

The Mirrors of the Earth

Balancing Ecosystem Integrity and Human Wellbeing

September 1-5, 2014 Perugia - Italy

PREFACE

The World Lake Conferences, originally launched by the Shiga Prefecture, Japan, has previously been organized by the International Lake Environment Committee Foundation (ILEC), in collaboration with local host organizations in the USA, Hungary, China, Italy, Argentina, Denmark, Kenya, India and Japan over approximately the last three decades. Continuing this tradition, the 15th World Lake Conference will be hosted in Perugia Italy from September 1 to 5, 2014. This upcoming conference foresees the participation of international, national and state agencies, non-governmental organizations, academic institutions, private sector representatives and other water stakeholders.

Utmost importance at the 15th World Lake Conference also will be given to disseminating the importance of conservation and safeguarding of the earth's natural resources to the new generation of researchers and scientists, and to the world of education. Ample time will be allocated for open discussion on a wide range of ideas, suggestions and themes of mutual interest and concern to all the conference participants.

ACTIVITIES AND EVENTS

The thematic structure of the Conference includes the following elements:

- Plenary Sessions
- Special Technical Sessions
- Poster Session
- Thematic Workshops
- International Policy Forum / Political Dialogue
- NGO Sessions

The Conference will also include a series of parallel events of interest to a wider audience, including:

- Student Meeting
- Children's Session (age from 5 to 13)
- Press Conferences
- Multimedia events (Shows, Edutainment, Demos)
- Excursions and Field Trips
- Accompanying Person's Programs
- Exhibitions

CONFERENCE THEME AND OBJECTIVES

Lakes, both natural and artificial, are vital and strategic resources for all life on our planet. At the same time, they are also highly vulnerable to human activities, especially if not properly managed for their sustainable use. These critical natural resources and their ecosystems have defined geographical borders, while at the same time also being strongly influenced by their locations. In fact, although there is a geographical limit between a lake ecosystem and neighboring ecosystems, lakes are heavily affected by the substances which flow into them in the inflowing waters from their surrounding catchments.

Moreover, lakes are very complex systems affected by many natural and human-related factors, major ones being the materials that are dissolved in, or carried together with their waters, the climate of the region, energy exchanges with the atmosphere, the nature of the soils in their locations, and the variety of organisms which inhabit them, all of which are influenced by, and at the same time also influence, the lake system itself. This characteristic complexity means that if a lake is studied solely on the basis of a single discipline, it can often lead to misleading conclusions, or even incorrect results.



...CONFERENCE THEME AND OBJECTIVES

Thus, the continuing scope of the World Lake Conferences is to bring together experts in the field of lake environments and habitats, with the underlying goal of establishing a basis for developing multidisciplinary solutions to multidisciplinary issues. Furthermore, transdiscipline being a keyword in this conference, different approaches and perspective also must be taken into account to adequately address complex lake issues.

Therefore, we are inviting not only scientists, but also resource managers, policy makers, and lake basin stakeholders and users including the political figures to the Conference. The interactions between these diverse individuals will result in wider and more comprehensive discussions, with an overriding goal of connecting a top-down approach with a bottom-up perspective as a means of analyzing and solving complex lake basin issues.

This Conference also will likely have a strong influence on the younger generations of researchers, managers and lake users, launch different didactic experiences for children and graduate students, and teach all how to focus on world lake issues, as well as how to network with other colleagues in considering lakes and their basins from both a local and global perspective.

CONFERENCE TOPICS (Proposed)

ECOLOGY AND BIOLOGY OF LAKES & INLAND WATERS

Water quality; Pollution control; Biological aspects of inland waters; Lake ecosystem and biodiversity conservation; Invasivespecies (flora/fauna); Biodiversity; Habitats; Saline lakes

LAKE PROCESSES AND DYNAMICS

Chemical and physical processes; Hydrodynamics and mixing processes; Geochemistry and geophysics

LAKES AND GLOBAL CHANGES

Climate change trends; Climate change mitigation and adaptation; Fishery impacts; Ecosystem impacts; Socioeconomic impacts

INFORMATICS, MAPPING AND MONITORING

Remote sensing; Advances in measuring technology; Hydroinformatics; Mapping and GIS; Quantity and quality aspects of ungauged basins; Water ecosystem monitoring; Biomonitoring; Lakes and ecosystem modeling; Citizen monitoring

LAKES AND HUMAN CONNECTIONS

Social and cultural aspects; Artistic and archeological aspects; Health aspects; Religious/spiritual aspects; Ecotourism; Lake basin "Heartware";

Land based activities and lake basin impacts (quantity & quality)



...CONFERENCE TOPICS (Proposed)

LAKE BASIN MANAGEMENT EXPERIENCES AND CHALLENGES

Lake Trasimeno (silting issues, waves and swelling, evaporationevapotranspiration, algal blooms and eutrophication); Lake Maggiore and other Italian lakes; Lakes in Europe, Africa and other regions; Urban lakes; Alpine lakes; Saline lakes

ROLES OF NGOS AND CITIZEN PARTICIPATION

Citizen participation in lake basin management; Feasibility of sustainable tourism industry in lacustrian areas

GOVERNANCE AND MANAGEMENT CHALLENGES

Integrated Lake Basin Management (ILBM); Transboundary Water Assessment Program (TWAP); Management of conflicts; Socio-economical Issues; Lake basin governance challenges

HUMAN IMPACTS MANAGEMENT

Economic incentives; Education/public awareness; Alternatives to business-as-usual; Indigenous people/traditional methods

WATER RECOURSES AND USES

Urban water use; Agricultural water use; Fisheries; Transportation; Generation of hydropower

EUTROPHICATION PROCESSES, IMPACTS AND MANAGEMENT

Phytoplankton dynamics; Macrophytes; Harmful Algal Blooms (HABs); Nutrient loads and dynamics; Eutrophication assessment; Eutrophication control measures

LAKE BASIN BEST MANAGEMENT PRACTICES

Point sources; Nonpoint sources; Mitigation and adaptation; Biological methods; Ecohydrology

ABOUT PERUGIA AND ITS SURROUNDINGS



Perugia is the capital of the Province of Perugia and the Umbria Region, being located in central Italy. The town is of Etruscan origin and contains more than 160,000 inhabitants. The Acropolis of Perugia (about 490 m a.s.l.) is built on two contiguous hills: the Collina del Sole and the Collina Landone and was selected by the Etruscans because of its rich water environment.

Although no definite information about the formation of an early settlement exists (some sources date back to the 6th Century B.C.), Perugia was one of the most important Etruscan cities and homes, being one of the twelve "lucomonie" or cities gathered into the "Confederation" of Etruria.

The oldest urban center is enclosed by walls dating from the 3rd Century B. C., that are themselves incorporated into a medieval fortification (14th Century). The latter fortification encompasses the five villages (or districts) that have developed along the five main hill ridges towards the surrounding suburbs. This expansion took place in five directions, corresponding to the five Etruscan doors (Roman Porta Sole; Porta Sant'Angelo; Porta Santa Susanna; Eburnea Porta; Porta San Pietro) and has given the city a stellar shape that Renaissance architect Leon Battista Alberti compared to the fingers of a hand.

The central position of Perugia, located between the Adriatic and Tyrrhenian Seas, has historically guaranteed the city a strategic role, both economic and political. Its rich history is well represented by the works of art housed in the most representative cities, and the numerous monuments that characterize the urban profile of its historic center.

...ABOUT PERUGIA AND ITS SURROUNDINGS

Among these monuments is first and foremost the Fontana Maggiore, built in the 13th Century. after construction of the aqueduct through which water was channeled to the center of the city, and which is still accessible today. In the same Piazza IV November is the Cathedral of San Lorenzo, which was completed during the 15th Century. The Palazzo dei Priori built between the 14th and 16th Century, is now the Town Hall of the Municipality of Perugia, and hosts the superintendence of cultural and ethno-anthropological heritage of the Umbria Region. The Palazzo dei Priori also contains the National Gallery of Umbria, the region's most important museum, and where visitors can admire works of artists such as Pinturicchio, Perugino, Pietro della Francesca, Gentile da Fabriano, and other work of arts covering a time span between the 13th and 19th Century.



Among the many other architectural works worthy of mention is Rocca Paolina, a fortress built by Pope Paul III in 1540, at the end of the Salt War, in which Perugia fought against the Papal States imposing taxes on the importation of marine salt. Only one wing remains of this monumental

building, designed by Sangallo the Young, one of the greatest military engineers of the 16th Century. The area under the building, the major underground citadel, is still accessible, however, having become one of the symbols of the city. It is now crossed by a path of escalators leading from the main bus terminal up to the city center.

Perugia is the home of one of the oldest universities in Italy, founded in 1308, as attested by the Bull issued by Pope Clement V certifying the birth of the Studium Generale. In addition to the University of Perugia is the University for Foreigners, founded in 1925, being the oldest university in Italy addressed to foreigners, and which specializes in the teaching and diffusion of the Italian language and culture worldwide.

But Perugia is not only a homeland for Arts; rather, many famous

...ABOUT PERUGIA AND ITS SURROUNDINGS

scientists also lived in Perugia and developed their works here. Among the most important are Luca Pacioli, the father of accounting; Andrea Bina, inventor of the first seismograph; and Father Benedetto Castelli, inventor of the first rain gauge, as well as having a long scholarly relation with Galileo Galilei.

In this highly suggestive scenario, and rich history, art and science surroundings, many cultural activities take place, making Perugia one of the most dynamic and attractive Italian cities. The best globally-known initiatives range from international music festivals (Umbria Jazz) to promotion of economic activities and crafts (Umbria Books), and from local confectionery production (Eurochocolate) to large conferences in the field of media and information (International Journalism Festival), architecture (FestArch) and science (Perugia Science Fest).

Umbria is also known as the Green heart of Italy. The extraordinary balance between nature and human activity has created impressive landscapes ranking amongst the most beautiful in Italy. Crossed by the Apennines, a large part of the region is mountainous or hilly, with these areas being



characterized by the choreographies of erosion, including sinkholes, natural springs, rivers, streams and lakes that embellish the expanses of woods, pastures, and carefully-cultivated fields. Grape vines and olive trees leave an unmistakable mark on the landscape of the surrounding hills, and on the Umbrian cuisine made up of simple, natural ingredients. Cooking is tied to its traditions, wherein the main taste is certainly the truffles, of which there are about seven varieties.

The facilities to host the technical sessions (oral and poster), plenary sessions and all major events will be the two aforementioned Educational Institutions - the University for Foreigners of Perugia and the University of Perugia, together with many of the prestigious halls of the Government palaces adorning the town.

INTERNATIONAL SCIENTIFIC COMMITTEE

CHAIR:

Masahisa NAKAMURA (Shiga University)

VICE CHAIR:

Walter RAST (Texas State University)

MEMBERS:

- Nikolai ALADIN (Russian Academy of Science)
- Sandra AZEVEDO (Brazil Federal University of Rio de Janeiro)
- Riccardo DE BERNARDI (EvK2-CNR)
- Salif DIOP (Cheikh Anta Diop University)
- > Fausto GUZZETTI (IRPI-CNR Perugia)
- > Zhengyu HU (Chinese Academy of Sciences)
- > Piero GUILIZZONI (ISE-CNR)
- Luigi NASELLI-FLORES (University of Palermo)
- Daniel OLAGO (University of Nairobi)
- > Ajit PATTNAIK (Chilika Development Authority)
- Richard ROBARTS (World Water and Climate Foundation)
- Adelina SANTOS-BORJA (Laguna Lake Development Authority)
- > Juan SKINNER (Lake Atitlan Basin Authority)
- > Tsugihiro WATANABE (Kyoto University)

LOCAL ORGANIZING COMMITTEE

CHAIR:

Lucio UBERTINI (University of Rome "La Sapienza")

VICE CHAIR:

Piergiorgio MANCIOLA (University of Perugia)

SECRETARY GENERAL:

- Arnaldo PIERLEONI (T4E Perugia)
- Yasue HAGIHARA (ILEC)

MEMBERS:

- Kodwo ANDAH (University for Foreigners of Perugia)
- Chiara BISCARINI (University for Foreigners of Perugia)
- > Maddalena BOGLIARI (Umbria Fiere)
- Stefano CASADEI (University of Perugia)
- > Benedetta GRASSELLI (Umbria Fiere)
- Salvatore GRIMALDI (Tuscia University)
- > Alessandro LUDOVISI (University of Perugia)
- > Fernando NARDI (University for Foreigners of Perugia)
- Luigi NASELLI-FLORES (University of Palermo)
- Gianluca PAGGI (Province of Perugia)

ABOUT USMA



Umbria Scientific Meeting Association (USMA 2007)

c/o CNR - IRPI - Via della Madonna Alta 126 06128 Perugia, ITALY Tel/Fax: +39 075 5014420 Website: www.usma2007.it Email: info@usma2007.it

Umbria Scientific Meeting Association (USMA 2007) is a non-profit organization, founded in 2005 to organize the Scientific Assembly of the IUGG XXIV held in July 2007. The Association promotes and produces scientific, cultural and artistic events. It also works with governmental administrations, with other public or private NGO's, including foreign associations and institutions.

ABOUT ILEC



International Lake Environment Committee Foundation (ILEC)

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The International Lake Environment Committee Foundation (ILEC) is a non-governmental organization based in Japan. Since its foundation in 1986, ILEC has been promoting rational and sound management of world lakes and their catchment areas, consistent with sustainable development policies. It has an advisory body known as the Scientific Committee, composed of internationally-recognized scientists and experts on lake and reservoir assessment, management and conservation.

REGISTRATION FEES

Developed Countries

Early registration: € 350 (until May 15th, 2014); Full registration: € 400 On-Site registration: € 450; Student*: € 150

Developing Countries**:

Registration: € 200; On-Site registration: € 230; Student*: € 100

* Students must be under 35 years of age and enrolled in a full time academic program.

** Developing countries are identified in the Organization for Economic Co-operation and Development (OECD) report.

CALL FOR SPECIAL SESSIONS AND ABSTRACTS

CALL FOR SPECIAL SESSIONS

- The WLC15 technical program will include Special Sessions and Workshops, with the objective of complementing the regular program with new or emerging topics of particular interest.
- The Special Session submission process will be available on the website beginning on **November 15, 2013**.
- The deadline for submission of proposals for Special Sessions is **January 15, 2014**.

CALL FOR ABSTRACTS

- The WLC15 Scientific Committee will invite abstracts submission for oral and poster presentations beginning on **February 1, 2014**.
- Prospective presenters should carefully review the information provided on the WLC15 website and submit their abstract via the online form.
- The deadline for abstract submissions is March 31, 2014.

For more information visit the WLC15 website: www.wlc15perugia.com

NOTES



15th World Lake Conference



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