BERTHAULT. Greater Paris Metropolis Councilor	
	- Dura Line HIDAN Execution Director W SMADT	
	O Prof. Han JUKAN, Executive Director, w-SMART	
13:00 - 14:00	0 Prof. nan JUKAN, Executive Director, w-SMAR1 Lunch	

We would like to extend our thanks for accepting the invitation to the UNESCO Metropolitan "ECO - RISE" R2020 Colloquium .

We would appreciate if you could kindly make your reservation to the

- UNESCO ECO-RISE COLOQUIUM,
- SITE VISIT

through the W-SMART site at https://www.w-smart.fr/ or via email to Luisa Francesca Schalck at lf.schalck@unesco.org

Looking forward to meeting you at the Colloquium



L'USINE D'EAU NON POTABLE D'AUSTERLITZ (15 Rue Paul Klee – 75013 PARIS)

Paris a la particularité de disposer d'un patrimoine hydraulique exceptionnel, comprenant notamment un double réseau d'eau souterrain garantissant à la fois la fourniture d'eau potable destinée à la consommation humaine, et la fourniture d'eau non potable, consacrée à des usages urbains spécifiques.

De forme cylindrique, construite dans les entrailles du sous-sol parisien, **l'usine d'eau non potable d'Austerlitz** évoque un Beaubourg souterrain avec ses gigantesques conduites colorées et ses énormes pompes.

De l'extérieur, seule la fontaine Dragon, œuvre de l'artiste Chen Zhen, signale la présence de l'eau à cet emplacement. Gérée par Eau de Paris, l'usine d'eau non potable d'Austerlitz compte pour essentielle dans la construction de la ville durable de demain, Paris.

Visite gratuite organisée le **8 novembre 2019 de 14h30 à 16h00**. Nombre de visiteurs limité aux premiers inscrits. Inscriptions par mail à Luisa Francesca Schalck at If.schalck@unesco.org or via website at <u>W-SMART</u>

Free visit on **November 8th 2019, 2:30 pm to 4 pm**. Limited number of visitors allowed, be the first to register at Luisa Francesca Schalck at If.schalck@unesco.org or via website at <u>W-SMART</u>



THE AUSTERLITZ INDUSTRIAL WATER PRODUCTION PLANT (15 Rue Paul Klee – 75013 PARIS)

Paris is one of the very few cities in the world to be fully covered with a dual system composed of a standard drinking water network and of a separated industrial water network. Industrial water is mainly destined to urban usages like washing the streets, flushing the sewers and watering the parks and the artificial lakes of the city. The two systems differ in water quality and in pressure in their pipe systems.

The Austerlitz production plant takes water from the Seine river along the Quai d'Austerlitz and supplies industrial water to one third of Paris. The Austerlitz plant has been fully reconstructed in the 1990's and inserted in the recent urban development of the area; it is a unique component of the water patrimony of the French capital city. Big pumps and large colored pipes are located below the ground in a vast cylinder, but from the surface, the only visibility of water lies in the Dragon fountain by the artist Chen Zhen.

Eau de Paris, the public water utility, operates the Austerlitz plant which plays an essential role in the construction of the sustainable Paris of tomorrow.



Participants



Sebastien, Maire Chief Resilience Officer, City of Paris

Bio-Sébastien Maire is the General Delegate for Ecological Transition and Resilience of the City of Paris, and coordinates the implementation of the climate, air quality, circular economy and resilience policies. As an expert in local authorities' management, he used to be both an elected official (deputy-mayor of his birth town, in charge of university and international relationships) and an administrative director in other French municipalities (for economic and local development). From 2008 to 2014, he had to manage many kinds of crisis, especially social ones, as the Mayor's chief of staff of a major yet poor city in Paris' suburb. In 2015 he graduated with a Master degree in Innovation management in public organizations and policies at the age of 40. He's a specialist in sustainable development and urbanism, and territorial governance. As Paris Chief Resilience Officer, member of the 100 Resilient Cities network, he has been building the city resilience strategy with a wide panel of stakeholders, in two main directions: how to strengthen social cohesion and the dwellers' preparedness to face any kind of crisis, and how to adapt middle and long term urban planning and development to the consequences of climate change.

Abstract:Thanks to the 100 Resilient Cities program, Paris has been benefiting from a Chief Resilience Officer since the end of 2015, who built a resilience strategy, voted in 2017. Where are we two years later, especially regarding capacity building and institutionalization within the municipal organization ?



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.



Pr Youssef DIAB Scientific Director and distinguished Professor EIVP / University Paris Est / France

BIO - Youssef Diab is a Professor of Urban Sustainable Planning in the University Paris Est in France. He is the founder and. He is also the Scientific Director of the EIVP: Ecole des Ingénieurs de la Ville de Paris. A graduated school dedicated the urban and municipal engineering. This school is attached to the city of Paris and associated to te University Paris Est.

His research work is related to the field of civil and environmental, resilience and energy engineering and the relations with urban and regional planning. These researches are based on multi criteria analysis, modelling infrastructure systems and numerical tools. These researches are realised in co-operation of municipalities especially the city pf Paris, urban utilities companies, the European Union and international donors. Currently, he is managing a research on the resilience of the inner city of Montreal and the role of underground space in the development and attractiveness of Paris.

Youssef Diab, is the author of more than 150 papers, communications and reports in the field of urban sustainability and urban services management in Europe and developing countries He is also the author of a series of publications in French called : Carrefours du génie urbain. These books are dedicated to cities management. 5 tomes are already edited : Mobility, numerical considerations, biodiversity, energy management, resilience, water and solid wastes. Two new tomes are under preparation.

Title: Urban Engineering, Innovation Strategies: Initiatives of the city of Paris towards low carbon cities.

Abstract This presentation will be closely linked to the relation between integrated approaches used for low carbon cities in a perspective of a smart sustainable city. Will be discussed, results of projects realized in Paris. Issues like resilience, mobility and energy conversion and management will in the scope of the presentation.

These approaches might be a model of recognised researches in the field of city management and planning. We will also discuss the innovation generated by this transversal understanding of city management. These innovations concern energy efficiency, infrastructures, smart mobility, risk assessment, urban resilience and finally urban planning and design.

A Validation by working on experimentation in situ and create living urban labs especially will be discussed. These transversal approaches will generate new business by substantially increasing the innovative success of urban communities, resulting in new products, technologies and services and in new value chains serving the needs and aspirations of local authorities and populations





Benjamin GESTIN General Manager, Eau de Paris

An alumnus from Ecole normale supérieure (ENS), Sciences Po and Ecole nationale d'administration (ENA), Benjamin Gestin serves as General Manager at Eau de Paris, the public water utility of the city of Paris, since December 2016.

Prior to this assignment, Mr Gestin, member of the French senior civil service, worked between 2012 and 2016 as Deputy Director General at Centre des Monuments Nationaux (Center for National Monuments, an agency of the Ministry of Culture which manages over a hundred historical sites and buildings).

He was seconded to the Ministry of Foreign Affairs between 2009 and 2012 and was posted the Embassy of France in India, working in the development and governance sectors.

In the first years of his career, Benjamin Gestin was attached to the Ministry of Culture and worked for the national museums directorate.



Eric Macfarlane P.E., M.ASCE, ENV-SP NYCDDC Deputy Commissioner

BIO- Eric C. Macfarlane leads the New York City Department of Design and Construction, Infrastructure Division with a technical staff of 500 employees, consisting mostly of engineers, project managers, and analysts. The division is responsible for the design and construction management of the capital infrastructure programs for the City of New York consisting of: consolidated roadways, sanitary sewers, storm drainage system, water distribution network and various urban landscape improvements. Currently the division has a 5 years capital plan portfolio of 574 projects in various, phases, from planning, design and construction, valued at more than \$12 billion. A few significant active projects under his management include: connecting the final section of a third water tunnel to the City's water distribution system, a project valued at more than \$235 million, a coastal resiliency program estimated at more than \$2 billion. The Infrastructure Division also procures the services of many consultants for both design and construction management who provide supplementary assistance in the delivery of DDC's annual infrastructure projects commitment plan. He has a Bachelor of Engineering degree from the City College



of New York, and a Master of Science, Civil Engineering degree from Polytechnic Institute of New York (NYU-Tandon School of Engineering). He is a New York State licensed Professional Engineer.

Title:Lower Manhattan Sea-Level Rise Resilience Building Challenges

ABSTRACT: The East Side Coastal Resiliency (ESCR) Project is an integrated coastal protection system that will reduce the risk of flooding and facilitate access to the waterfront, creating improved public spaces and enhanced natural areas. Stretching from Montgomery Street to East 25th Street, the ESCR Project will strengthen 2.4 miles of urban coastline against floods and rising sea levels, while providing social and environmental benefits to the community the other ninety-nine percent of the time. The proposed project will occur on the East Side of the Borough of Manhattan, New York County, NY. The project area begins at Montgomery Street to the south and extends north along the waterfront to East 25th Street and is composed of two sub-areas: Project Area One and Project Area Two for environmental review and design



purposes. The project limits are as follows:

SANDRESM1: Project Area One extends from Montgomery Street on the south to the north end of John V. Lindsay East River Park (East River Park) near East 13th Street. Project One Area is approximately 61 acres and consists primarily of the Franklin Delano Roosevelt East River (FDR) Drive right-ofway, a portion of Pier 42, Corlears Hook Park, and East River Park. The majority of Project

Area One is within East River Park and includes four existing pedestrian bridges across the FDR Drive to East River Park (Corlears Hook, Delancey Street, East 6th Street, and East 10th Street Bridges) and the Houston Street overpass. This project area includes the reconstruction of three maintenance buildings and two comfort stations that will be maintained by the NYC Parks Department.

SANDRESM2: Project Area Two is approximately 21 acres and extends north and east from Project Area One, from East 13th Street to East 25th Street. In addition to the FDR Drive right-of-way, Project Area Two includes the Consolidated Edison Company of New York (Con Edison) East 13th Street Substation and the East River Generating Station, Murphy Brothers Playground, Stuyvesant Cove Park, Asser Levy Recreational Center and Playground, VA Medical Center, and in-street segments along East 20th Street, East 25th Street, and along and under the FDR Drive.

The proposed project includes drainage management elements to ameliorate the reduced sewer capacity due to outfall closure during a design storm event. The drainage management would reduce the risk of sewer backups and associated flooding within the drainage protected area during a storm event. These drainage elements include installing additional combined sewers, termed "parallel conveyance," within the drainage protected area to augment the capacity of the existing sewer system. Specifically, nine parallel conveyance connections are proposed. Parallel conveyance work will be completed under project ID SANDRESPC.





Sébastien DAZIANO Directeur de la Coordination Exécutive SUEZ

BIO(French)

Sébastien Daziano a rejoint le Groupe SUEZ le 6 mai 2019 en tant que **Directeur de la Coordination Exécutive**. Ancien élève de l'ENA, Sébastien Daziano est un ancien collaborateur de Anne-Marie Idrac au secrétariat d'Etat chargé du commerce extérieur et de Claude Guéant au ministère de l'Intérieur, de l'Outre-Mer, des Collectivités territoriales et de l'immigration. Il était depuis 2015 sous-directeur des finances et du pilotage à la direction générale de la police nationale

BIO(English)

Group Senior Vice President, Executive Coordination of SUEZ

Sébastien Daziano joined the SUEZ Group on May 6, 2019, as **Group Senior Vice President, Executive Coordination**. A former student of ENA, Sébastien Daziano worked under Anne-Marie Idrac at the State Secretariat for Foreign Trade, as well as Claude Guéant at the Ministry of the Interior, Overseas French Territories, Local Governments and Immigration. Since 2015, he has been Deputy Director of Finance and Management at the General Directorate of the National Police.

Title : Human as a key Resilience Factor

Abstract : As climate change is multiplying risks for our planet, our environment, our resources, for goods and people, human is a key resilience factor.

In view of the megatrends observed in our society, both mitigation and resilience through adaptation actions are an absolute necessity.

SUEZ is working at a corporate level and as a public services operator, with all its stakeholders to support the environmental and societal transition of territories, favoring a circular economy model.

Human is at the core of the climate change, and is also key in the holistic approach to develop solutions. SUEZ fosters collaborative actions to scale-up the implementation of climate-responsible solutions

Dr. Benny VAKNIN Former Mayor, City of Askelon 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 Lawyer





Michael BERKOWITZ Former President, 100 RC Program, Rockefeller Foundation

BIO: Michael Berkowitz is the Founder and past President of 100 Resilient Cities. He held that position from 2013 until August 2019. With colleagues from 100RC, he will announce a new urban resilience venture in October 2019.

He joined the Rockefeller Foundation in August 2013 to shape and oversee the 100 Resilient Cities initiative, which is a global effort to change the way cities plan and act.

Previously, he worked at Deutsche Bank, as the deputy global head of Operational Risk Management (ORM). In that capacity he oversaw the firm's OR capital planning

efforts, served as a primary regulatory contact and connected the myriad operational risk management efforts group-wide.

He held multiple other positions at DB, including Chief Operating Officer of Corporate Security, Business Continuity (CSBC) and Operational Risk Management, where he had responsibility for budgeting, operations, and global coordination across the group's six workstreams. During this time, he also served as the head of the Bank's Protective Intelligence unit, designed to assess and analyze security and geopolitical threats to the Bank, its staff, processes and information.

Prior to December 2010, he was the CSBC head in APAC with responsibility for all business continuity planning and alternate site operations, as well as physical security, executive and event protection, fraud investigation and prevention, and cybercrime. Between 2005 and 2008 he had management roles for DB in Mumbai, India and New York.

Until January 2005, he was Deputy Commissioner at the Office of Emergency Management in New York City. In this position he worked on major planning initiatives, including the New York City Coastal Storm, Biological Terrorism and Transit Strike contingency plans.

At OEM he led an initiative to create OEM's Public-Private Emergency Planning Initiative and its Ready New York citizen preparedness campaign. He also responded to incidents including the 1999 outbreak of West Nile Fever, Tropical Storm Floyd, major flooding in Southern Queens (1999), the crashes of SwissAir 111 and American Airlines 587, the 2003 Northeast blackout, as well as the 2001 anthrax incidents and the World Trade Center disaster.

Contact Michael on Twitter @berkmic.

Title: Lessons Learned from 100 Resilient Cities

Abstract : In 2013, The Rockefeller Foundation incubated 100 Resilient Cities to celebrate its centennial. The goal was to select and support a diverse cohort of cities across the world to spark a resilience movement that would fundamentally change the way cities plan and act in the 21st Century. This talk will feature some of the lessons learned during this time, highlighting successes and as well as challenges to doing innovative resilience work in cities .





Milo FIASCONARO Executive Director, Aqua Publica Europa – EU Association of Public Water Operators

Bio : Milo Fiasconaro has been the Executive Director of Aqua Publica Europea – the European Association of Public Water Operators – since 2012. Prior to that, he worked with public authorities in the implementation of European policies. He has an extensive experience in EU policies, especially in the field of Innovation and Environmental policies. He holds an MA by research in Human Geography from Durham University (UK) and a degree in Political Science from Florence University (Italy). In addition to Italian, his mother tongue, he fluently speaks English, French and Spanish.

Title: EU Water Safety Plan & Resilience Policy Measures

Abstract :

Short presentation of our network (who we are)

- Reference to the European legislation that has an impact on the topic of the conference: Water Framework Directive, Floods Directive, Directive on security of network and information systems and forthcoming new Drinking Water Directive (with a focus on the latter two, as both require – or will require – risk assessment of water network and supply, with potential overlaps).

- Report on an ongoing comparative work within our network on the implementation of Water Safety Plans among different European water utilities (it appears that, whereas the concept of WSP is known to everyone, the concrete implementation and impact on water utilities internal "way-of-doing" vary significantly among operators, hence the need to compare how this methodology is being implemented concretely.



Pierre GUEZ Marketing Director at Veolia Water France

BIO: After an engineer degree at the Ecole des Mines de Paris, he first worked in the Renault research department on smart vehicles. He then joined the Compagnie Generale des Eaux, now Veolia, where he worked in various regions as operational manager, project manager, sales manager, and now at strategic marketing at Veolia Water France.



French:

Title: Comment réduire les besoins de financement d'infrastructures de résilience des territoires ? En développant la résilience de ses habitants !

Abstract: Poser la question de la résilience des infrastructures urbaines, et notamment celles liées à l'eau, cela nécessite de travailler sur 2 problèmes : leur disponibilité, l'offre, et leur besoin accessibilité, la "demande".

Bien sûr, il y a des besoins de construction de nouvelles infrastructures, ou d'adaptation de celles existantes, et cela requiert des financement importants : c'est le financement de "l'offre".

Mais il apparaît aujourd'hui indispensable de travailler aussi sur "la demande", qui peut limiter les besoins d'infrastructures, qui peut les compléter et en renforcer l'efficience, et finalement peut modérer les besoins de financement.

La planification et le financement de la résilience doivent clairement dédier une partie du budget à la formation et à l'implication des acteurs du territoire.

English:

Title: How to reduce the financing needs of territorial resilience infrastructures? Let's develop the resilience of its inhabitants !

Abstract: To ask the question of the resilience of urban infrastructures, and in particular those related to water, this requires working on 2 problems : their availability, the "supply", and their need for accessibility, the "demand"..

Of course, there are needs for the construction of new infrastructures, or adaptation of existing ones, and this requires significant financing : it is the financing of the "supply".

But it is now essential to work also on "demand", which can limit the need for infrastructures, which can complement the, improve their efficiency, and finally can moderate the need for funding.

Resilience planning and financing must clearly dedicate a part of the budget to the training and the implication of the actors of the territory



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 m³. 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.



Prof. Fadi G. COMAIR Director General, Hydraulic and Electric Resources, Republic of Lebanon

BIO: Fadi Georges Comair is a graduate of American universities as well as renowned French universities, and holds a doctorate in Civil Engineering, Hydraulic sandor and Energy Resources and a degree from Harvard University's Executive Program.

He began his career with the French Government as the Head of the Department of Industrial Technical Research Centres and a member of the European Union's Standards Committee at the Ministry of Industry. He has managed several European technical committees related to water and energy resources.

As Chairman of the Joint Lebanese Committee on transboundary Waters, he has played a major role in resolving conflicts on several cross-border rivers in the Middle East such as the Orontes, Nahr El Kebir and Jordan basins, and has published several articles and books on these topics. Similarly, he initiated the "Water Code" as an institutional reform of the water sector in Lebanon in coordination with the French government. Among his notable achievements was the creation of a national water resource database department in Lebanon using highly advanced technology and modeling tools.

Among other professional activities and achievements, he chaired the Mediterranean Network of Basin Organizations (MENBO) from 2009 to 2011, developing important activities and partnerships to promote Integrated Resource Management in Water in the Mediterranean basins, including good governance of water resources. As a member of the Steering Committee of the Union for Mediterranean Energy (UfM), he launched and contributed to the Mediterranean Water Strategy, which includes actions related to the effective governance of integrated water resource management, adapting to climate change, improving drought and flood management, promoting water demand management, including unconventional water resources, etc.

He has also worked on the creation of a Training and Information Centre for water-related professions, in collaboration with the International Water Board . From 2003 until now, Comair has been vice-president of the Euro-Mediterranean Information System on know-how in the Water Domain (SEMIDE). Since 2015, he has been a member of UNESCO's Advisory Committee of Experts on Water and Human Settlements. He has also acted as a key partner in the initiative of UNESCO-PHI's "ECOMED" network (Environmental Coastal Observatory for Ecologically Sustainable Development of the Mediterranean) which aims to monitor ecosystem pollution and effectively support the capacity building of local governance to mitigate environmental risks and ensure ecologically sustainable regional development.



Since 2017, he has chaired the association Medurable, through which he organized annual seminars on "hydrodiplomacy and climate change for peace in the Middle East" in the French Senate (case of the Orontes basin in 2015, case of the Jordan basin in 2016, the case of the Nile basin in 2017, the case of the Tigris and Euphrates basins in 2018 and the governance of international basins in 2020).

Other important achievements include; being actively involved as an expert and as a leader in the implementation of national, regional and international activities related to information, awareness and promotion of the rational management of water resources. In particular, he was the initiator of the "Beirut Water Week" (recurrent event held in 2005, 2009, 2010, 2013, 2016 and 2019) and, through his commitment to professionalism and to ethics, he acted as a key expert and speaker in events on transboundary water resources and conflict resolution through hydrodiplomacy. For example, he was interviewed as a key expert as part of the official mission of the French National Assembly on water geopolitics in the Middle East.

He also studied and reported on the impact of conflicts, including the Syrian conflict and migration, on the management of water resources in Lebanon and at the regional level. In addition, he has been involved in the preparation of studies and strategies related to the following topics: public-private partnerships, water governance, water financing, adaptation to climate change, the Mediterranean solar plan, the NEXUS water-energy-food and unconventional water resources. Recently, he was appointed as a member of the 2018 King Hassan II World Water Grand Prize jury. In addition, Comair has been an active member of the Institute for Economic Prospective of the Mediterranean World (IPEMED) since 2008 and since 2009, of the Academy of Ethics in France.

Since 2015, he has been appointed as a member of the French Water Academy, which is a multidisciplinary and cross-sector think tank on the various aspects of water resource management and use in France, Europe and at the International level.

At the academic professional level, he has been a professor at various universities and has taught several courses related to IWRM, cross-border water resources, public-private partnerships and hydrodiplomacy. He also founded the Centre for Research on Water, Energy and the Environment (WERC) at the University of Notre Dame and was the thesis director and member of the defence juries for several master's and doctoral theses related to water resource management and sustainable development at the national and international level.

He has received numerous awards in his home country as well as abroad, including the Honorary Title of Diplomat Water Resources Engineer (DWRE) by the American Academy of Water Engineers (AAWRE). He was awarded the "Knight of the Legion of Honour" medals in France in 2016, and was appointed a member of the French Academy of Overseas Sciences in 2018. He is also the recipient of the 2017 Gaia Prize for Safeguarding and Environmental Safety in the Mediterranean, awarded by the Petrovich Njegosh Foundation of Montenegro.

Mr. Fadi Comair is the author or co-author of more than 200 publications, including books and articles on water resource management, sustainable development, transboundary water resources and hydrodiplomacy.

Publications

Author or co-author of the following books:

• Fadi Georges Comair, Hydrodiplomatie et Nexus «Eau-Energie-Alimentation » 2018, Editions Johanet



• Ballabio, R., Comair, F.G., Scalet, M. Scoullos, M. (Editors). (2015). Science diplomacy and transboundary water management, the Orontes River case. Published by United Nations Educational, Scientific and Cultural Organization (UNESCO).

• Blue Gold of Lebanon. (2013). Published by Civic Influence Hub. Edition l'Orient-Le Jour.

• Water Resources in Arab Occupied Territories. (2012). Published by League of Arab States. (en arabe)

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• Comair, F. (2008). Gestion et Hydrodiplomatie de l'eau au Proche-Orient. Editions L'Orient Le Jour. ISBN 9953012202, 9789953012209.

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Author or co-author of the selected following articles

• Comair, F. (2017). Hydro-diplomatie et Nouvelle masse d'eau pour la paix au Moyen-Orient. Annales des Mines - Responsabilité et environnement, 86, (2), 49-55.

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• Comair, F. Donzier, J.F., Lainé, H., Mino, E. (2010). Une «Agence méditerranéenne de l'eau» pour passer de la stratégie à l'action - Confier la coopération régionale aux professionnels des bassins hydrographiques. Projets pour la Méditerranée, Institut de Prospective Economique du Monde Méditerranéen (IPEMED).

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• L'eau en Méditerranée: fonder une stratégie commune. (2008). Perspectives Stratégiques, Edition L'Harmattan. ISBN 978-2-296-10749-6.

• Comair, F. (2005). La géopolitique de l'eau au Liban. In L'eau, nouvel enjeu géopolitique, Etudes géopolitiques, n.4. Published by Observatoire d'études geopolitiques.

• Les Enjeux Méditerranéens: l'Eau entre Guerre et Paix. (2004). Les cahiers de la Convention Démocratique. Lead author: De Charrette, H. Edition L'Harmattan. ISBN : 2-7475-6091-0

• Le Pacte de Paris pour la gestion des bassins nationaux et transfrontaliers Cop21 (2015). Paris.

• Comair, F. (2015). Hydrodiplomatie et changement climatique pour la paix au Moyen-Orient: Cas du bassin de l'Oronte. Conference proceedings, French Senate.



• L'après Cop 21: Politiques d'adaptation pour le Moyen-Orient (2016). Beirut.

• Comair, F. (2016). Hydrodiplomatie et changement climatique pour la paix au Moyen-Orient: Cas du bassin du Jourdain. Conference proceedings, French Senate.

• Comair, F. (2017). Hydrodiplomatie et changement climatique pour la paix au Moyen-Orient: Cas du bassin du Nil. Conference proceedings, French Senate.

Title: The Hydrodiplomacy: a new approach to face global and climate future challenges in the MENA region

Abstract:

Hydrodiplomacy at a glance: a tool for building regional cooperation

Hydrodiplomacy is a new concept which represents a tool for applying water peace among riparian countries on transboundary basins. This approach is at the service of the construction of integrated water resources, national and transnational management, according to a cooperative model, away from the fragmented unilateral management which compromises more socio-economic development of many countries. Due to the pressure of climate change in the MENA region, the water shortages on the transboundary basins will create a climate of insecurity for riparian countries. Hence, the economic development of the basin will deteriorate due to the political instability that prevents any peaceful and constructive water cooperation.

On the contrary, hydrodiplomacy wants to build a new form of governance that has the ambition of building peace, a process for prevention, mediation and resolution of conflicts on water. This is to exclude any form of domination of one country on the other, to take away the militarization of access to water sources and pushing the concept of unilateral resource management.

The main objectives of hydrodiplomacy are:

- To push away the tensions at the basins level by turning water into a catalyst for peace and not a source of conflict.

- To secure water resources and supply for present and future generations in accordance with the principles of sustainable development;

- To create regional economic development dynamics, integrating the water-energy-food nexus that connects different interacting factors of the economic and social development of the concerned countries.

- To achieve its purposes, the hydrodiplomacy is mobilizing both technical expertise and diplomacy. It combines diplomats, scientists, academics, policy makers at the level of the transboundary basins, in order to reach a fair and reasonable use of water to achieve a situation of mutual success and "win-win" situation, between countries and riparian regions.

Today, the world is witnessing several examples of successful hydrodiplomacy at the level of different basins:

- The Danube Basin cooperation through the implementation of the UNECE 1992 Convention and the EU Water Framework Directive (WFD) enabled cooperation on the management of the Danube waters
- The collaborative cooperation of the Rhine Basin.



- The transboundary cooperation in the SAVA River Basin through the application of the Sava River Initiative, the Framework Agreement on the Sava River Basin (FASRB) and the creation of the International Sava River Basin Commission (ISRBC).
- Increased Transboundary Cooperation and Integrated Water Resources Management in the Drin River Basin through dialogue, the Drin Action Plan (DAP) and its various related projects.
- The Orontes Basin has had a bilateral hydrodiplomatic success between Lebanon and Syria and an "agreement" between Syria and Turkey.
- The Indus is cooperating successfully with the creation of a commission and treaty between India and Pakistan.
- The Senegal River has seen the establishment of the senegal River Development Organization (OMVS), a success between Mali, Mauritania and Senegal.
- Cooperation between Spain and Portugal, which jointly operates five transboundary basins (Mino, Limia, Duero, Tage and Guadiana), the Albufeira agreement.

In addition, the world also demonstrates multiple examples of non-cooperative management at the level of different basins:

- The Tigris and Euphrates rivers have been subject to the concept of unilateral management for several decades. This domination of both basins deprives Syria and Iraq of a legitimate share for the development of the agricultural strategies of these two countries as well as the drinking water needed to meet the needs of the citizens.
- The Jordan Basin has been subject to unilateral management bearing in mind that it is a very important source of water for all riparian countries especially that the occupation of the Arab countries water sources led to an hegemonic basin management by Israel and to an inequitable sharing of water resources between Israel and the Arab countries.
- The Nile Basin through the Renaissance Dam continues to experience hydro-political tensions between the riparian countries, notably Egypt, Ethiopia and Sudan, which exacerbates the problems and requires an urgent solution to deal with the growing water shortage in this region.

Hydrodiplomacy and the Water-Energy-Food Nexus: applying the SDGs In the MENA region

Water security is one of the most important strategic issues for the stability in the Arab Region. It has national, regional and international dimensions due to the interdependence of water and energy and their economic and political importance for all the states in order to ensure their food needs and also the development of their countries.

Since the beginning of the 20th century, the Arab Region witnessed many conflicts over transboundary water, and fossil energy and lately the attack on Aramco's Oil plants. What if the other attack will concern a major desalination plant, cutting by this action the access to potable water and to irrigation in one of the major city of the Gulf state? Bearing also in mind that the Gulf State devotes 30% of their energy production to the desalination of water which requires high consumption of energy, requiring an estimated 1,7 kw for the production of 1 m3 of water, and this technology will be increasingly important for the survival of the MENA Region.

Regional cooperation, is - now more than ever- a mandatory condition for achieving the common development goals in the Arab region in order to achieve the desired prosperity.

Regional cooperation helps to facilitate the flow of production factors, capital and direct investment as a way to accomplish a sustainable development





Okjoo SOHN Senior Program Specialist, UNESCO

BIO:

(Academic Background)

Jun. 2003: Master Degree, Civil and Environmental Engineering, MIT, USA

Feb.1992: Bachelor Degree, Agricultural Civil Engineering, Seoul National University, Republic of Korea

(Main Professional Experience)

(2018-present) Senior Programme Specialist: UNESCO

(2017) Director-General: Presidential Committee for Balanced National Development

(1996-2017)

Director: Division of Water Resources Policy, Ministry of Land, Infrastructure and Transportation, MOLIT, ROK

Director: Division of River Planning, Division of Future Strategy, Division of Human Resources Management

Deputy Director: Division of River Environment, Division of Urban Railroad

Title: Climate Impacts Resilience Building Challenges & Measures – The South Korean Experience

Abstract: In 2019, the Republic of Korea released its national strategy for Smart City to address unban challenges from high density of population and climate change, which contains 2 national pilot city development plans including Busan City as a urban platform mainly aiming 100% water recycling city with smart water technologies. It also raises other challenging issues regarding privacy, inequality, and increasing cost on the way of smart city. This presentation introduces integrated water resource management with smart water management in the context of smart city strategy in Korea. It describes how to implement smart water management on the site, based on the case study in Paju city, providing real-time water quality information for the residents, followed by significant increase of direct drinking rate of tap water and consumer satisfaction as well.





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 systemsoriented 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 waterenergy 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.







Denis PENOUEL Deputy CEO, SIAAP

Bio(French):

Denis Penouel a 30 ans de responsabilités opérationnelles dans le domaine de l'eau, des déchets et de l'énergie dans les secteurs public et privé. Ingénieur de formation, il est diplômé de l'école supérieure du génie urbain de Paris et de l'Ecole Nationale des Ponts et Chaussées. En tant que directeur général des services techniques du SYCTOM il a été impliqué dans la gestion des déchets ménagers dans l'ensemble de l'agglomération parisienne, le développement et la mise en œuvre de la politique d'investissement basée sur la diversification des moyens de traitement et la modernisation des outils industriels ainsi que la gestion des grands projets. En tant que directeur de la production et du développement de la Compagnie Parisienne du Chauffage Urbain (CPCU), il a eu la responsabilité opérationnelle des outils de production d'énergie (chaleur, électricité), la planification du développement de l'entreprise dans les énergies renouvelables en étant également responsable du développement international. Ensuite, chef du service de l'eau et de l'assainissement de ville de Paris pour la définition et suivi des politiques des eaux, l'exploitation et la modernisation du réseau d'égouts de Paris et exercer le rôle d'autorité organisatrice du service public de l'eau potable, A rejoint le SIAAP - service public de l'assainissement francilien qui transporte et épure quotidiennement les eaux usées de près de 9 millions d'habitantsdepuis septembre 2014, il en est le Directeur général adjoint en charge de la prospective, de l'ingénierie, des grands projets d'investissement, de l'expertise scientifique et technique dans les domaines de la santé, de l'environnement et de l'énergie.

Bio(English):

Denis PENOUEL has 30 years of operational responsibilities in the field of water, waste and energy in public authorities and private company. As a civil engineer he has a Master of Public Management of Ecole Nationale des Ponts et Chaussées and a graduate of the Engineering School of the City of Paris, School of Urban Engineering.

As Deputy General Manager in SYCTOM he was involved in household waste management in the whole Paris area Development and implementation of the investment policy based on diversifying household waste processing means and modernization of industrial tools, project management of major development projects .Implementation of local consultations and public debates, environmental quality charters and monitoring.



As Director of Production and Development in CPCU (ENGIE group) he had operational responsibility for energy generation tools (heat, electricity) company planning and implementation of the investment policy in renewable also responsible for International Development of the Company.

Then for City of Paris, Head of Services for Water and Sanitation, definition and monitoring water policies of the City of Paris (blue book), operation and modernization of the sewerage network in Paris and Organizing authority of the public service of drinking water, including organization of distribution of non-potable water service.

Now executive director and Deputy Director General in SIAAP, the greater Paris interdepartmental sanitation authority. SIAAP daily cleans the wastewater of almost 9 million Parisians, storm and industrial water conducts large investment projects, sanitation master plans scientific and technical expertise inhouse.

Others

President of ASTEE IdF,, French Scientific and Technical Association for Water and Environment

Member of French Academy of water

Title: New synergies for an integrated urban resources management

Abstract: Climate change has become a major concern, the first consequence of which is a questioning of individual, collective, domestic and industrial consumption patterns. The emergence of alternatives to fossil energies has gained a strong foothold in public opinion, reinforced by the Paris Agreements on climate.

The issue is to place women and men at centre stage in a city, where, tomorrow, everyone will be able to benefit from the right to good quality water and wastewater treatment under sustainable economic conditions. This city will have to contribute to the good status of waterbodies, the attenuation of climate change and the emergence of a circular economy that creates value. It will offer a shared quality of life conducive to well-being and public health whilst, at the same time, promoting biodiversity.

In this quickly evolving context, the vision of urban areas is to fully harness the potential of wastewater management to benefit not only people, but also the city and the environment.

Based on this vision, water utilities are committed to offering the best service at the lowest price, having resources serving climate issues, sanitation helping the development of smart and sustainable cities, listening and collaborating in order to better address the issues related to their activities and thus preparing future.

The vocation of responsible economic stakeholders is coupled with the growing role of wastewater management in the energy sector. Cities and megacities of tomorrow must be aware of carbon emissions, at the same time as modern societies are showing a desire to build a world that is, as far as possible, freed from the need for fossil energies.

This empowers the wastewater management sector to strengthen its role in both the fight against climate change and natural resources management.

Thus, the climate challenge forces us to reduce our industrial consumptions and develop renewable energies making wastewater systems leading producers of bio-energy.

The best use of inherent energy sources such as biogas, heat and electricity produced from sludge or heat carried by water, will give us the choice between different strategies ranging from the widest energy autonomy to "carbon neutrality". The pursuit of these objectives opens up a new world of synergies with other sectors' stakeholders





Jean Didier BERTHAULT Paris City Councillor and Great Paris Metropolitan, Local Authority Councillor

BIO: Paris City Councillor elected since 2001 (17th district of Paris)

Great Paris Metropolitan Local Authority Councillor since 2016 responsible for water and climate

Chief of campaign of Nathalie Kosciusko-Morizet, former candidate running for Mayor of Paris in 2014 and former French Minister of Environment

Vice-President of SIAAP (Sanitation Great Paris Local Authority) since 2001

Member of the board of "Eau de Paris" in charge of potable water production and distribution in Paris

Member of French Partnership for Water Board representing Great Paris Metropolitan Local Authority

In charge of local authorities college in the "Megacities Alliance for Water and Climate" included in COP (UNFCCC) and coordinated by UNESCO

e-mail : jean-didier.berthault@paris.fr / jdberthault@gmail.com



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.



Dr. Sam AZIMI Head, General Study Unit, Innovation Department, SIAAP

BIO: Sam Azimi is a doctor in environmental sciences who brings technical support for wastewater treatment plant facilities. As head of general studies unit of the Innovation department of SIAAP (greater paris sanitation authority), he helps operators to optimise their treatment processes. He works on topics such as energy and biological processes involved in wastewater treatment (water and sludge). To keep the requested level of expertise, he coordinates the Mocopee research program that guide efforts of innovation to improve operation and maintenance practices and accommodate the changing role of the treatment plant towards a recovery material center.

Before starting this support activity, Sam Azimi spent eight years as operations manager of two wastewater treatment plants. After a successful career commissioning and operating facilities, Sam now helps them to go further towards sustainable development goals.

Title: Modelling, control and optimisation pf the wastewater treatment processes - "MOCOPEE research program"



Abstract:

A partnership between scientists and stakeholders in the field of wastewater treatment

S. Azimi1, V. Rocher1, S. Guérin-Rechdaoui1, R. Mailler1, J. Bernier1, Y. Fayolle2, S. Laruelle3, C. Causserand4, M. Spérandio5, A. Pauss6

- 1 DIE SIAAP, Colombes, France
- 2 Prose IRSTEA, Antony, France
- 3 LAMA UPEC, Créteil, France
- 4 LGC UPS, Tououse, France
- 5 LISBP INSA, Toulouse, France
- 6 TIMR UTC, Compiègne, France

The regulations governing wastewater treatment have changed substantially since the mid-1990s. Enforcement of the legislation incorporating the requirements of the EU Urban Waste Water Treatment Directive (UWWTD - 1991) and Water Framework Directive (WFD - 2000) have led to ever-stricter demands on the quality of water discharges to the environment. In order to meet these requirements, French and European urban areas have conducted a policy of wastewater facility (WWTP) building and upgrading. Compact and high-performance technologies have been integrated into the wastewater treatment plants.

In the meanwhile, the Energy Transition Act for Green Growth (ETAGG - 2015) outlines the mid-century headline goals of the new French energy model. Responsible energy use and the preservation of resources within the water cycle become also major concerns. The circular economy and the promotion of a better waste management are favoured. More precisely, current major challenges include limiting the consumption of energy, using renewable energies and recovering the nutrients present in wastewater.

In this context, the major industrial actors, especially the SIAAP R&D, tackled the issues stemming from this high treatment performance at a low energy cost. Over the last thirty years, the prolific research conducted in the field of process engineering made it possible to accompany the changes in the industrial transport and wastewater treatment tools. Efforts in terms of innovation must today be oriented towards improving operation and maintenance practices of industrial systems. More precisely, the results of R&D must make it possible (1) to increase the level of control and optimisation of the treatment facilities by building the so-called "smart" plant (2) to progress on questions concerning the ageing of facilities and (3) to accompany the changing role of the treatment plant, today a de-polluting centre, but tomorrow recovery and recycling centre.

Created to progress towards these three major objectives, the Mocopee reaserch programme is built around four field of research devoted (1) to the building of innovative metrological tools (continuous measurement and methods for characterizing matrices), (2) to the modelling and control of wastewater and sludge treatment processes, (3) to the integrity of wastewater transport and treatment systems, and (4) to innovative concepts for material recovery.





Dr. Silvia TINELLI Research Associate, W-SMART

BIO: With a Bachelor and Master Degrees in Civil Engineering with major in Structural Engineering. She is currently a Research Associate with W-Smart & a PhD Student at the Department of Civil Engineer and Architecture of Pavia University (Italy) in collaboration with NYU Urban Infrastructure Institute. The activity research concerns the simulation of the bio-contamination risk propagation under real working conditions in Water Distribution Systems (WDSs). The water quality monitoring and the early detection feasibility of bio-contamination in WDSs are investigates, applying the concepts of stochastic analysis and Artificial Intelligence. Particular interest is also shown in the optimal placement of water sensors along the WDS.



Georges LECLERE LGMA International Media Consultant New York City, USA

BIO: Georges Leclère started his Media career in Beirut, Lebanon, hosting a weekly Radio show for young audiences, a weekly live Sports news radio show and anchored live, the daily 1968 Mexico Olympics Games coverage on Télé-Liban.

Today, Georges is a writer, creator and executive producer, advising media companies on television and transmedia projects in China, Korea, Russia, Canada and more. He is also known worldwide as the expert in international TV program Awards.

From 1997-2006, Leclere was Exec Director/SVP of the International Emmy Awards TV Academy. From 1986-1997, he was TV/Media Director at the UN, following a 15-year career in French TV as a reporter, anchor and Head of Science & Environment department.

Leclere is currently Vice-President of the New York Emmy Awards Foundation and creator of CareCFA.org for worldwide caregiving



Chief Everything Officer - LGMA Inc. New York, NY USA

January 2007 to present

TV and Transmedia Programs Creator and Producer

January 2007 to present - New York, NY, USA

Member of the Board War and Peace Media Channel

June 2009 to present - Saint Petersburg - Russia

<u>Deputy Director of the Academic Committee of the International Contemporary Art Education Center -</u> <u>University of the Chinese Academy of Sciences</u>

September 2017 to present – Beijing, PR of China

Founder eSport event Speed-Con

January 2018 to present – Zurich – Montreal – New York

Non-Profit

Founder CareCFA.org,

May 2018 to present - New York, NY USA

New York Alumni organizer for Sorbonne University Foundation

February 2018 to present- New York, NY USA

Vice-President NY Chapter of NATAS EMMY Academy Foundation

2017 to present- New York, NY USA

Treasurer Rosemary Pencil Foundation

2005 to present- New York, NY USA







Few years ago, Georges Leclere was:

Creator and Executive Producer of the Format Day and Drama Awards

Sichuan TV Festival

July 2011 - September 2015 - Chengdu, Sichuan China

Senior Partner - Florida Media Market

March 2012 - February 2013 - Miami, Florida

Director of Competitions and Awards - Banff World Media Festival

June 2008 to June 2012

Advisor of the Organizing Committee - Seoul Drama Awards

July 2007 to September 2017 - Seoul, Korea

Chairman of the Board of Directors - Russian Media Group War & Peace

June 2011 to June 2016 - Saint Petersburg, Russia

Senior Vice President - The International Academy of Television Arts & Sciences

November 1997 to November 2006 - New York, NY - USA

Representative of La Cinquième French TV Channel in the USA

1994 to 1997 in New York

Representative of the Franco-German TV Channel ARTE in the USA

1994 to 1997 in New York





A long time ago:

Director of the DPI Media Division - United Nations

April 1986 to January 1993 - New York, NY - USA

Producer Computers and New Media programs – French TV

1985 to April 1986 - Paris, France

Head of Science Daily News - French TV

1971 to 1985 – Paris, France

Journalist at France-Inter National French Radio and France Culture

1969 to 1971 – Paris France

Radio Host, Producer & Anchor – Radio Liban and Channel 11

1967 to 1969 - Beirut, Lebanon

Georges Leclere was awarded the "Chevalier des Arts et des Lettres" Medal by the French Government in June 2003 in New York, NY – USA

Georges Leclere was awarded the May Chidiac Foundation Excellence in the Media Industry Award 2019 in Beirut, Lebanon in October 2019

Contact: WWW.LGMA.TV

Title: The Media, they are a changing, (Paraphrasing Bob Dylan

Abstract: With the irruption of digital media in our daily lives, we entered an era where, often, students know more, much more, than their teachers... perhaps because they fully embrace any new technologies without questioning them or questioning themselves. They fast master them, and especially in the media field, they perform tasks that their parents didn't even know they existed.

Question: How can you attract this youth's attention, how can you incite these students and young adults to keep discovering and learning about major changes and then communicate their thinking, their reactions, their acceptance of this new world that is being prepared for them?

My answer is double.

First, make these young minds actors and developers of the questions you need to investigate.

Make them drive these quests themselves and make them communicate their finding themselves.

Second, motivate them with incentives and awards in a way that makes sense to them.

How do you do that in a concrete form?

My proposal, already discussed in some of your spheres, is to create a Worldwide TV Competition reality show for Television, Streaming, Universities studies and also shown in any public forum that will need to be informed on the matters that count the most for the survival of Humanity.

In my presentation to the ECO-rise colloquium, I will give you the practical details on the preparation, production, filming and distribution of this survivors' Reality Show. I will suggest the categories, the Awards and the potential follow ups.

I will also raise many questions to be discussed before we can start the production. That is why I accepted to come in front of all of you, because, more than my public, you will be my partners to help me harness



the huge creativity displayed by our youth, especially by the ones who know that there is no Planet B to this magnificent Earth that saw us be born, raised, live and love.

Thank you,



François de CLOSETS Journalist & Author of Inspirational Novels

BIO(French):

François de Closets né le 25 décembre 1933 est diplômé de droit et de l'Institut d' Etudes Politiques, a mené en parallèle une double carrière de journaliste et d'écrivain. Journaliste de presse écrite, il a collaboré successivement à l'Agence France-Presse, à Sciences et Avenir, à l'Express, au Nouvel Observateur. Journaliste de télévision, il a débuté au Journal télévisé puis a produit pendant une trentaine d'années des émissions, tantôt sur TF1, tantôt sur France 2, dans les domaines de l'économie, des faits de société, de la médecine et de la science. Notamment « l'Enjeu », « Médiations », « Savoir Plus Santé », « Les Enigmes de la science ».

Comme écrivain, il a publié vingt-cinq essais, dont la plupart furent des best-sellers. Sur des thèmes très variés, il s'est attaché à mettre en lumière les blocages de notre pays face à l'évolution du monde moderne. Son livre « Toujours Plus ! » publié en 1982 a été vendu à plus d'un million et demi d'exemplaires. Mais il a également consacré des ouvrages à la fin de vie, à l'orthographe, à l'histoire de la liberté ainsi qu'une biographie d'Albert Einstein. En 1988, il a présidé la Commission "Efficacité de l'Etat" dans le cadre du Commissariat Général au Plan. Le rapport final : "Le Pari de la responsabilité" inspirera la politique du gouvernement sur le renouveau du service public.

Il est aujourd'hui éditorialiste sur la chaîne LCI et vient de sortir un ouvrage graphique « Les guerres d'Albert Einstein »

François de Closets est marié à la journaliste littéraire Janick Jossin. Ils ont deux enfants Régis et Sophie.

Abstrat:

La civilisation industrielle se retrouve face à un défi qu'elle n'avait jamais connu, qu'aucune civilisation avant elle n'avait connue : sa propre disparition. Tous les enseignements de la science, toutes les observations vont dans le même sens : qu'il s'agisse de réchauffement climatique, de perte de la biodiversité, d'épuisement des ressources : le pire est devant nous. Non pas dans des siècles mais des décennies voire des années. C'est la grande revanche de la planète qui va bouleverser l'humanité dans son ensemble. La catastrophe mondiale n'est pas assurée, pas datée, mais elle est possible et même probable. Cela place les médias dans une situation entièrement inédite comment peuvent-ils réagir face à une apocalypse annoncée ?

La première erreur serait de croire que les médias manipulent l'opinion qu'ils peuvent à volonté la faire basculer dans un sens ou dans un autre. Ils ne sont que des amplificateurs de conformisme mais ils n'inventent rien par eux-mêmes.



La seconde serait de croire qu'ils sont manipulés. Qu'une autorité supérieure peut les faire agir dans tel ou tel sens.

La réalité est beaucoup plus subtile comme le prouve toute l'histoire de la prise de conscience écologique depuis les années 60.

Il nous faut prévoir, organiser si possible, la réaction des médias face aux phénomènes de plus en plus divers, de plus en plus violents, qui vont ponctuer cette dégradation de la nature, cette révolte de la planète face aux agressions de l'anthropocène.

BIO(English):

François de Closets born December 25, 1933 and graduated in law from the Institute of Political Studies, conducted in parallel a dual career as a journalist and writer. Print journalist, he worked successively Agence France-Presse, Sciences et Avenir, L'Express, Le Nouvel Observateur. Television journalist, he started in television news and has produced over thirty years of emissions, sometimes on TF1, sometimes on France 2, in the fields of economy, the facts of society, medicine and science. Including "Issue", "Mediation," "Learn More Health", "The Riddle of science."

As a writer, he has published twenty-five trials, most of which were bestsellers. On a variety of topics, he has sought to highlight the obstacles of our country face the evolution of the modern world. His book "Always More! "Published in 1982 has sold over a million and a half copies. But he also dedicated works to the end of life, spelling, history of freedom as well as a biography of Albert Einstein. In 1988, he chaired the Commission "Efficiency of the state" in the General Planning Commission. The final report: "The Bet of responsibility" will inspire the government's policy on the renewal of the public service.

He is now editor of chain LCI and just released a graphic book "Albert Einstein Wars"

François de Closets is married to the literary journalist Janick Jossin. They have two children Sophie and Regis.

Abstract: Industrial civilization is faced with a challenge she had never known, no civilization before she had known: his own demise. All the teachings of science, all observations point in the same direction: be it global warming, loss of biodiversity, depletion of resources: the worst is ahead of us. Not in centuries but decades or even years. This is the big hand of the planet that will change humanity as a whole. The global catastrophe is not assured, not dated, but it is possible and even probable. This puts the media in a completely new situation how can they respond to an announced Apocalypse?

The first mistake would be to believe that the media manipulate public opinion they can at will tilt in one direction or another. They are only conformism amplifiers but they invent nothing by themselves.

The second would be to believe that they are handled. A higher authority can make them act in a particular way.

The reality is much more subtle as evidenced by the history of environmental awareness since the 60s.

We must anticipate, organize, if possible, the media reaction to the phenomena of increasingly diverse, increasingly violent, which will punctuate the degradation of nature, this revolt of the planet from attacks of the Anthropocene.





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 recharging aquifer 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 (Becurity 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 of has been part of the core business 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 EBCprogramme 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.)



Bernard Ollagnier President, BBOCOM, international network. General Delegate, O.M.A., Observatory of accompaniment professions

BIO: Bernard P.Ollagnier has mostly a background in Paris, New York and Montreal, dedicated to public organisms and companies which intend to develop their activities in France, Europe or North America. Bernard P.Ollagnier leads its own office BBOCOM, the international network head to create good efficient relationships.

He serves as General Delegate the O.M.A., Observatory of accompaniment professions.



During the past years, Ollagnier served as Chairman and CEO several leading French and American Public Relations firms. He has been golden awarded by the International Academy for Communications Arts and Sciences (USA). Member of NY Rotary. He also produces several TV events, documentaries and magazines. Bernard serves as General Delegate of the film festival "Ecrans publics". He chairs FM&Society Club.

He run the EPR, European PR Group in 14 countries for 10 years. Founder-Chairman of the prestigious Paris TV Radio Club. Bernard frequently shares his time between his base in Paris and North America. Speaker around the world and author, his latest book "Communiquer, un défi français" (Ed.L'Harmattan) is a best-seller.

Today and during the last 20 years, Bernard mainly dedicates his services to:

- - L'Hermione / The La Fayette Frigate (corporate lobbying and promoting in USA),
- - Ardennes Department (corporate lobbying and promoting in France, USA, Canada),
- - WW1 Centennial Anniversary, Inaugural Day of the War and Peace Museum in

Ardennes (UN, American and Canadian Official Delegations)

- - Acteurs publics, the global media of public affairs (permanent Consultant since 2007)
- - Ecrans publics, TV Documentaries' festival in Paris since 2013
- - Apple (PR, corporate lobbying, creating Apple Expo)
- - European Program for Continuig Education, Brussels and whole Europe
- Dental Health in France
- - European Writers Festival in Strasbourg, France
- Regions, Departments and Cities: Provence Côte d'Azur to USA, Aisne-Champagne to USA, Sens, Cannes, Clermont-Ferrand The City of Michelin and much more
- French Ministry of Equipment for National and local information, urbanism and road safety programs
- - Many other assignments in the fields of Culture, New Technologies, Tourism, Food

business and gastronomy, Healthcare.



DIANE d'ARRAS President of the International Water Association

BIO: Graduated from "École des Ponts ParisTech" and from the Paris Institute of Politic Sciences, she began her career in 1977 in a French Public Water Authority.



In 1981, she joined SUEZ, a Water and Solid Waste Company. After a first experience in water operations in the western part of Paris (population: 1 million), she had the opportunity to join Aguas Argentinas in Buenos Aires in May 1993, becoming the Operations Manager (Network and Customers management, 7 million inhabitants, 2.5 million clients served, 2,000 employees).

In 1998, she became Research Senior Vice President at Degrémont, the infrastructure company of SUEZ, and then, joining the Executive Committee of SUEZ, she was the Senior V.P. in charge of Technology, Research and Innovation at the group level. She implemented a broad innovation strategy for the group, developing a wide research network and an investment fund, as well day-today technical support to SUEZ operations. From 2011 to 2017, coming back to field business, she was Suez Water Western Europe Senior Executive V.P.

She retired in January 2018, being since October 2016 the President of the International Water Association.

She is member of the French Technology Academy since 2014

Title: Water Industry Perspectives and Adaptation Challenges to climate Change Impacts

Abstract: The water industry is facing a pivotal moment. The recent World Economic Forum Global Risks Report highlighted water crises as one of the critical risks we face over a ten-year horizon. Add to this risks, associated with the failure of climate-change mitigation, the growing threat from extreme weather events and natural disasters is a risk of high likelihood and high impact almost everywhere in the world.

As a sector, we face a major challenge in terms of allocating water to several, ever-increasing demands: from cities, industries, power suppliers, farmers, nature, transport, and environment and we still failed to treat correctly waste water which become a real threat for heath and environment. At the same time, an increasing number of areas around the world experience either extreme water shortages or devastating flood events that affect energy production, agriculture, regional stability and economic performance. The water industry is often seen as slow to change, and to adopt new technologies; the reasons for that are several. But there is a willing to speed up innovation, and our sector is beginning to learn from other sectors where technological disruption are more accepted. This change is being driven by a number of different forces, such as the human right to water, the SDG's and even most obvious climate change which will impact hydrological situations.

Extreme weather events and growing water scarcity are thus significant drivers for innovation in wastewater management, water reuse, desalination and water quality technologies. Creating water resilience for growing urban areas is a clear priority for the sector and stimulate the innovation creating opportunities of change, thanks to new and smart technologies, and reverse engineering.



Maximilien Pellegrini Directeur Général Délégué de SUEZ en charge des activités Eau en France Deputy CEO of SUEZ Water France BIO(*French*):



Maximilien Pellegrini est Directeur Général Délégué de SUEZ en charge des activités Eau en France depuis septembre 2018.

Il a rejoint le groupe SUEZ en 2001 où il a exercé de nombreuses missions à l'international. Il a débuté comme Directeur Administratif et Financier au sein de la filiale construction du groupe (Degrémont) avant de devenir, en 2008, Directeur Général de Degrémont Ibérie-Afrique basé à Bilbao puis de prendre la tête des activités industrielles du Groupe aux Etats Unis en 2013.

C'est en janvier 2017 qu'il a effectué son retour en France en tant que DGA en charge du développement, de la Stratégie et de la Transformation de SUEZ EAU France

BIO(English):

Maximilien Pellegrini is deputy CEO of SUEZ Water France since September 2018.

He has been part of the SUEZ group since 2001 where he held many missions worldwide. He first started as CFO within the group's construction subsidiary (Degrémont). In 2008, he became CEO of Degrémont Iberia-Africa based in Bilbao before taking the lead of the Group's industrial activities in the United States in 2013.

He returned to France in January 2017 as Senior Executive Vice President in charge of development, strategy and transformation of SUEZ Water France.

Title: Water Utility Commitment for resilient cities

Abstract: Global warming is accelerating the global cycle of water, and upsets ecological and social balances with an increasing violence.

Cities are facing resource availability and quality but also infrastructures resilience issues. In regards with these issues, building resilient water services requires the deployment of the circular and low-carbon economy on a large scale, especially through adaptation solutions.

SUEZ is working at global and local scale to foster dialogue and innovate with all its stakeholders, in order to support the environmental and societal transition of territories.



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 multiplelayered 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)



Adir PEREZ Project Manager

BIO:

Name: Adir Perez

Date of Birth: 04/11/1974

Marital Status: Married + 4

Office address: 52nd Hameyasdim Street, Zichron Yaakov, POB 138, Zipcode 3095101 **Tel:** 04-6294973, Fax: 04-6294993, Mobile: +972-50-8385300

Email: adir@honigeng.com

Higher Education

Period: 1996-2000.

Location: Technion - Faculty of Civil Engineering. Degree: Civil Engineer (license number 114393).

Occupation: Civil Engineering

Honig Engineering Ltd - Management and supervision of civil engineering projects.

The company specializes in the management and supervision of projects in the following areas:

- Establishment of wastewater treatment plants
- Pumping stations and sewage water
- Building water reservoirs and ponds
- Implementation of transmission lines for water and sewage
- Establishing central sewer systems
- Development and paving works
- Extensions to existing establishments and infrastructures

The range of activities is broad and relying on the experience acquired over the years in the relevant fields.

The company employs 12 civil engineers each competent in management and supervision of Civil engineering projects.

Below here Partial list of Unique Infrastructure Projects Managed by the Company Project Management 2006 – 2019

Expanding the Nir Etzion Sewage Treatment Facility and the Regional Conduction Lines Customer: The Company for the Treatment of Beach Water Hof HaCarmel, via the Administration for the Development of Infrastructure and Sewage, and the Ministry of Housing.

Investment: 90 M US\$

Planning and constructing a sewage treatment facility, in a scope of 32,000 cubic meters per day, for the Hof HaCarmel Regional Council, the Druze localities, the city Tirat HaCarmel and the southern outskirts of



Haifa. Managing and coordinating teams of consultants and planners, generating a program in order to initiate RFI and RPF tenders, selecting the technology for sewage treatment in an international tender. Managing and editing the tenders' documents according to the technology that has been selected and issuing the tender in two stages of execution in order to ensure fluent construction process.

Editing the city construction plans in order to establish the facility in its final form, as well as applying for a building permit for the preparation statements based on existing plans.

Constructing the regional system for the conveyance of sewage from all contributing parties into the facility with an overall length of approximately 20km and with diameters of up to 1,000mm. upgrading the existing pumping stations, installing the systems for measuring sewage quality in real-time, and providing alerts to the operational staff Establishing an emergency reservoir for forbidden sewage with a capacity of 150,000 cubic meters. including the installation of a pipeline of approximately 6km long and 630mm in diameter, as well as installing pumping stations for the retrieval of sewage to the facility.

Constructing the main drainage carrier Kiryat Bialik – Kiryat Yam and the Kurdani residential neighborhood in Kiryat Motzkin

Customer: Palgey Motzkin via the Ministry of Housing.

Investment: 75 M US\$

Managing, coordinating and supervising the works for laying the main drainage carrier with the following external measurements 8.0/3.0m, total length 4 Km. crossing main roads in Kiryat Motzkin and Kiryat Yam, until it reaches the sea.

including the crossing of route 4 and Jerusalem Avenue using DPT system, crossing the Israel railroad at the openings – an operation that took eight days and necessitated the complete halting of all trains. making an opening in the railways excavation, casting large elements of up to 130 tons, lifting them and laying them below the railways, moving the Mekorot lines, works in a scope of 15 million NIS, and also moving the HOT and IEC infrastructures. Up close and personal accompaniment of all operations and coordination in order to ensure a fluent execution of the project. Handling coordination and planning opposite all the statutory entities and other infrastructure owners; issuing the tender and supervising the contractor's works on site.

Construction supervision of a new neighborhood of 3,200 housing units in Kiryat Motzkin. construction is made by 20 different contractors; Development works in the public compounds include parks, gardens and an acoustic wall running along the railroad.

Upgrading the Sewage Treatment Facility in Ashdod.

Customer: The Ashdod Yuvalim Water Corporation Investment: 34 M US\$.

Under construction.

Upgrading the existing facility, that has a capacity of 47,000 cubic meters per day, and adding an emergency pool for the intake of sewage at the entrance to the facility. In addition, an array for the tertiary treatment of sewage – for unlimited irrigation. The work includes: civil engineering works, earth works, concrete and plumbing, construction of buildings, finishing works, electrical works and electromechanic equipment.

Expansion of the Sewage Treatment Facility in Nir Eliyahu – Southern HaSharon

Customer: Igud Arim Southern HaSharon Sewage. Investment: 36 M US\$.

Under construction.

Upgrading and expanding the sewage treatment facility from 16,000 cubic meters per day to 45,000 cubic meters per day in 2020. The existing facility is working at maximum capacity and its activation is requires during the entire time of execution. The facility is planned using the activated sewage sludge system. Works include: civil engineering, electro-mechanics, electricity and plumbing.

Construction of the Sewage Treatment Facility in Maayan zvi

Customer: Zichron Yaakov Local Council, Fureidis Local Council, Hof HaCarmel Regional Council via the Administration for the Development of Sewage Infrastructure



Investment: 9 M US\$ Constructing a sewage treatment facility using an activated sewage sludge system, with a capacity of 12,000 cubic meters per day.

The work includes: civil engineering works, earth works, concrete and plumbing, construction of buildings, including the finishing works, electrical work and electro-mechanic equipment.

Construction of the Sewage Treatment Facility "Tzur"

Customer: Hatanur Water and Sewage Corporation and Kolhey Golan via the Administration for the Development of Sewage Infrastructure

Investment: 12 M US\$

Constructing the Sewage treatment facility using an activated sewage sludge system, with a capacity of 6,000 cubic meters per day.

The work includes: civil engineering works, electro-mechanics, supply of equipment, electricity and tertiary treatment using a pressurized sand filtration system.

Construction of the Dolphin Pumping Station

Customer: Mei Carmel Water Corporation

Investment: 8.5 M US\$ Constructing a main Dolphin facility for sewage pumping, for the Haifa City Sewage System. The station has a maximal hourly output of 5,000 cubic meters. The station has been constructed in a densely and built area and in close proximity to the railroad. The work includes reinforcement and support works including anchoring; excavation depth of approximately 10 meters in ground waters, civil engineering works, electro-mechanics and electricity, a pre-treatment facility, odor neutralization, diesel generator and laying sewage plumbing of different types and diameters (up to 1,200mm, at the entrance to the station and at its exits).

Construction of the Neve Neeman Pumping Station

Customer: Mei HaSharon Water Corporation.

Investment: 5.1 M US\$Sewage pumping facility in Hod HaSharon, at maximal capacity of 3,000 cubic meters per hour. The work includes reinforcement and support for Slurry Walls, excavation depth of approximately 12 meters in ground water, civil engineer works, electro- mechanics and electricity, pre-treatment facility, odor neutralization, diesel generator, laying sewage pipelines in gravitation at the entrance to the station, a concrete pipeline with a 1,000mm diameter and an approximate length of 1,200 meters. Additionally, laying pipelines of different types and diameters at the exit of the station.

PREVIOUS EXPERIENCES 2001 – 2005 - A. A Engineers

Occupation: Civil Engineering – Design sewage system and treatmaent

Overall system design for animal droppings in the village of Joshua

Client: Kfar Yehoshua

The design includes farm-level environmental treatment (wet solution), transmission system planning (gravitational / delivery) of leachates, leachates using herbal treatment method constructed wetlands and reinstatement of water for irrigation.

Planning the restoration of dry waste landfill site

Client: Caesarea Development Corporation

Series of site in terms of slopes and slope stabilization, transport of waste into two main clusters, sealing the site, runoff drainage and rehabilitation of the landscape.

Planning the restoration of an abandoned quarry in Kfar Tavor

Client: Quarries Rehabilitation Fund

Rehabilitation of an abandoned quarry by landfilling of waste land and providing solutions to environmental problems and gangs.

Biological system design a milking waste water treatment using reed bed

Client: Kibbutz Maagan Michael



Planning and guidance (supervision) of the facility for approximately - 200 m3/day milking wastewater through wetlands of reed bed, two sets of vertical flow of leachates first and second horizontal, chlorination facility, facility monitoring and delivery of reclaimed fishponds of Kibbutz.

Planning of a number of dairy farms (dairy farm Ramat David, Aloni aba and a number of private farms) planning including adjustment of the barn to the requirements of existing regulations and reform in the dairy industry, planning method of cowshed dry / wet, planning of mixing ponds, pumping and separation of mechanical / static, planning construction of buildings, waste water treatment facilities planning and supervision of works.

Planning of two waste transfer stations in Om el Fahem and Lod operating systems, equipment for separation/compact, facility for Physical/Chemical industrial waste management and device to create under pressure facility in the storage pool.



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
Sébastien MAIRE	Chief Resilience Officer	City of Paris
Bruno Nguyen	President	W-SMART Association
Yoessef Diab	Research Director	School of Engineering, City of Paris
Alexandros MAKARIGAKIS	UNESCO	UNESCO
Benjamin GESTIN	CEO	Eau de Paris
Eric MACFARLANE	Deputy Commissioner	NYCDDC
Sébastien DAZIANO		Suez
Michael BERKOWITZ	Former President	100 RC Program, Rockefeller Foundation
Milo FIASCONARO	Executive Director	Aqua Publica Europa , EU Associatin of Public Water Operators.
Pierre GUEZ	Marketing Director	Veolia Water France
Alain PALMANS	CEO	CILE
Benny VAKNIN	Former Mayor	City of Ashkelon
Dr. Jair TORRES	UNESCO Chair on Inter- sectorial Safety for DRR and Resilience	University of Udine
Amit CHANAN	Vice President	City of Sydney, IWA-W2SM
Giuseppe ARDUINO		UNESCO
Diane D'ARRAS	President	IWA
Alexandra CRISTÓVÃO	Director, Sustainability	EPAL,Portugal
Fadi G. COMAIR	Director General, Hydraulic and Electric Resources	Republic of Lebanon
Laurna KAATZ	Manager, Climate Science, Policy & Adaptation Program,	Denver Water; Chair, WUCA
Anil MISHRA		UN
Denis PENOUEL	Deputy CEO	SIAAP
<u>Avrum Ben YOSSEF</u>	Deputy CEO Deputy CEO,	MEKOROT, Israel
Jean Didier BERTHAULT		Suez
<u>Okjoo SOHN</u>	Senior Program Specialist,	Senior Program Specialist
Soichiro YASUKAWA	UNESCO	UNESCO
Cedric AULIAC	CEA	
Joshua Sperling	US-DOE	NREL
Dr. Abou AAMANI	Executive Officer of the Natural Science Sector	UNESCO
Silvia TINELLI	Research Associate	W-SMART



		The Foundation of the New York
	Vice President. : Former	Television Arts and Sciences: UN-
Georges LECLERE	Director	DPI;
	Journalist & Author of	
François de CLOSETS	Inspirational Novels	
George PAPAGIANNIS	Chief Media Services	
	Deputy CEO of SUEZ Water	
Massimiliano PELLEGRINI	France	Suez
	Sustainable Development	
Jean Pierre MAUGENDRE	Deputy VP	Suez
Arie AMSALEM	UNESCO	UNESCO
Sam A7MI	Head, General Study Unit,	διάδρ
Conceição Soares Almeida	Director, Maintenance Division; Secretray General;	EPAL,W-SMART Association
Erich Shaw	Chief Environmental Engineer	Mekorot, EPAL and CILE
	Program Manager Cyber-	Ministry of Infrastructure and
Jozef van BRUSSEL	security	, Water, Netherlands;
		Academic Director (Solvay edu/it):
Georges ATAYA	Professor; Vice President	Belgian Cyber-security Coalition
William De ANGELIS	Cyber Security Officer	CILE
	Director. Regional	
Patrick FAUVET	Development	SIAAP
	Director, Laboratories &	
Olivier ROUSSELOT	Environment	SIAAP
Laurent Brunet	Technical Director	SUEZ Eau France
Eric ADAMSE	Security Policy Officer	VITENS
Peter DANE	Benchmarking Foundation	NL
	Business Partner Middle East-	Development, Innovation &
Jean Michel TIBERI	Africa & Italy	Markets Department
	Advisor, Drinking Water,	
	National Institute for Public	
Robin van LEERDAM	Health & Environment	Netherlands
Doron GAVISH	Brig. General (Ret.)	
	General manager for the	
Doron Lipkonski	Water Treatment Company	Hof HaCarmel
	Executive director; Professor,	
<u>Ilan Juran</u>	Director	W-SAMRT, NYU
Olivia Bouquet		
Philippe Dupraz		



Stéphane CORDIER		
Matthieu BAILLE		
Karine GERVAISE		
Adir Perez	Project Manager	
Hervé Ingelaere		
		BBOCOM, international network;O.M.A., Observatory of
Bernard Ollagnier	President, General Delegate	accompaniment professions.
Sam White	Research Associate	New York University
Daniel Marcovitch	President	ARCEAU