2ND INTERNATIONAL CONFERENCE
"WATER, MEGACITIES AND GLOBAL CHANGE"

1-4 DECEMBER 2020, UNESCO HQ

CALL FOR PAPERS

https://en.unesco.org/events/eaumega2020

BACKGROUND

UNESCO's Division of Water Sciences, the Research-Communities Association in the Water Sector in Ile-de-France (ARCEAU-IdF, Association Recherche Collectivités dans le domaine de l'EAU Ile de France), the Greater Paris Sanitation Authority (SIAAP, Syndicat Interdépartemental pour l'Assainissement de l'Agglomération Parisienne) and the Greater Paris Metropolis are organizing the 2nd International Conference on "Water, Megacities and Global Change" (EauMega 2020), from 1st to 4th December 2020, at UNESCO's Headquarters in Paris, France.

In December 2015, UNESCO-IHP and ARCEAU-IdF hosted the 1st "Water, Megacities and Global Change " International Conference, during the 21st Conference of Parties (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, the 2nd International Conference will bring together scientists, urban service managers, political representatives, and civil society to exchange for 4 days on the management of water in very large urban centers, Megacities[1].

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

The EauMega 2020 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 for adapting to climate change and promoting 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 (in both the public and private sectors) who innovate technically and socio-politically, and local politicians who can support new, just and more efficient models of water governance, in constant interaction with civil society.

[1] As defined by the United Nations, megacities refer to cities with a population that exceeds 10 million people.

5 YEARS AFTER, EAUMEGA 2020

OBJECTIVES

1 Produce a scientific and technical overview of water management in Megacities in order to identify, update and raise awareness on the most important issues

Little research has been conducted on this subject, although the publication in 2016 of a series of monographs on water management in Megacities by UNESCO-IHP and ARCEAU-IdF made a first step towards this direction.

How do the construction and operation of a wastewater treatment plant for a large urban area raise particular technical and economic problems?
How can the impact of releases to the aquatic environment from a high population concentration be reduced?
How does the presence of a large number of stakeholders affect the way water is managed?

These are some questions, among others, that it will be interesting to address through the conference. By enriching the knowledge on these issues, providing elements of comparison and feedback, the papers presented during the conference shall help to guide water policies in Megacities.

2 Strengthen the dialogue between science and policy actors

Papers and posters written as often as possible by a researcher-practitioner pair and presented during the conference, as well as the event itself, should contribute to strengthening the links between the scientific community and water policy actors. The conference aims to stimulate these exchanges share best practices and to create precedents in areas where these practices are still underdeveloped.

3 Strengthen and officially launch the Megacities Alliance for Water and Climate (MAWAC)

The first conference in 2015 issued a declaration to create a global alliance of Megacities in the field of water and global change. This proposal was supported by the signatures of many participants at the event. The main objective was to promote institutional, technical and scientific exchange between the world's major cities. The establishment of privileged relationships over time should also make it possible to develop models of good practice from the "established" Megacities that could benefit the Megacities in the making.

Since 2015, the reflection on the establishment of such an Alliance has continued. Regional sections (from a United Nations and UNESCO point of view) have been created. The Conference will be an opportunity to officially name the Alliance, to clarify its mode of operation, and to set up its first action programme.

LIST OF TOPICS

The conference will focus on **two main thematic areas**, in which communications should be focused: challenges and solutions.

CHALLENGES

The first thematic axis highlights **key water related factors for maintaining and strengthening the balance of mega-systems**, a balance which is fragile due to the pressures exerted by the effects of climate change, population growth, consumption patterns and subsequent increasing water demands :

- **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.

- **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 databases, to capture urban trends/patterns and facilitate this continuity is not evident and often non-existent.

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

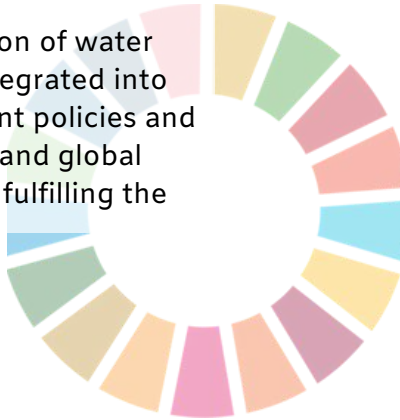
- Considering **land issues and challenges like densification, gentrification,** urban sprawl **and sub/urban zones:** the link between the heart of megacities and their peri-urban areas is seldom strong. Megacities must assess their operations beyond their urban perimeters as they can negatively impact 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.

- Develop an **ethical approach to nature**: assessing how species and ecosystems are often ignored and face extinction due to the extreme anthropogenic pressure by urban dwellers, especially within a limited natural environment and available water resources.

- **Governance modalities in** Megacities: 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.

- **Holistic water management**: megacities' adaptation to climate change involve 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 the centralization and decentralization policies followed.

- 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.



CHALLENGES

The second thematic pole, **Solutions** will address the types of solutions **(means, methods, tools) that can be implemented** to support the management of water in Megacities:

- Planning tools that allow tackling urbanization or regulating informal settlements in central and peri-urban areas, which may pose risks 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.

- **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.

- **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.

- 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.

- The **strengthening of sustainable solidarity**, through solid mechanisms of cooperation, partnership, governance and financing at the adequate levels: urban area and watershed area.

SOLUTIONS

ORGANIZATIONAL ELEMENTS

The 2nd International Conference "Water, Megacities and Global Change" will take place at UNESCO's Headquarters, 7 Place de Fontenoy, Paris, France, from 1st to 4th of December 2020. The conference will be free of charge for all the participants.

- The event follows UNESCO's mandate and provides an interface where science and policy cooperate, bringing together the research community with that of the utility operators (decision-makers) and of municipalities (policy-makers). To encourage and promote this goal, "two-track" interventions (scientific and operational) will be preferred. To break the mold of a strictly scientific event, the conference will provide a platform for representatives of civil society and elected officials, to highlight the importance of the political dimension.

- Format: the conference will consist of plenary sessions and parallel sessions based on the aforementioned thematic areas.

  Related side events will be organized during the lunch breaks and in the evening, immediately after the day's sessions have ended.

  It is proposed that sessions will commence with presentations which will last 30 minutes (and will include a 10 minutes discussion segment at minimum), and will end with a round table discussion.

- In parallel with the conference, the Megacities Alliance for Water and Climate (MAWAC) General Assembly is planned. The event aims at bringing together Mayors of Megacities and other elected officials to express their views on water management in their cities and their commitment in cooperating with other Megacities in finding solutions for sustainable water management in the face of climate change and its impacts.

- Sessions organized by the regional chapters of the alliance are also foreseen.

PARTICULARITIES

The conference fully integrates the participation of young people (students and professionals), in line with UNESCO's strong commitment to youth. They will play a role prior to the conference working on communicating in social networks and they will be invited to take part in sessions or to have dedicated posters.

Artists will be invited to convey the symbolic and aesthetic dimensions of water management issues in Megacities and how they may relate to global change.

It is also planned that a Call for Visuals be opened to all citizens and enterprises around the world, to demonstrate the value of public opinions and urban practices as the micro perspective of megacities.

APPLICATION PROCEDURES

STEP 1: EXPRESSION OF INTEREST THROUGH ABSTRACT SUBMISSION

Authors must first send an Expression of Interest before January 31, 2020. Its format should include a summary of 10 to 15 lines (around 200 words), which should clearly indicate:

- The selected **theme** within the Call for Papers to which the intervention is linked: how does the proposal shed light on the issues raised?

- The **plan** of the intervention, in very broad terms

- The affiliation of the main **author** and the **co-authors**

Abstract should be sent via the website https://eaumega2020.sciencesconf.org/, either in English or French, for its review and evaluation by the Programme Committee.

Applicants will be informed at the end of March 2020 if their proposal is selected for an oral presentation or a poster.

STEP 2: THE TRANSMISSION OF FINALIZED ARTICLES

Once selected, authors must send their **extended written communication in English**. The length of the articles should range approximately from 8 to 10 pages (approximately 4000 to 5000 words). A template will be communicated to all authors in due course. All communications must be completed and submitted by 31 July 2020.

The **evaluation of the articles** will take place between **August and September 2020.**

The **edited papers are to be submitted in their final form by** 30 September 2020.

The Programme Committee will select best quality papers for publication in high-level scientific journals. The registration of the authors to the conference is a prerequisite for their paper to be accepted.

expression of interest	extended written communication	edited and finalized communication
31 JANUARY	**31 JULY**	**30 SEPTEMBER**

COMPOSITION OF THE PROGRAMME COMMITTEE

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To submit your paper

https://eaumega2020.sciencesconf.org/

For any further information

https://en.unesco.org/events/eaumega2020

For any questions

eaumega2020@unesco.org

We look forward to welcoming you,
EauMega 2020 team

United Nations Educational, Scientific and Cultural Organization

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