

Final Program



IDA International Water Reuse and Recycling Conference

Making Every Drop Count

June 24-27, 2018 | Valencia, Spain



in collaboration with





Message from the President of IDA

Miguel Angel Sanz



On behalf of the Directors and colleagues of the International Desalination Association (IDA) and our affiliates AEDyR and EDS, I am pleased to welcome you to the 2018 IDA International Water Reuse and Recycling Conference: **Making Every Drop Count.**

IDA is committed to water supply sustainability, and we trust in water reuse as a complementary solution to desalination to face the problems of water scarcity. That is the reason we are presenting our second conference devoted exclusively to reuse, after hosting our inaugural event in Nice in 2016 as an extension of the IDA World Congress that takes place in alternating years.

I am glad and proud that IDA selected the wonderful city of Valencia, on the Mediterranean coast of my country, as the location to talk about water reuse and recycling because Spain is a leader in Europe and in the world, recycling on average over 13% of the treated waste waters. Some cities and regions far exceed that amount, recycling even more than 90%. Indeed, Spain has been a pioneer not only in desalination but also in water reuse.

Water reuse is widely used in some parts of the world, but there are still many challenges to overcome in other regions. That is the reason we have set important targets in the conference: to debate the challenges faced by the reuse sector while at the same time presenting successful case studies and new technologies, solutions and applications; to go deeper in the regulatory framework as key factor of water reuse development; to present new financing alternatives and solutions, public or private, of the necessary infrastructures; and to facilitate important networking between speakers, panelists and attendees.

I would like to thank all the Spanish authorities for supporting this event, and especially the Ministry of Agriculture, Fisheries, Food, and Environment and the City of Valencia, our affiliates AEDyR and EDS, for their support in organizing this conference. And thanks to all of you for being part of this successful conference, as we work together to make every drop count.

Welcome to Spain. Welcome to Valencia.

Welcome to the 2018 IDA International Water Reuse and Recycling Conference.

Message from the President of AEDyR

Domingo Zarzo Martínez, PhD



AEDyR is the Spanish Desalination and Reuse Association, which includes among its members the most important players in this field, founded in 1998 as an IDA affiliate during the successful IDA World Congress held in Madrid. Spain has also a very strong water industry with successes worldwide in desalination and water reuse including a large number of companies, suppliers, consultant companies and world class scientific and research centers.

Spain also has a long track record in water reuse. Due to water stress and recurring droughts, wastewater reuse has turned into a matter of necessity, and it has been incorporated into hydrological planning for a long time beside other water resources such as desalination, groundwater, superficial water and transfers.

With 400-550 Hm³/year (10%-13%) of wastewater reused (very variable data depending on the source), Spain accounts for about a third/half of the total volume in the European Union.

Spain has had legislation regulating reuse since 2007 (Royal Decree 1620/2007), which was a pioneering development in Europe, and it was based on different international standards (WHO recommendations, California regulation, etc.). Although there is a consensus about the need of an update and potential improvements, it has been a very important tool for the regulation of this application, with no recorded cases affecting health risks. On the other hand, it draws attention to the fact that direct potable reuse is forbidden by law except in emergency cases (which contradicts what happens in some superficial watercourses where this happens de facto with wastewater plants discharging close to the intake of drinking water plants).

AEDyR, and with support from the European Desalination Society (EDS), are pleased to co-host the second IDA International Conference on Water Reuse and Recycling: "Making Every Drop Count".

Message from the Secretary General of IDA

Shannon K. McCarthy



On behalf of the Board of Directors of IDA, it is my sincere pleasure to welcome you to the 2018 IDA Biennial International Conference on Water Reuse and Recycling held in collaboration with our Spanish affiliate AEDyR and with the support of the European Desalination Association. The conference theme, ***Making Every Drop Count***, reflects the IDA longstanding mission to promote sustainable advanced water treatment technologies to meet growing freshwater needs.

Under the patronage of the Spanish Ministry of Agriculture, Fisheries, Food, and Environment, we are especially honored that the conference will enjoy the participation of the Spanish Secretary of State for the Environment, the Director General for Water, and other distinguished Spanish and international dignitaries. The Technical Program Chairmen and the Committee have worked diligently to bring this innovative conference to life with a focus on cutting-edge technologies for water reuse and recycling. We thank them for their generous volunteer contributions of time and expertise.

Above all, it is with the support of our sponsors, that we bring together users and clients from both industry and public utilities, regulatory authorities, international organizations, and lending agencies with technical solution providers to discuss the implementation of water reuse and recycling. We greatly appreciate this support which enables IDA to create valuable knowledge sharing events like this one. Thank you, Almar Water Solutions, Veolia, Besix, Future Pipe Industries, Acciona, Aqualia, Suez, ROPV, SACYR, Toray, DOW, PWT, and Piedmont.

Bienvenidos a Valencia!

Message from the Technical Program Committee Co-Chairs

Borja Blanco and Mike Dixon PhD



Why did we choose Valencia to host our program this year? There are so many reasons! It is Spain's third largest city. It has a beautiful and a historic center, filled with cultural attractions including the Valencia Arts and Sciences Museum, an iconic site where we will be holding our centerpiece

social and networking event, **An Evening at the Palace**. Valencia's location on the coast and its fabulous climate are additional reasons why it is one of Spain's most popular tourist destinations. And did we mention the cuisine? Spain's iconic paella was born in Valencia!

The IDA has made a concerted effort over the last 5 years to be more inclusive of Water Reuse and Recycling initiatives. In Spain, it is often said that reuse is a form of desalination, but while desalination is the only way to produce additional fresh water, water reuse can satisfy most water demands. Reuse reflects a typical water cycle in nature – we're imitating nature. The technologies we use accelerate the natural process. We anticipate the growth rate of reuse will be double the growth rate of desalination.

There are also places in the world where desalination is not physically or fiscally possible. Where desalination is used, reuse introduces a way to expand the amount of water that desalination produces, so it makes sense to recycle it.

When we talk about the growth in reuse, we should recognize that there are different ways to treat and reuse water, from simple to very sophisticated. It's the sophisticated techniques that are experiencing double digit growth. We think that the use of water reuse for potable water will grow, too, especially in the face of droughts and other similar strains on water supplies.

This conference differs significantly from others that cover reuse. Our conference is technical and policy focused. We emphasize the treatment technologies and processes, regulatory needs and financing/legal frameworks needed to expand the adoption of reuse and recycling to Make Every Drop Count.

IDA is also about facilitating business opportunities. This event provides ample opportunity to network.

Technical Program Committee

Conference Chairmen

- Mr. Borja Blanco, Spain
- Dr. Mike Dixon, Canada
- Dr. Domingo Zarzo, Spain

Technical Program Committee Members

- Mr. Leon Awerbuch, USA
- Mr. Antonio Casanas, Spain
- Mr. Guillaume Clairet, Canada
- Mr. Sylvain Donnaz, France
- Dr. Jörg Drewes, Germany
- Mr. Joan Galtes, Denmark
- Dr. Blanca Jiménez-Cisneros, France
- Prof. Maria Kennedy, Netherlands
- Ms. Melissa Meeker, USA
- Mr. Wade Miller, USA
- Mr. Mehul Patel, USA
- Mr. Rodrigo Segovia, Spain
- Mr. Troy Walker, USA
- Mr. Greg Wetterau, USA
- Mr. Roland Winkler, Germany

Sunday, June 24, 2018

9:00 - 13:30 Training Course – State of the Art in Water Reuse

Location: Melia Meeting Room 8

Conducted by: Mr. Antonio Casanas, Key Account Manager, Dow Water and Process Solutions, Spain & Dr. Domingo Zarzo, AEDyR President, Research & Development Manager of Valoriza Agua, Spain

Course focus will be on the importance of reuse as a new water resource, looking at the global water scarcity situation and regulations concerning water quality and health implications. A review of the available technologies will include conventional tertiary treatments, advanced treatment, membranes or soft technologies, contemplating aspects such as efficiency and costs. Case studies will be analyzed for different applications and uses.

Course Schedule

9.00-9.15	Registration, presentations and introduction
9.15-9.45	State of the Art of Reuse. Global data, needs, current situation and regulation
9:45- 10.15	Water quality and health risks (pollutants, microbiology, emerging pollutants, etc.)
10.15- 11.15	Conventional tertiary treatments, advanced technologies (advanced oxidation) and soft technologies
11.15- 11.45	Coffee break
11.45-12.45	Membrane tertiary treatments and MBR Technology
12.45-13.30	Case studies of different technologies, uses and costs.
13.30	End of course

14:30 - 18:00 Conference Pre-registration

18:00 - 20:00 Delegate Welcome Reception

Location: "The Bottom" Restaurant

Sponsored by



Monday, June 25, 2018

9:00 - 10:30 Opening Ceremony

Emcee: *Ms. Shannon K. McCarthy, IDA Secretary General*

Welcome Remarks:

Mr. Miguel Angel Sanz, President of IDA, France

Ms. Elena Cebrian Calvo, Counsellor of Agriculture, Environment, Climate Change, and Rural Development from Generalitat Valenciana, Spain

Dr. Liana Ardiles, General Directorate for Water, Spain

Ms. Maria Angeles Ureña Guillem, President of the Hydrographic Confederation of the Jucar River Basin, Spain

Honorable Vicent Sarria 8th Deputy Mayor of the City of Valencia, Spain

Dr. Domingo Zarzo, President of AEDyR, Spain

Prof. Maria Kennedy, President of EDS, Ireland

Keynote Speaker:

Prof. Emeritus Rafael Mujeriego, Universidad Politécnic de Catalunya (UPC), Spain

Conference Overview

Mr. Borja Blanco, IDA Director and Conference Chairman, Spain

Dr. Mike Dixon, IDA Director and Conference Co-Chairman, Canada

10:30 - 10:45 Refreshment Break

10:45 - 13:30 Plenary Panel Sessions

The Big Debate: Water Reuse Regulations in Europe, USA and Asia (10:45 - 11:50)

This panel will discuss the big debate on water reuse regulations in Europe, USA and Asia. Panelists have been directly involved in the development of these regulations offering an experienced viewpoint. These regulations define and cover the various uses, requirements and advantages in using water reuse technology to meet growing water needs for agriculture, industry and urban uses, as well as aquifer recharge, to offset water needs. The regulations represent a fundamental foundation for many countries and government regulatory bodies to establish their local directives and allow expansion of the reuse market.

Moderator: Mr. Carlos Cosín, IDA Officer and CEO of Almar Water Solutions, Spain

Panelists: Mrs. Conchita Marcuello, Adjoint to the Deputy Director for Water Planning and Sustainable Water Use – Water General Directorate Ministry for

Agriculture, Fisheries, Food and Environment, **Ms. Traci Minamide**, COO, LA Sanitation, City of Los Angeles, **Mr. Maurice Neo**, Director, Water Reclamation (Network), Singapore Public Utilities Board, **Mr. Mehul V. Patel**, Director of Water Production, Orange County Water District.

Pricing Water Security and Enhancing Practical Financing Tools for Reclaimed Wastewater Reuse (11:50 - 12:50)

Panel Description: Panelists will discuss specific approaches to pricing water security through the diversification of water supplies and specifically tools they use to finance and develop water-reuse infrastructure projects to meet irrigation and urban needs, and other water requirements. The discussion will focus on policy priorities by use and region. In addition, panelists will reflect on international financial tools available to expand the necessary infrastructure to equip existing facilities to new demands and uses.

Moderators: Dr. Gonzalo Delacámara, Senior Research Fellow and Coordinator of Water Economics at IMDEA Water Research Foundation, and **Dr. Eduardo Orteu**, Head of Support Unit and Responsible for the International Affairs Service at the Spanish Water Directorate.

Panelists: Mr. Zael G. Sanz Uriarte, Senior Water Supply and Sanitation Specialist, World Bank Group, Washington DC, USA, **Mr. Xavier Leflaive**, Water Team Leader, Environment Directorate, OECD, France, **Mr. Víctor Arroyo**, Acting Director of Knowledge Management in Water at CAF.

Research and Market Trends: Thematic Shifts and Macro Level Drivers (12:50 - 13:30)

This Plenary Session will discuss the role of decentralized water and the impacts associated with rolling out the Internet of Things and the Digital Economy on the value chain and technology landscape. Alongside the thematic shifts in research this panel will cover the future role of a water utility in a hot, flat and decentralized world. This inevitably will change the market drivers for certain products and resources and this will occur at a much faster rate than we have previously seen in the water industry. The impact of the democratization of water quality testing and increased prevalence of big data usage is set to quickly disrupt the water world, including water reuse and recycling. Innovation will play a much more impactful role than we have ever before seen in municipal and industrial settings.

Moderator: Tim David Chinn, SVP & Executive Consultant, Drinking Water Program at AECOM, USA

Panel Keynotes: Mr. Jeff Mosher, Principal Technologist VP, Carollo Engineers, Inc., USA, **Mr. Paul O'Callaghan**, CEO, BlueTech Research, Europe and North America, **Mrs. Julie Minton**, Director of Strategic Initiatives, The Water Research Foundation, USA

13:30 - 14:30 Lunch Break**14:30 - 16:30 Parallel Session Presentations**

SESSION CO-CHAIRS: Mr. Jorge Malfeito, Director of R&D, ACCIONA Agua, Spain, Dr. Roberto Mangano, Dept. Head-Water Projects, ILF Consulting, UAE, Prof. Seungkwan Hong, Korea University, Republic of S. Korea, Mr. Simon Breese, VP & Technical Director of Drinking Water, AECOM, USA, Dr. Emilio Gabbrielli, Director, Overseas Business Development, Toray, Mr. Andres Zancada, Business Development Director, Aqua, Spain

	INDUSTRIAL WATER REUSE AND RECYCLING (Valentia A)	WATER QUALITY MONITORING AND CONTROL (Valentia B)	NON-POTABLE AND AGRICULTURAL REUSE (Valentia C)
14:30 - 15:00	ULTRA-PURE WATER FROM SEWAGE WATER HARDLY USING CHEMICALS KN: Gerrit Veenendaal, Director, nieuWater, The Netherlands	THE STATE OF WATER REUSE IN SOUTH AFRICA KN: Martin Pryor, Process Manager, Prentec (Pty) Ltd, South Africa	MANAGED AQUIFER RECHARGE FROM WWTP (IPR) AND SURFACE WATERS KN: Nathalie Dorflinger, Director of Environment & Ecotechnologies, BRGM, France
15:00 - 15:30	OSMOTICALLY ASSISTED REVERSE OSMOSIS TECHNOLOGY CONCENTRATES BRINE Dr. Basel Abu Sharkh, Business Development Specialist, Hyrec, Turkey	INTEGROILO PROJECT: INTEGRATED SOLUTIONS FOR WATER REUSE AND WATER QUALITY CONTROL Jorge J. Malfeito, Director of R&D, Acciona Agua, Spain	DESALINATION OF SALTY SEWAGE TREATMENT PLANT EFFLUENT FOR IMPROVING THE RESOURCE EFFICIENCY OF IRRIGATION Dr. Thomas Axel Peters, Sr. Technology Consultant, Germany
15:30 - 16:00	EXPERIENCE WITH INTEGRATED ULTRAFILTRATION AND REVERSE OSMOSIS MEMBRANES FOR ZERO LIQUID DISCHARGE Gerard Mèlich Serrano, Engineer – Dow Water Solutions – Spain	CITY OF LOS ANGELES REUSE PROGRAM Traci Minamide, COO, Los Angeles Bureau of Sanitation, USA	RECHARGE LOCAL WATER CYCLE THROUGH AQUIFER STORAGE Sylvain Donnaz, Global Market Leader, Suez International Treatment Infrastructure, France
16:00 - 16:30		FLUORIDE REMOVAL: EDR WITH BRINE TREATMENT FOR 99.6% RECOVERY Dr. Avijit Dey, VP of Water Technology, CH2M Hill , USA	OPERATIONS AT THE WORLD'S LARGEST-OF-ITS-KIND RECLAMATION PLANT IN KUWAIT Dakhllallah Dakhllallah, Plant Manager, Sulaiyiyia WWT & Reclamation Plant, Kuwait

16:30 - 16:45 Refreshment Break

16:45 - 19:00 Water in the Circular Economy - Presentation of iAgua Magazine 19

The circular economy is a concept that has brightly burst in recent times. The urgent need for efficient use of resources has led to the implementation of measures from all areas to transform the linear economic model to circular. The water hydrological cycle encourages this type of actions in a natural way and there are success cases worldwide. However, there is still a lot of room for the application of innovative technologies that allow the circle to be adjusted more.

ROOM Valentia A	
16:45 - 17:00	Opening • iAgua • IDA
17:00 - 17:30	iAgua Dialogue Félix Parra, General Director of Aqualia Alejandro Maceira, Director of iAgua
17:30 - 19:00	Presentations Gari Villa-Landa, Head of International Affairs of AEAS Conclusions on Circular Economy at the World Water Forum Santiago Martínez, Managing Director of Concessions of Almar Water Solutions on Non-conventional sources (reuse and desalination) in new public-private collaboration contracts Jorge Malfeito, R&D Director of Acciona Agua Incremento de la eficiencia de la reutilización de aguas residuales en las zonas costeras José Ferrer, Head of Water Quality Investigation Group of IIAMA The binomial Representative of Fira de Barcelona Iwater and the Circular Economy European Summit, an obligatory appointment

19:30 - 22:30 Evening at the Palace

19:15 First bus departure from Melia Hotel

21:45 First bus departure from the Palace

22:45 Last bus departure from the Palace

Sponsored by:



One of Spain's most iconic architectural sites, the Valencia Arts and Sciences Palace was designed by renowned Valencian architect Santiago Calatrava. The evening will include a unique cultural performance by regional singers and dancers. Bus transfers to the Palace will leave directly from the Melia Valencia hotel.



Tuesday, June 26, 2018

9:00 - 11:00 Parallel Session Presentations

SESSION CO-CHAIRS: **Dr. Veronica Garcia Molina**, Technical Service & Development Manager, Dow Chemical Company, Switzerland, **Mr. Alejandro Sturniolo**, VP Marketing & Sales, Fluence, Argentina, **Mr. Alistair Munro**, CEO and Managing Director, ProjecX, UAE, **Mr. Guillaume Clairet**, COO, H2O Innovation, Canada, **Mr. Mazen Ellaban**, Regional Sales Manager, Professional Water Technologies, USA, **Mr. Juan Arevalo**, Project Director, FCC Aqualia, Spain

	INDUSTRIAL WATER REUSE AND RECYCLING (Valentia A)		INDUSTRIAL WATER REUSE AND RECYCLING (Valentia B)		DIRECT AND INDIRECT POTABLE REUSE (DPR) (Valentia C)
9:00 - 9:30	THE CIRCULAR ECONOMY KN: Kimberly Kupiecki, Global Leader, Sustainability, Advocacy and Communications, Dow Water & Process Solutions, USA		BRINE REDUCTION AND ZERO LIQUID DISCHARGE IN REUSE APPLICATIONS KN: Greg Wetterau, Vice President, CDM Smith, USA		THE STATE OF POTABLE WATER REUSE IN SOUTHERN CALIFORNIA KN: Dr. Gil Crozes, Partner, Carollo Engineers, USA
9:30 - 10:00	PHENOL REMOVAL WITH RESIN TECHNOLOGY FROM INDUSTRIAL WASTEWATER M. Àngels Tejero-Iborra, PhD Student, The Dow Chemical Company, Spain		CONFIGURING MEMBRANES TO CONSERVE ENERGY FOR DIRECT INDUSTRIAL WATER REUSE Paul Brezoved, Principal Process Engineer, Concurrent Technologies Corp, USA		A NEW CONCEPT FOR CONTROL/ ELIMINATE MEMBRANE FOULING Mehrdad Hesampour, Principal Scientist, Kemira Oyj, Finland
10:00 - 10:30	IMPLEMENTING CIRCULAR ECONOMY MODELS BY BOOSTING INDUSTRIAL REUSE THROUGH URBAN WASTEWATER RECLAMATION Carlos Echevarria, Project Manager & Researcher, Cetaqua, Spain		REVERSE OSMOSIS AND OSMOTICALLY-ENHANCED DEWATERING PROCESS FOR PRODUCED WATER Prof. Seungkwan Hong, Korea University, Republic of S. Korea		ROBUSTNESS OF INTEGRATED ULTRAFILTRATION AND REVERSE OSMOSIS SYSTEMS FOR CHALLENGING MUNICIPAL REUSE Sonia Vila, Dow Water and Process Solutions, Spain
10:30 - 11:00	ONE WATER LA – A COLLABORATIVE APPROACH TO INTEGRATED WATER MANAGEMENT Jacqueline Reed, Utility Advisory Services, Carollo Engineers, USA		APPLICATION OF WATER PINCH ANALYSIS APPROACH FOR WATER CONSERVATION IN INDUSTRIAL FACILITIES Mohammed Ali Alhajji, Engineering Specialist, Saudi Aramco, Saudi Arabia		LEGAL ISSUES TO POTABLE REUSE IN THE UNITED STATES Keith R Solar, Attorney, Park and Solar, USA

11:00 - 11:30 Refreshment Break

11:30 - 13:30 Parallel Session Presentations

SESSION CO-CHAIRS: Mr. Ravid Levy, Fluence, Israel, Ms. Victoria Vasini, Fluence, Argentina, Mr. Victor Monsalvo, Aqualia, Spain, Dr. Giancarlo Barassi, FEDCO, USA, Mr. Ali Ben Haj Hamida, Suez, UAE, Ms. Kelly Grieves, Seven Seas, Canada

	WATER QUALITY MONITORING AND CONTROL (Valentia A)	BEST PRACTICES IN REUSE (Valentia B)	ADVANCED TECHNOLOGIES FOR JOINT DESALINATION AND WATER REUSE (Valentia C)
11:30 - 12:00	<p>WATERVAL, AN AUSTRALIAN TECHNOLOGY VALIDATION FRAMEWORK - ESTABLISHING LRV CREDITS FOR THE SAFE IMPLEMENTATION OF REUSE KN: Dr. Cedric Robilot, Managing Director, Australian Water Recycling Centre of Excellence, Australia</p>	<p>MAXIMISING REUSE FOR INDUSTRIES WITH BENEFIT OF AQUIFER KN: Eryl Edwards, Commercial Manager, BESIX, UAE</p>	<p>ADVANCED WATER TREATMENT USING MEMBRANES FOR PREVENTION OF SEAWATER INTRUSION KN: Mehul Patel, Director of Water Production/GWRS, Orange County Water District, USA</p>
12:00 - 12:30	<p>INCREASING WATER REUSE PRACTICES THROUGH IMPROVED RISK MANAGEMENT: THE CASE STUDY OF MBR IN AUSTRALIA Pierre Le-Clech, Assoc Professor, University of New South Wales (UNSW) Australia</p>	<p>MULTI-REUSE RESEARCH PROJECT – FROM MUNICIPAL WASTEWATER TO INDUSTRIAL WATER Christina Starke, Manager Application Service & Support, inge GmbH, Germany</p>	<p>POTENTIAL AND CHALLENGES FOR FORWARD OSMOSIS AND OSMOTIC MEMBRANE BIOREACTOR TO COMBINE DESALINATION AND REUSE Dr. Gaetan Blandin, Post-doctoral Researcher, University of Girona, Spain</p>
12:30 - 13:00	<p>LIFE13 TRANSFORMEM: RECLAIMING WASTEWATER USING RECYCLED ULTRAFILTRATION MEMBRANES Elena Campos, Valoriza Agua, SL, Spain</p>	<p>MEMBRANE TECHNOLOGIES: STATE OF THE ART AND AREAS OF FUTURE INNOVATION Val S. Frenkel, VP, Greeley & Hansen, USA</p>	<p>SELECTING FUEL SOURCES FOR SIMULTANEOUS WASTEWATER REUSE AND WATER DESALINATION USING BIOELECTROCHEMICAL SYSTEMS Dr. Juan Arevalo, Project Manager, FCC Aqualia, Spain</p>
13:00 - 13:30	<p>INDUSTRIAL WASTE WATER REUSE WITH UF+UV+RO: LESSONS LEARNED Victoria Vasini, Application Engineer, Fluence Corp., Argentina</p>	<p>WASTEWATER TREATMENT BY MEMBRANE AERATED BIOFILM REACTOR (MABR) – NEW TECHNOLOGY FOR ACHIEVING HIGH GRADE EFFLUENT AT MINIMAL ENERGY Udi Tirosh, Produce Marketing, Fluence Corp, Israel</p>	<p>INNOVATIVE CONCEPT FOR ULTRAFILTRATION SYSTEMS: INTEGRATION OF ULTRAFILTRATION CARTRIDGES AND STRAINER IN A SINGLE VESSEL Marta Otegui, Engineering & Quality Director, Fluytec, Spain</p>

13:30 - 14:30 Lunch Break

14:30 - 16:30 Parallel Session Presentations

SESSION CO-CHAIRS: Mr. Antonio Casanas, Dow Water & Process Solutions, Spain, Dr. Mike Dixon, IDA Director and Conference Co-Chairman, Canada, Mr. Giorgio Galli, VP of Sales & Marketing, ENOIA Management Limited UAE, Mr. Ziad Salibi, General Manager - Sales & Marketing, Future Pipe Industries, UAE, Mr. Philippe Rouge, Suez, Spain, Mr Manuel Manjon, Acciona Agua, Spain

	INDUSTRIAL WATER REUSE AND RECYCLING (Valentia A)	ADVANCED TECHNOLOGIES FOR JOINT DESALINATION AND WATER REUSE (Valentia B)	CUTTING EDGE TECHNOLOGIES (Valentia C)
14:30 - 15:00	GUIDANCE FOR SUCCESSFUL INDUSTRIAL REUSE PROJECTS KN: Angel S. Aguilera Serrano, Process Engineer, Aquabio Ltd, UK	NOVEL HYBRID OF ADVANCED WATER REUSE WITH THERMAL DESALINATION KN: Leon Awerbuch, President, International Desalination Consultancy Associates LLC/LET USA	COATING - A DRAMATIC CHANGE IN ULTRAFILTRATION OF SECONDARY EFFLUENT KN: Patrick Buchta, Head of Application Technology, BASF, Germany
15:00 - 15:30	PRETREATMENT - HOW THE DESIGN OF CARTRIDGE FILTER VESSEL AFFECTS TO CAPEX / OPEX OF A WATER REUSE RO SYSTEM David Jimenez, Technical Director, Piedmont, Spain	BENEFICIAL REUSE OF PRODUCED WATER CONTAINING HIGH LEVEL OF OIL IN WATER – FIELD EXPERIENCE Supriyo Das, The Dow Chemical Company, Spain	UTILIZING NOVEL ENZYMATIC CLEANER TO RESTORE MEMBRANE PERFORMANCE AT WASTEWATER REUSE SITES IN CALIFORNIA Mazen Ellabban, Regional Sales Manager, Professional Water Technologies, USA
15:30 - 16:00	STATE OF THE ART AND INNOVATIONS IN EVAPORATOR AND CRYSTALLIZER TECHNOLOGY Dan Bjorklund, Director of Industrial Concentration, Aquatech International Corporation, USA	FORWARD OSMOSIS AND REVERSE OSMOSIS HYBRID SYSTEM FOR REUSE AND SEAWATER DESALINATION Prof. Suhan Kim, Pukyong National University, Republic of S. Korea	CELLULAR ADENINE NUCLEOTIDE LEVELS AS A READ-OUT FOR MICROBIAL VIABILITY USING BIOLUMINESCENCE-BASED STRATEGIES Said A. Goueli, Senior Research Fellow, Promega Corp., and University of Wisconsin, USA
16:00 - 16:30	EVOLUTION OR REVOLUTION? AN 18 ML/D FULL-SCALE TRIAL OF “MGF” MEMBRANE GRAVITY FILTRATION Simon Breese, Technical Practice Leader, Drinking Water, AECOM, Canada	FLOW REVERSAL FOR HIGH RECOVERY DESALINATION OF MUNICIPAL WASTEWATER Prof. Jack Gilron, Dept Head of Desalination and Water Treatment, Ben Gurion University, Israel	INNOVATIVE CHLORAMINE-FREE WATER REUSE TECHNOLOGY Lior Eshed, Product Manager, IDE technologies, Israel

16:30 - 16:45 Refreshment Break

16:45-18:00 Closing Remarks and Awards

Emcee: Ms. Shannon K. McCarthy, IDA Secretary General

HE Dr. María García Rodríguez, Secretary of State for the Environment, Spain
Mr. Miguel Angel Sanz, President of IDA, France
Mr. Borja Blanco, Conference Chairman/ **Dr. Domingo Zarzo**, Co-Chairman/**Dr. Mike Dixon**, Co-Chairman

Water Reuse and Conservation Awards Presentation

End of Program

18:00 - 19:00 Farewell Cocktail

Wednesday, June 27, 2018

9:00 - 12:30 Facility Tour

IDA and AEDyR are pleased to offer conference delegates a special 3-hour Tour of Valencia re-use application sites and UNESCO World Heritage site of the Valencia Ancient Court of Water.

Guides:

Manuel Aldeguer, General Director of Water from Valencia Region and Mr. Enrique Lapuente, Gerente EPSAR

Schedule:

Delegates arrive 9:15
 Bus departs Melia hotel at 9:30 am
 Bus returns to Melia hotel at 12:30 pm
 (Note – be sure to bring a form of identification)

Program:

Tour includes two stops. The first stop is to the Acequia del Oro irrigation, one of the main traditional ditches in Valencia which distributes reused water from the Pinedo Waste Water Treatment Plant for rice field irrigation and environmental regeneration of the Albufera lagoon. The second stop is the Water Court of Valencia, the oldest existing institution of justice in Europe and an interesting visit about how water rights have been managed from ancient times to the present today.

Book your seat:

There is no cost to the Conference delegates.
 Contact, Michele mpszenny@idadesal.org

Sponsors of the Conference



Sponsor of "An Evening at the Palace":

Almar Water Solutions is a specialist provider of technical capabilities and expertise for water infrastructure development, including design, financing and operation. Its dedicated team of accomplished professionals draws on international experience gained in over two decades across 25 international markets in the water industry and is today continuously working to develop integrated solutions to meet the growing needs of both municipal and industrial sectors.

The unique combination of this expertise and its innovative business structure make Almar Water Solutions the preferred partner to develop tailored infrastructure solutions. Almar is also trusted as a reliable partner to operate, maintain and manage the assets after construction, offering sustainable water cycle management solutions in the execution of the projects it develops.

Almar Water Solutions was established as part of [Abdul Latif Jameel Energy & Environmental Services](#) in 2016. Abdul Latif Jameel was founded in 1945 and is now one of the most well-respected businesses in the Middle East, North Africa, and Turkey (MENAT region), with operations in more than 30 countries and with over 17,000 employees worldwide.

With a solid financial standing and benefiting from the strong networks and long-established relationships of Abdul Latif Jameel, Almar Water Solutions tackles the challenges of water scarcity, quality and contamination from a uniquely holistic perspective.

By combining expertise and resources with [Fotowatio Renewable Ventures](#) (FRV) – Abdul Latif Jameel Energy’s renewable energy business, and a recognized global leader in the sector – the issues of rising energy and water demand can be successfully addressed in a way that both reduces costs and increases availability of these essential resources. Together, they offer the capability to develop and deliver tailored real-world solutions and future developments through the thoughtful application of technology, experience and a highly qualified team.

We wish to thank all of our sponsors for their support and contribution to the success of this event

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About AEDyR

AEDyR was created in 1998 after the successful IDA Congress held in Madrid in 1997. This association intends to gather all individuals, companies and organizations dealing with desalination and water reuse in Spain. Back then, the International Desalination Association (IDA) added AEDyR to its member list in recognition of its technological development and its desalination track record.

Importantly, AEDyR is one of the world's few non-regional, country specific desalination associations. Spain's large Engineering Companies performed an outstanding role at that point, and with the collaboration of a number of individuals, they helped our association take its first steps forward.

www.aedyr.com



IDA Regional Affiliate

About EDS

EDS, an IDA affiliate, is a Europe-wide organization for individual and corporate members including universities, companies, research institutes, government agencies and all concerned with and interested in desalination and membrane technologies for water.

It is a society uniting Europeans interested in promoting desalination, water reuse and water technology. All processes are covered and the wide range of roles and activities involved in the desalination field include: research, applications, consulting, contracting, operation and maintenance, manufacturing, marketing, economics, legislation. Members are welcome from other regions outside Europe.

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