

# AQUAPOLIS

No. 4  
International  
Conference  
of Aquapolises



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## The Third International Conference of Aquapolises was held in Piraeus, Greece, between March 20 and 22, 1997.

Representatives of twenty-two cities from eleven countries took part in the conference. The venue, the cruise ship "Orpheus", created a relaxed and homelike atmosphere, as participants ate and slept on board. The Experts Conference was divided into two working groups, hearing presentations and holding discussions on each city's programs in areas including conservation of water resources and greenery, countermeasures against flooding, and port development. The Directorial Cities Conference endorsed the holding of the Fourth International Conference in the year 2000 in Vienna, a city which has played host to various international conferences through its history.



### PAST HISTORY

In July 1990, the First International Conference was held in Osaka, which was in that year celebrating the 100th anniversary of its municipal inauguration. Osaka proposed and planned this new international conference, which was held over three days starting on July 26, 1990. Thirty-two cities (including six in Japan) participated in the conference. The Osaka Declaration, which was adopted at the end of the conference, states the necessity to share the ways and means cities have adopted in tackling issues related to water, reconfirms the role of the waterfront not simply for the purpose of urban regeneration but also

for helping to enrich the quality of human life, and recognizes the key role to be played by the amenity created through greenery in the development of the city of tomorrow.

In order for the International Conference of Aquapolises to take a leading role in programs for the conservation and improvement of the global environment, the conference must continue to be held. To this end, eight cities were selected to become directorial cities. The Rivers and Canals Department of the Public Works Bureau of the Osaka Municipal Government agreed to serve as the Secretariat.

The Second International Conference was held in Shanghai between November 17 and 19, 1993. Twenty-eight cities from twenty-two countries and one international body took part. The Mayors and Experts Joint Conference and the Experts Conference were held. Discussions ranged over many topics, namely, protection of water resources, sewage treatment technology, new approaches to urban planning and harbor construction, correlation between economic growth and environmental protection, greenery creation and ecosystems, and prevention of natural disasters.





## 3rd ICAP Report

### OPENING SPEECH BY THE MAYOR OF PIRAEUS, STELIOS LOGOTHETIS

Honourable Ministers,  
Honourable Mayors,  
Ladies and Gentlemen,

I welcome here at Piraeus all the Mayors and the delegations from cities all over the world.

In particular, I welcome the delegation from Osaka, the city which played and still plays a leading role in the formation and operation of the International Conference of Aquapolises.

I thank you all for your participation in this significant meeting. In particular, I thank the Minister of the Environment, Land Planning and Public Works, Mr. Costas Laliotis, for supporting financially the present conference.

Dear Participants in this Conference,

The most precious good in life, water becomes increasingly 'an item threatened with extinction' on our planet.

The ICAP initiative is an important intervention internationally. It is a network of cities, which aims at studying, exchanging experiences, sensitizing and becoming active on the complex problem concerning water.

By its nature, this problem is a universal problem which needs to be dealt with in a special manner.

In the previous decades, the extensive exploitation of the ground water, the pollution of seas and rivers, the uncontrolled use of pesticides in agriculture, the destruction of the forests and the population explosion in the third world have made up a gloomy picture with regard to the future of water resources all over the world.

Tremendous ecological imbalances are formed and negative consequences are caused for human beings as well as for all living organisms.

Certain species of the animal and plant realms tend to become extinct.

Lately, frequent is the phenomenon of either a prolonged drought or floods caused by the destruction of the forests.

Mankind as a whole is faced with a dramatic problem:

Will it continue to waste water unreasonably?

Will it continue to pollute its sources and to downgrade the quality of life and the health of citizens?

Or will it sound the alarm and take all those measures which are necessary for saving water, controlling its quality and securing its natural recycling?

I believe, the theme sections of our Conference include all the major aspects of the problem.

Piraeus, a city with a history of centuries since the ancient times and until now, is exceptionally interesting with regard to hydrology.

As historical evidence shows, Piraeus was an island.

Geological changes transformed it into a small peninsula.

During Themistocles' epoch, its natural harbours were used by an all powerful fleet.

Two years ago, the reservoir of the Ancient Piraeus was discovered at the centre of the city.

But, even now, the water element plays a special role in the development of the city. Shipping and tourism are important economic activities for Piraeus, as well as fishing for the islands of the Argosaronic gulf.

Moreover, the geophysical state and the urban-planning changes effected in the 1960s favoured flooding situations.

Near us, at the islet of Psyttalia, the biological treatment installations are situated which receives all the urban area sewage of the Attica

basin.

Therefore, with regard to the issues we are examining here, we can say that Piraeus has a range of problems and experiences which can be useful to the other cities.

I believe that the scientists and the experts participating in the work of the Conference will make a decisive contribution. By means of their knowledge and experience they will shed light on the problems and will propose solutions.

I hope that issues of concern as well as experiences emerging out of techniques and achievements will be exchanged in order to be able to deal with the problems we examine.

The preservation and development of Green, the protection of coasts, flood controls, biological treatment, water quality control, all these issues are a package of interconnected measures, actions and initiatives which should be taken by us in order to elaborate a modern urban plan.

The cities are not able, any more, to continue developing without making any provisions for the environment, because this would place their future at stake.

Despite all the difficulties we are optimistic. The rapid development of technology can provide solutions.

However, in order to find solutions to these problems, the will of the local and central authorities is also required as well as, surely, the financing of the necessary works.

The "AQUAPOLISES" initiative gives the opportunity to have an international coordination at the level of cities in order to elaborate a strategy for water in the threshold of the 21st century.

Thank you.

## PIRAEUS DECLARATION

As representatives of 22 cities we have gathered in the city of Piraeus on the 20th, 21st and 22nd of March, 1997 for the 3rd International Conference "AQUAPOLISES" with main theme "City and Water."

This Conference is a continuation of the two previous meetings that have taken place in Osaka and Shanghai, with the theme: water and greenery for a better environment, the development and for upgrading the quality of life.

During the Conference, we have exchanged scientific know-how centered on the following:

- Development and management of water resources
- Conservation and development of coastal zones and areas with greenery
- Relation of geotechnical research with seaside engineering work
- Prevention of flood damage to coastal habitable areas and recreation areas for tourists.

- Coastal area development projects.

Discussion among the cities centered on the following topics:

- Exploitation, management and quality of water—present status and future prospects
- Development of coastal areas—problems and future prospects, harmony between water, greenery and urban area; environmental protection.

Among special topics taken up during the discussion were:

- Future prospects of the global environment
- European environmental policies and cooperation in coastal area management

We unanimously agreed on the following:

- There must be harmonious relationship among nature, society, and economic development. This must be taken into consideration in urban planning.
- In the framework of well-balanced development, natural resources must be conserved to a sufficient extent.

- Systematic engineering works and infrastructure development must contribute to environmental protection and control exploitation of natural sources, in such a way as to achieve sustainability in the 21st century.

The significance of international conferences focused on the above subjects was emphasized. This is because it is important to exchange technical know-how, and clarify areas requiring intervention by politicians or scientists.

During the Conference a meeting of the Directorial cities took place to discuss the future of ICAP. The members of Directorial cities decided that the 4th ICAP will take place in Vienna in the year 2000.

The City of Piraeus learned much during the international conference. It thanks all the representatives and specialists that attended the Conference.



## PROGRAM

	MARCH 20 (Thu.) Day-1	MARCH 21 (Fri.) Day-2
	<b>Opening session Press Conference</b>	
WORKING GROUP Meeting of Mayors	"New City of Water—OSAKA"(Shin SASAKI) "Development in Environmental Policy and the Problems It Has to Solve in Hamburg" (VAHRENHOLT Fritz)	"The Aquapolis of Larnaca: A rare combination of sea, lake and underground waters and problems arising"(George LYCOURGOS) speech of Mr. Serguey SHILO(Mayor of Taganrog) "Landslide, Abrasion and subsidence Incidents on the Territory of Varna Municipality"(Kiril VIDOLOV)
WORKING GROUP Experts' Meeting on Water resources Technical infrastructure Flood Water quality Environment Drought	<b>Water resources—Irrigation</b> "Environment-Irrigation management plan of the Athens Water Supply & Sewage Company" (Konstantinos KYRIAZIS) "WATER—Source of life for the planet. Potable water, Sea 2000"(KAKOMANOLI and PATSA) "Mathematical Model of the Azov Sea" (I.NIKOLAYEV) "Shanghai Suzhou Creek Rehabilitation Project" (Huang YUEJIN)  <b>Sewage—Sewage management</b> "Presentation of Projects for the Sewage Treatment Centre of Psyttalia"(Nikos HEIMONAS) "Environmental protection in waste water disposal" (Dimitris POULIS)	<b>Floods , Drought</b> "Looking for the Probable Maximum Flood in Athens"(Alexandros VOUZARAS) "The flood problem in Athens as the center of our local society's attention"(Miltiadis SARROS) "An overview of the flood prevention projects in Attica"(Nikolaos STEFANIDIS) "Flood controls of the Attica Region." (Andreas NIKOLOPOULOS) "The causes of flooding phenomena and the possibilities of preventing their run-off to the basin of the Kifissos river of Attica"(P.SABATAKAKIS) <b>Quality of Waters—Environment</b> "IGME-Geological and Mineral Research Institute-Integrated water quality control"(K. LEONIS) "Marine and Atmospheric Pollution Along the Saronic Gulf Coastal Zone"(Vasilis TSELENTIS) "Chemical Parameters Affecting the Sea Water Quality in Saronic Gulf"(J. HATZIANESTIS) "Influence of Pollution on Planctonic and Benthic Communities of Saronic Gulf"(SIOKOUFRANGOU I.)
WORKING GROUP Experts' Meeting on Coastal areas issues	"Marine Pollution Caused by Oil and Chemicals" (Lieut.Com.H.C.G. Elias SAMPATAKAKIS) "Blue flags of Europe. Ten years of contribution to the upgrading of management and protection of coastal areas" (Aliki VAVOURI) "The contribution of the geotechnical study to the safety development and construction of public works in shore lines—Case histories by Engineering Geological Department of IGME"(Chr.AGELIDIS)	"The Systems of Technogenesis Safety of Towns' and Regions' Objects"(IONOV Mikhail) "Coastal zone management—System approach" (EMBEDOCLIS Lefteris) "To Make Osaka an Environmental Advanced City Full of Flowers and Greenery"(Hisao TAKA) "Planning, Development and Monitoring of Taganrog with the Use of Geographical Information System"(Valentine KHOLODKOV) "Implementation of Dotonbori River Waterfront Redevelopment Plan"(Tadashi NISHIKAWA) "Creation of New Waterfront Amenities at the Port of Osaka—The Canal in Cosmosquare Zone and Sports Island"(Takayuki TOKUHIRA)
Meeting of the Directorial Cities	1. Proposal for the election of the city of Piraeus as one of the Directorial Cities. 2. Proposal for the election of Vice President 3. Selection of the host city of the next Conference of Aquapolises 4. Measures for the Directorial Cities which did not participate in this meeting. 5. Approval of the closing statement of Piraeus. (Piraeus Declaration)	
		<b>Plenary session</b> Presentation of the results of the Mayors' meeting the Experts' meeting the Directorial Cities' meeting  <b>Closing session</b>

## LIST OF PARTICIPANTS

City (Country)	City (Country)	City (Country)
<b>Vienna</b> (Austria)	<b>Ceres</b> (Greece)	<b>Osaka</b> (Japan)
<b>Varna</b> (Bulgaria)	<b>Hiaba</b> (Greece)	<b>Rostv na Donu</b> (Russia)
<b>Shanghai</b> (China)	<b>Lonioi</b> (Greece)	<b>Taganrog</b> (Russia)
<b>Larnaca</b> (Cyprus)	<b>Milos</b> (Greece)	<b>Mariupol</b> (Ukraine)
<b>Paris</b> (France)	<b>Nafplio</b> (Greece)	<b>Odessa</b> (Ukraine)
<b>Hamburg</b> (Germany)	<b>Piraeus</b> (Greece)	<b>Belgrade</b> (Yugoslavia)
<b>Argostolion</b> (Greece)	<b>Ptolemais</b> (Greece)	
<b>Athens</b> (Greece)	<b>Sparti</b> (Greece)	



## CONCLUSIONS

### MEETING OF MAYORS

The mayors who participated in the meeting can convey these experiences to their technical experts in their cities and investigate to what extent international experiences and solutions can solve local problems.

#### <Osaka>

The senior advisor to the Mayor of Osaka, Mr. KAZUNE IHDA, reported in detail about the plans for the New City of Water Osaka and the "City Attractive to International Visitors" program. He also discussed Osaka's future city planning, giving useful information about the usage of water for environmental conservation, and he presented excellent examples of cityscape designs providing access to water. He presented also public facility development in Osaka, waterfront amenities, and the concept of promotion of exchange through the usage of water. Among such projects and events, Osaka is bidding to host the Olympic Games in the year 2008.

#### <Piraeus>

The Mayor of Piraeus, STELIOS LOGOTHETIS, discussed the Piraeus programme for rehabilitation of the Saronic Gulf, the integrated biological treatment installation on the Piraeus island of Psitalia, the recycling possibilities of waste water, and the re-operation of tourist beaches.

#### <Shanghai>

The deputy secretary general of the Shanghai Municipal Government, HUNG YUE JIN, offered a full description of the Shanghai Suzhou Creek Rehabilitation Project.

In order to ensure implementation of the management plan for Suzhou Creek, SMG prepared the contract of preferential policy for the comprehensive use and development of the land along the banks.

The management implemented by SSCRPHO in the city proper is stricter than that in other areas of the city in order to guarantee good results from the rehabilitation work. The management foundation of Suzhou Creek, Shanghai, will be set up. All interested societies and people will be made aware of and help to finance this project.

The rehabilitation of Suzhou Creek will cost over 20 billion RMB. SMG hopes and encourages governments, banks, large financial organizations and large groups all over the world to provide funding and technology in the form of lower-interest loans, grants, technical assistance and cooperative development.

Under the leadership of SMG and the care and support of the people of Shanghai and overseas, we are sure that the targets of comprehensive pollution control of Suzhou Creek will be achieved. A new Suzhou Creek will be appearing in the next century.

#### <Hamburg>

Environmental policy developments and problems in Hamburg were analysed by Dr. Fritz Vahrenholt, Head of the State Ministry of Environment of Hamburg-Germany.

The social and socio-geographic polarisation trends in the city cause further problems, which have to be counteracted by political measures.

Developments and improvements in environmental policy have been achieved, such as the reduction of air polluting emissions, the reduction of influence from factories and sewage works, lowering water consumption, an increase in recycling cleaning Hamburg's water, and groundwater conservation.

#### <Larnaca>

As an outcome of the presentation delivered by the Mayor of Larnaca

(Cyprus), we considered:

1. The necessity to have integrated development plans, which take into consideration the historic particularities, social facts and, economic activities of the coastal areas. The existence of an institutional framework that makes these development plans legal and valid.

2. The funding of local authorities by governments to promote and implement development plans in ports.

3. The conflict of the port and tourist activities developed in the coastal areas.

4. The high concentration of population in the coastal areas that led to urban problems related to the sufficiency and quality of the services provided such as water, sewage management of rain water more acute.

#### <Taganrog>

The systems of technogenesis safety of towns' and regions' objects were presented briefly by the deputy Mayor of Taganrog, Mr. IONOV.

#### <Varna>

Mrs. KANCHEVA IVANOVA MARIANA, representative of the Mayor of Varna, discussed the Eutrophication and Blossoming of the Black Sea, providing recommendations for controlling the pollution.

RADOUL KOVATCHEV, General Secretary of the Black Sea Club, discussed the corresponded institution of the Black Sea organization.

#### <Odessa>

Mr. KODISKI, the representative of Odessa, discussed the local water problems of Odessa.

All the cities presented high level technology and projects of common interest, which can be evaluated by their own experts and further elaborated through visits and first hand experience of local solutions.

### EXPERTS' MEETING

#### <Coastal Areas>

The delicate and fragile balance between the natural and socioeconomic parameters that have an impact on the coastal zone and the seafront has the common theme in all the talks. Even the slightest disturbance of one of those parameters could result in a major disturbance in the balance, which many times is not reversible.

Up-to-date methods concerning the study of the seafront and its balance, i.e. such as the Geographical Information Systems, the field measurements of the natural - chemical parameters, etc., are now implemented in all the geographical longitudes and latitudes.

The number of crises in the seafront (environmental stability, natural disasters, etc.) increase constantly. Due to the great economic importance of the coastal zone, proper measurements and the necessary planning for each district should be taken in order to manage these crises.

Cooperation among local authorities,

centres for specialized research, and university centres in various countries, is the route that will lead to the rational resolution of the problems concerning the seafront.

#### <Water resources-Technical infrastructure-Flood-Water quality-Environment,Drought>

The unified planning based on up-to-date criteria and the rational hierarchy of priorities regarding technical structures must be the responsibility of only one state authority, so that comprehensive programs can be implemented and adverse phenomena such as non-continuity of the water currents can be avoided.

Flood prevention planning should precede urban planning so that the problems can be addressed rationally and substantially, either in the case of average precipitation or storms.

Methods of analysis with respect to precipitation measurements should be reviewed in order to enable us to estimate the data and obtain better knowledge regarding the phenomenon. Water

measurements in the torrent basins, experimental basin for the observation of the correlation between rain and runoff in an urban environment, will allow us to obtain a greater respect for the natural options.

The structuring of major technical projects such as the ones for urban and industrial waste management has as their main environmental impact, a substantial decrease of pollution in sea or river waters which receive these samples, and such results are shown in the chemical analyses of these bodies of water.

The complete and systematic monitoring of the quality of water that is intended for various uses and particularly for human consumption, is imperative. The necessary technical and scientific infrastructure must enable the systematic monitoring of the surface and ground water. Quality standards must be determined and the proper intervention must be made so that the quality of water is preserved within the set boundaries.



## CONCLUSIONS

### MEETING OF THE DIRECTORIAL CITIES

The Directorial cities are the following: Birmingham, Belgrade, Chicago, Hamburg, Melbourne, Montreal, Piraeus, Sendai, Shanghai, Venice, Vienna and Osaka.

The discussions went on with the selection of the city to host the next conference of ICAP, which in accordance with the Constitution, takes place every three (3) years. The next conference will take place in the year 2000.

A proposal was made to have Vienna host the 4th conference. Vienna expressed the wish to undertake the necessary procedures for the 4th conference. The proposal was unanimously accepted. Being ICAP's Secretariat, we will take all necessary steps so that this conference will also be successful and we hope to have your cooperation.

Regarding the improvement of the newsletter of the *«Aquapolises»* issued by the Secretariat, it was decided that the cities members will exchange information through articles about planning works and other information related to water and green areas.

In order to implement this decision, the Secretariat invites all of members of ICAPS to participate in this effort by submitting various articles.

In addition, if members of ICAPS wish other matters to be included in the newsletter, please do not hesitate to get in touch with the Secretariat in OSAKA.

Finally, we dealt with the draft declaration of Piraeus, which was approved. The declaration will be announced next by the Towns of Piraeus.



Press Conference



Panel Exhibition

### The Statute of the International Conference of Aquapolises

#### 1. Purpose

The purpose of this statute is to decide on matters necessary for the management and development, and for smooth operation of the International Conference of Aquapolises (hereinafter referred to as ICAP).

#### 2. Mission

ICAP shall meet approximately every three years on a mission to have 'aquapolises' (cities for which bodies of water are important in some way) of the world mutually know their respective past, present and future conditions and debate on "the basic policies and role of 'aquapolises' in urban planning for the 21st century," and thus assume leadership in forming a consensus of the world opinion for preservation and improvement of the global environment.

#### 3. Directorial City Conference

(1) The Directorial City Conference (hereinafter referred to as DCC) shall be established in order to smoothly perform and achieve the purpose and mission as set forth in the preceding two Sections respectively.

(2) DCC shall be comprised of the heads of directorial and host cities participating in ICAP and shall deliberate on the appointment of directorial cities and the next host city, and the operation and management of ICAP and other necessary matters.

(3) A chairman and a vice-chairman shall be appointed by DCC: the former from the city of the Secretariat, and the latter from the

host city.

(4) The resolutions of DCC shall be adopted by majority vote, and in the case of a tie vote, the chairman shall cast the final decision. DCC shall be entitled to pass a resolution also in writing.

#### 4. Directorial City

(1) Each directorial city shall endeavor, in cooperation with the host city, to facilitate the operation of ICAP.

(2) The cities listed hereinbelow shall be the directorial cities: Belgrade, Birmingham, Chicago, Hamburg, Melbourne, Montreal, Osaka, Piraeus, Sendai, Shanghai, Venice, Vienna

(3) A city participating in ICAP may become a directorial city after due deliberation by DCC.

(4) Should a directorial city fail to participate in two successive conferences, the status thereof shall be invalidated after due deliberation by DCC.

#### 5. Secretariat

The Secretariat shall be established in Osaka for the purpose of executing the decisions made by DCC and making contact and coordinating activities with respective cities.

#### 6. Revision

This statute may be revised by DCC as required.

Date of enforcement: March 20, 1997



# The 4th International Conference of Aquapolises, Vienna

June 15th to 17th, 2000

Participation from many cities is awaited.  
Details will follow in later issues of the Newsletter "AQUAPOLIS" and the announcement.

## INFORMATION

### Space Available for City Introduction

The Newsletter "AQUAPOLIS" will offer pages for city introduction, for the purpose of promoting friendship between member cities. The space offered is from page 2 to page 3 of the Newsletter (a 2-page spread, shown below) in full color.

Photographs and manuscripts submitted from the applicants will be edited, proofread and printed by the Osaka Secretariat.

Applications are awaited. Contact the secretariat for details.

## GREETING



**Makoto Matsuda**

Secretary General  
International Conference  
of Aquapolises

Director  
Public Works Division  
Public Works Bureau  
Osaka Municipal Government

Recently, I was appointed Secretary General of the International Conference of Aquapolises.

At the 1st International Conference of Aquapolises 10 years ago, I served as Vice Secretary General.

I am therefore fully aware of the gravity of my responsibilities as Secretary General, and I deeply appreciate the contributions of participating cities to the Conference.

I will do my best to develop the 10 year-old Conference into an even more fruitful event.

I hope for your continued support in this endeavor.

## SECRETARIAT

### Personnel Changes at Osaka Secretariat

The staff members and the contact person of Osaka Secretariat have been changed.

We appreciate your continued assistance toward the new staff.

Secretary General: Makoto Matsuda  
Staff: Fumihiro Nagai, Shin'ya Takashima  
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