

WATER, MEGACITIES AND GLOBAL CHANGE

UNESCO HQ,
Paris, France
and online
11-14 January 2022



Co-organised by

In collaboration with

BACKGROUND

UNESCO's Division of Water Sciences and ARCEAU-IdF (Association of the Water Professionals, Researchers, Decision Makers And Elected officials from the Paris Metropolitan Area) are co-organizing the **Second International Conference on Water, Megacities and Global Change (EauMega)**, in collaboration with the Greater Paris Metropolis and the Greater Paris Sanitation Authority (SIAAP, Syndicat Interdépartemental pour l'Assainissement de l'Agglomération Parisienne) on 11-14 January 2022, in hybrid format, online and at UNESCO Headquarters in Paris, France.

In December 2015, UNESCO-IHP and ARCEAU-IdF hosted the First International Conference on Water, Megacities and Global Change, during the 21st United Nations Conference on Climate Change (COP 21), to draw attention to the significant challenges megacities are facing and to propose the creation of a global alliance to focus on climate change and water security: the Megacities Alliance for Water and Climate (MAWAC). Five years later, in December 2020, the online Pre-Conference "Water, Megacities and Global Change" gathering **more than 6000 participants**, reopened the discussion on this issue and paved the way towards the Second International Conference on Water, Megacities and Global Change.

This flagship initiative will bring together scientists, water operators, decision-makers, civil society and basin authorities, to exchange for four days on the management of water in very large urban centers, megacities.

The main challenges related to this theme have changed little over the past seven years despite the constant increase in the number and size of megacities, the augmentation of scientific communications alerting on the negative effects of climate change, and the population growth within these megacities.

The EauMega conference responds to the **need to consider the challenges of megacities from a water perspective**, and vice-versa, as their interdependence is strong, and their management deeply linked. For example, urban discharges to aquatic environments are one of the major causes of ocean pollution by plastics.

Cities are increasingly vulnerable to extreme water events, such as hurricanes, floods, storms and storm surges or tidal waves.

To tackle these increasingly recurrent incidents, the recent report by the OECD and UN-Habitat, "Global State of National Urban Policy", shows the importance of urban policies in climate change mitigation and adaptation and the promotion of sustainable development.

Given their size, **the challenges posed by water management in megacities are of particular importance** and raise new and specific issues that require close collaboration between **scientists** who advance knowledge, **operators and basin authorities** (public and private) who innovate technically and socio-politically, and **local decision-makers** who can support new, just and more efficient models of water governance, in constant interaction with the **civil society**. After providing a scientific and technical overview of the water and global change challenges facing megacities, the conference will propose and develop multi-dimensional solutions, based on collaboration between all urban water stakeholders, to lead to holistic and sustainable resource management.

EXPECTED OUTCOMES

- To produce a scientific and technical overview of water management in Megacities in order to identify and update the most important issues
- To strengthen the dialogue between science and policy actors at local level
- To activate the cooperation platform of the Megacities Alliance for Water and Climate (MAWAC) by concretizing the exchange of their expertise in the specific field of water and climate
- To review the Strategic Global Framework of MAWAC, prepared by the Working Group of UNESCO Intergovernmental Hydrological Programme (IHP)

- Declaration of the Mayors and Governors in support of the Megacities Alliance for Water and Climate
- Publication of the 15 best papers in a high-level open-access international scientific journal
- UNESCO electronic publication of the Proceedings of the conference in open-access
- Youth Declaration and/or Call for Actions for water and climate change in Megacities

EXPECTED OUTPUTS

CHALLENGES

01

Disaster Risk Reduction water related natural hazards are increasing in intensity and frequency due to climate change, often resulting in climate related disasters. Water related risks, sanitary risks, and the way these risks increase due to population growth and demographic pressure, insufficient assessments, governance and institutional challenges, will also be addressed in this theme.

02

Service continuity including its disruption such as in the cases of Intermittent Water Supply and Crisis Situations: cities face a major challenge in meeting sanitation and health requirements as they expand while the coverage of services does not expand / is not renewed at the same rate to ensure service provision. Such requirements are often addressed retroactively with limited planning and are ineffectively regulated. A proper management of water services as well as the implementation of water conservation measures can significantly improve the service continuity. The presence and evolution of technical tools, such as urban data-bases, to capture urban trends/patterns and facilitate this continuity is not evident and often non-existent.

03

Knowledge of the technical and social conditions necessary for the resilience of resources and systems and the planning of actions to strengthen it.

04

Governance modalities assuring effectiveness of governance by scaling down complex management modalities such as the case of multi-scale and multi-utilities policies, for the benefit of citizens, is often challenging. The challenge increases when social acceptability, service cost, gender equality, as well as education and sound communication with the end-users are taken into account.

05

Holistic water management megacities' adaptation to climate change involves a holistic water management approach that requires consideration of parameters that extend to the basin(s) they rely on for their supply and which they influence, as well as the principles of Integrated Water Management, both at the urban scale and at the watershed scale. The degree of difficulty in doing so can increase depending on the centralization and decentralization policies followed.

06

Land issues and challenges like densification, gentrification, urban sprawl and sub/urban zones: the link between the heart of megacities and their peri-urban areas is seldom strong. Megacities must assess their operations beyond their urban perimeters as they can negatively impact the living conditions of the global population, as well as the energy resources and the environmental conditions of their hinterlands. This theme will present the way informal settlements and slums are being dealt with or the lack of their consideration in urban planning.

07

The Sustainable Development Goals are measuring tools for the adaptation of water services to global changes. How are expected climate change impacts integrated into the targets of the water related SDGs in an urban setting? How are current policies and tools at city level facilitating the contribution of the cities to the national and global picture? Examples of cooperation and partnerships will illustrate ways of fulfilling the SDGs.

SOLUTIONS

01

Planning tools

that allow tackling urbanization or regulating informal settlements in central and peri-urban areas, which represent a challenge to public health, society and the environment. Additionally, the probable solution that a water-energy-waste nexus approach could provide in coordinating the various levels of planning — megacity, state, province, national, local — will be discussed.

02

Technical and technological solutions

which extend over a continuum ranging from “classical” civil engineering works (large infrastructure developments) to new management technologies labeled “smart city” or nature-based solutions that can respond to the emerging urban challenges in megacities. These solutions that call for innovation, research and development programmes have to also include a financial viability component.

03

Innovative initiatives at governance, technical, institutional or social level

learning how individual megacities deal with and adapt to expansion, taking into consideration their differences and given that developed and emerging economy countries do not share the same legacy. These initiatives concern in particular the development of preservation and the promotion of nature as a major asset for adaptation to climate change. Urban Agriculture and Green Infrastructure can be used to combat the Heat Island Effect, and in general terms contribute to enhancing urban climate comfort. The preservation and restoration of urban wetlands optimize the benefits of the ecosystem services they provide to the cities they are located. On the other hand, the Recovery and Reuse of treated wastewater for energy production, fertilizer valorization or irrigation is developing in many countries, within the overall framework of the circular economy. This section will also explore how climate change adaptation at megacities’ level will be financed.

04

The “new water culture”

embraces a new holistic water management approach in megacities to meet water challenges for livable cities, in synergy with other public policies, including the preservation of biodiversity, and the development of sustainable food. This section mainly focuses on exploring models and means of governance, protective regulations and public participation, experts’ and citizens’ awareness raising initiatives, trainings and capacity-development to facilitate water service provision.

05

The strengthening of sustainable solidarity

through solid mechanisms of cooperation, partnership, governance and financing at the adequate levels: urban area and watershed area.

COMMITTEES

STEERING COMMITTEE

President

- Jean-Claude Deutsch – ARCEAU-IdF

Members

- Daniel Marcovitch – ARCEAU-IdF
- Bruno Nguyen – ARCEAU-IdF
- François Prevot - ARCEAU-IdF
- Graciela Schneier – ARCEAU-IdF
- Irina Severin – ARCEAU-IdF

- Régis Thépot – ARCEAU-IdF
- Claire Beyeler – Greater Paris Metropolis
- Jumaanah Khodabocus - Greater Paris Metropolis
- Joakim Giacomoni – SIAAP
- Tristan Milot – SIAAP
- Maud Berthelot – UNESCO
- Corentin Juin - UNESCO
- Alexandros Makarigakis – UNESCO
- Philippe Pypaert – UNESCO

PROGRAMME COMMITTEE

Co-Presidents

- S.E. Blanca Jiménez Cisneros – Ambassador of Mexico to France
- Jean-Marie Mouchel – Sorbonne University

Researchers College

FRANCE

- Sabine Barles (Université Paris 1 Panthéon-Sorbonne)
- Bernard Barraqué (CNRS/AgroParisTech)
- David Blanchon (Université Paris Nanterre)
- Catherine Carré (Université Paris 1 Panthéon-Sorbonne)
- José-Frédéric Deroubaix (Ecole des Ponts ParisTech)

- Nathalie Dörfliger (IHP French National Committee)
- Daniel Loudière (Société Hydrotechnique de France)
- Régis Moilleron (LEESU)
- Eric Servat (Comité National Français de Géodésie et de Géophysique)

INTERNATIONAL

- José Paulo Soares De Azevedo (Universidade Federal do Rio de Janeiro/Escola Politécnica/Drhima - Brazil)
- Andrea Catenazzi (Universidad Nacional de General Sarmiento - Argentina)
- Srinivas Chary (Administrative Staff College of India - India)
- Nilo Nascimento (Universidad Federal de Minas Gerais - Brazil)
- Akomeno Oteri (Hydrated Geo - Consulting Services - Nigeria)

- Juan Pablo Rodriguez Sanchez (Universidad de Los Andes - Colombia)
- Otto Corrêa Rotunno Filho (Programa de Engenharia Civil/ COPPE/UFRJ - Brazil)
- Manfred Schütze (IWA/IAHR Joint Specialist Group on Urban Drainage - Germany)
- Juan Valdez (University of Arizona - United States of America)
- Rae Zimmerman (New York University - United States of America)

Utilities - Operators College

FRANCE

- Frédéric Gache (EPTB Seine Grands Lacs)
- Dominique Gatel (VEOLIA)
- Benjamin Gestin (Eau de Paris)
- Pascal Goujard (EPTB Seine Grands Lacs)
- Karine Bidart (Agence Parisienne du Climat)
- Eve Karleskind (CD 94)
- Nicolas Londinsky (Ville de Paris)
- Jean-Pierre Maugendre (SUEZ)
- Denis Penouel (Syctom)
- Eric Pfliegersdoerfer (Eau de Paris)
- Anastasia Poli Bodereau (Ville de Paris)
- Anne Rieth De Jonghe (CD 92)
- Thierry Witkowicz (VEOLIA)

INTERNATIONAL

- Carlos Berroeta (Aguas Andinas/UNESCO-IHP - Chile)
- Edward Curley (Western Coalition of Arid States - United States of America)
- Hamanth Kasan (Rand Water - South Africa)
- Emilio Lentini (Ministry of Internal Affairs - Argentina)
- Angela Licata-Misiak (New York City Department of Environmental Protection - United States)
- Atsushi Masuko (TSS Tokyo - Japan)
- Jose Augusto Mendes (Departemento de Águas e Energia Electrica São Paulo - Brazil)

Decision makers & Civil Society College

FRANCE

- Sylvain Berrios (Greater Paris Metropolis)
- Emmanuel Berthier (CEREMA)
- Patricia Blanc (Agence de l'Eau Seine-Normandie)
- Jean-François Donzier (Global Alliance for Water and Climate)
- Muriel Floriat (AMORCE)
- Ilan Juran (W-Smart/New York University)
- Yves Kovacs (SEPIA Conseils)
- Brice Lalonde (Académie de l'eau)
- Christophe Le Jallé (PS-Eau)
- Marie-Dominique Monbrun (Agence de l'Eau Seine-Normandie)
- Roland Nussbaum (AFPCN)
- Jean-Claude Oliva (Coordination Eau Ile-de-France)
- Julie Purdue (AMORCE)
- Oriana Romano (OCDE)
- Adriana Salazar (French Water Partnership)
- Eric Tardieu (Office International de l'Eau)
- Pierre-Frédéric Ténière-Buchot (PS-Eau)
- Marie-Laure Vercambre (French Water Partnership)
- Daniel Zimmer (Climate KIC)





INTERNATIONAL

- Graham Alabaster (UN Habitat - Kenya)
- Diane D'Arras (International Water Association)
- Antoine Delepiere (SIWI - Sweden)
- Miguel Doria (UNESCO-IHP - Uruguay)
- Andre Dzikus (UN Habitat - Kenya)
- Milo Fiasconaro (Aqua Publica Europea - Belgium)
- Jovana Gojkovic (Aqua Publica Europea - Belgium)
- Shahbaz Khan (UNESCO-IHP - Indonesia)
- Dylan Meagher (NYC Environmental Protection - United States)
- Marco Antonio Palermo (Prefeitura de São Paulo - Brazil)
- Julie Perkins (UN Habitat - Kenya)
- Marcos Sant'anna Lacerda (Guanabara Bay Basin Committee - Brazil)
- Arjun Thapan (WaterLinks - Philippines)
- Regina Maria Valletta (Prefeitura de São Paulo - Brazil)
- Maggie White (SIWI - Sweden)

YOUTH STEERING COMMITTEE

Ana Kasznar – Camilla Kong - David C. Lindao – Federick Pinongcos - Ngague Hisseine Ganda – Jdrzej Bylka – Laura Lock - Liudmyla Odud – Paulina Ramirez Quevedo - Rasha Hassan – Redha Agadi - Rinan Shah - Rivonia Pillay – Vilina P. Engheepi

CONFERENCE PARTNERS

 <p>unesco Intergovernmental Hydrological Programme</p>	<p>UNESCO Division of Water Sciences holds the Secretariat of the Intergovernmental Hydrological Programme (IHP) which is the only intergovernmental programme of the United Nations system devoted to water research, water resources management, and education and capacity development.</p> <p>Its eighth phase (IHP-VIII, 2014-2021) is devoted to “Water security: Responses to local, regional and global challenges.” Using an interdisciplinary approach, and with the contribution of the “UNESCO Water Family” representing over 3000 experts, it addresses among others the topics the adaptation to climate change impacts, the management and protection of groundwater resources and water resources management for human settlements of the future.</p>
 <p>ARCEAU Île-de-France</p>	<p>ARCEAU-IdF is a non-profit organization founded in April 2013 by several local communities and research laboratories from the Paris region. Its activity is mainly oriented towards the transfer of both scientific data and pioneering actions in the water sector. Unique in its structure, ARCEAU-IdF is a pluralist debate platform, connecting researchers, operators and elected officials</p>
 <p>Métropole du Grand Paris</p>	<p>The Greater Paris Metropolis is an administrative structure for cooperation covering the City of Paris and its nearest surrounding suburbs. The métropolis came into existence right after EauMega 2015, on January 1st, 2016 and comprises 131 municipalities, covers 814 square kilometers and has a population of 7.2 millions.</p>
 <p>SIAAP Service public de l'assainissement francilien</p>	<p>SIAAP is the public service utility that cleans every day waste water from 9 million inhabitants of Ile de France, including also storm water and industrial waste water. SIAAP, with more than 1,700 agents, cleans 7d / 7, 24H / 24, almost 2.5 million m³ of water, transported by 440 km of main sewers and treated by its six waste water treatment plants. This has allowed to get to a large step forward in the Seine and the Marne river quality improvement.</p>

Sponsors

With the kind support of



PROGRAMME

Day 0: Monday 10 January			
17:00 - 19:00	Registration of participants and welcome buffet [UNESCO Restaurant on the 7th floor]		
Day 1 : Tuesday 11 January			
8:30 - 9:30	Registration of participants and welcome coffee		
Opening Ceremony [Room I]			
9:30 - 10:30	Welcome Addresses <ul style="list-style-type: none"> Audrey Azoulay - Director-General of UNESCO Mami Mizutori - Special Representative of the UN Secretary-General for Disaster Risk Reduction, United Nations Office for Disaster Risk Reduction (UNDRR) Chairperson of the Council of the UNESCO Intergovernmental Hydrological Programme (IHP) Mathias Cormann - Secretary-General of the Organisation for Economic Co-operation and Development (OECD)* Daniel Marcovitch - President of ARCEAU-IdF Representative of the Greater Paris Metropolis Representative of the French Government* 		
10:30 - 11:00	Coffee Break		
11:00 - 12:30	Keynote Speeches <ul style="list-style-type: none"> Felicia Marcus - Founding Member, Water Policy Group Leo Heller - Former UN Special Rapporteur on the Human Rights to Safe Drinking Water and Sanitation, Researcher in Oswaldo Cruz Foundation, Brazil Jun Xia - Academician of Chinese Academy of Sciences Jean-Pierre Elong Mbassi - Secretary-General of United Cities and Local Governments of Africa 		
12:30 - 14:00	Lunch Break	Side-Events	
Parallel sessions			
14:00 - 15:30	Pre-conference "Water, Megacities and Global Change": what results one year later?	Disaster Risk Reduction 1/3	Knowledge of Technical and Social Conditions 1/2
15:30 - 16:00	Coffee Break		
16:00 - 17:30	Holistic Water Management 1/2	Disaster Risk Reduction 2/3	Knowledge of Technical and Social Conditions 2/2

Day 2 : Wednesday 12 January			
Parallel sessions			
09:00 - 10:30	Holistic Water Management 2/2	Disaster Risk Reduction 3/3	Regional session –Asia and the Pacific
10:30 - 11:00	Coffee Break		
11:00 - 12:30	Governance Modalities 1/2	Service Continuity and SDGs	Land Issues and Challenges Regional session – Africa and Arab States
12:30 - 14:00	Lunch Break	Side-Events	
Parallel sessions			
14:00 - 15:30	Governance Modalities 2/2	Technical and Technological Solutions 1/2	Regional session – Europe and North America
15:30 - 16:00	Coffee Break		
16:00 - 17:30	Planning Tools	Technical and Technological Solutions 2/2	Regional session – Latin America and the Caribbean
17:30 - 19:00	Side-Events		

PROGRAMME

Day 3 : Thursday 13 January				
Parallel sessions				
09:00 - 10:30	Innovative Initiatives 1/2	New Water Culture 1/2	Strengthening of Sustainable Solidarities	Round table 1 Water governance in megacities in the face of the multiplicity of actors and the challenges of climate change
11:00 - 12:30	Innovative Initiatives 2/2	New Water Culture 2/2	World Youth Perspectives	Round table 2 Metropolitan "PANDEMICS" Challenges – "Pandemic, Anthropogenic & Natural Disasters – Emergency Management, Info-technology & Cyber Security"
12:30 - 14:00	Lunch Break	Side-Events		
14:00 - 15:00	Transfer from UNESCO headquarters to the sites			
15:00 - 17:00	Technical visits on site			
17:00 - 18:00	Transfer from the sites to UNESCO headquarters			

Day 4 : Friday 14 January				
Parallel sessions				
09:00 - 10:30	Round table 3 Comparing knowledge and experiences of Megacities on the urbanization processes and their effects on floodplains	Round table 4 Enhancing resilience in blue cities	Round table 5 City-basin dialogue and climate change adaptation: how to re-connect cities to their basins	
10:30 - 11:00	Coffee Break			
Closing Ceremony [Room I]				
11:00 - 12:30	<ul style="list-style-type: none"> Shamila Nair-Bedouelle – Assistant Director-General of UNESCO for Natural Sciences Youth Declaration François-Marie Didier - President of SIAAP Representative of Xylem Jean-Claude Deutsch - President of the Steering Committee Co-Presidents of the Programme Committee <ul style="list-style-type: none"> S.E. Blanca Jiménez Cisneros – Ambassador of Mexico to France Jean-Marie Mouchel – Sorbonne University Claudia Sheinbaum - Head of Government of Mexico City 			
12:30 - 14:00	Lunch Break	Side-Events		
14:00 - 17:00	Assembly of Mayors and Governors under the auspices of the Megacities Alliance for Water and Climate (MAWAC)			



unesco

Venue for EauMega 2022
UNESCO Headquarters
125, avenue du Suffren
75007 Paris
France

Assess, reduce and offset the carbon footprint of your flight to Paris

For participants who will be flying to UNESCO Headquarters in Paris, France, we recommend you too choose an airline attentive to the reduction of greenhouse gases resulting from air travel. For example, an airline that has a fleet of modern, more fuel-efficient aircraft and/or that allows you to evaluate the CO2 emissions produced by your flight and offset them.

You can also take a voluntary and individual approach to compensate your carbon footprint by financing actions in this area.

Participants who have compensated their travel will be encouraged to send the Conference Secretariat the amount of their offset.

Contact

Philippe Pypaert
Programme Specialist

Maud Berthelot
Associate Project Officer

Division of Water Sciences, UNESCO
eaumega@unesco.org
en.unesco.org/events/eaumega

Co-organised by



In collaboration with

