

1st Announcement



# 17<sup>th</sup> World Lake Conference

(Lake Kasumigaura, Ibaraki, Japan, 2018)

Harmonious Coexistence of Humans and Lakes - Toward Sustainable Ecosystem Services -

October, 15-19, 2018

Ibaraki-Japan

Tsukuba International Congress Center



- 【Host Organizations】 Ibaraki Prefectural Government,  
The International Lake Environment Committee Foundation (ILEC)
- 【Co-Hosts】 Ministry of Land, Infrastructure, Transport and Tourism (MLIT),  
Ministry of Environment (MOE), Tsuchiura City, Tsukuba City, Hokota City, Kasumigaura City,  
Ibaraki Town, Mito City, Council to Improve the Water Quality of Lake Kasumigaura,  
The Association of Lake Hinuma, Registered Ramsar Site
- 【Language】 English/Japanese
- 【Participation fee】 TBD (Details will be posted on the 2<sup>nd</sup> announcement)

17<sup>th</sup> World Lake Conference (Lake Kasumigaura, Ibaraki, 2018) Executive Committee

## Introduction

Many of the world's lakes are facing serious problems that threaten the sustainability of their life-supporting ecosystem services, including increasing pollution, loss of biodiversity, and the negative effects of climate change.

Recognizing these serious problems, the Convention on Biological Diversity was concluded in 1992 as an international framework for the comprehensive conservation of biodiversity and the sustainable use of biological resources. At the Tenth Meeting of the Conference of the Parties to the Convention on Biological Diversity (COP 10) held in Japan in 2010, a new strategic plan of the Convention was adopted, representing a new global direction for biodiversity since 2011.

A large-scale comprehensive evaluation on ecosystems, the Millennium Ecosystem Assessment advocated by the United Nations also was implemented from 2001 to 2005. The results of this global assessment suggested ecosystem changes affect human health and well-being. In addition, "consideration of the value of ecosystem services" and "recovery of damaged ecosystem" were also proposed as long-term goals. Relating these goals to the lake environment also raised awareness of "sustainable management of water and sanitation" and "terrestrial ecosystem, forest management, coping with desertification, conservation and recovery of biodiversity" as key issue to be addressed on a global scale.

In consideration of these realities and their implications for human and ecosystem well-being, it was decided to host the 17th World Lake Conference with the theme of "**Harmonious Coexistence of Humans and Lakes- Toward Sustainable Ecosystem Services -**".

## 17th World Lake Conference Aim

Water forms the basis of all life, and a variety of ecosystems that include humans have benefited greatly from it. Lakes are an invaluable resource for agriculture and fisheries, for industry, and for our culture, and the conservation of lake environments is of the utmost importance.

The 6th World Lake Conference, held in Ibaraki in 1995, adopted the theme "Harmonizing human life with lakes - toward the sustainable use of lakes and reservoirs". Lake use, environmental conservation, the securement and management of freshwater resources, and the effects of eutrophication and chemical substances were discussed, and opinions exchanged with the aim of striving for harmony between humans and lakes. Furthermore, as a result of placing a focus on the undertaking of aquatic environment conservation activities and environmental education, a large number of river basin residents and citizens' organizations participated in the conference, triggering an increase in citizen activities. Since the conference, a partnership between citizens, researchers, businesses, and government bodies has formed the basis of ongoing efforts to solve issues surrounding aquatic environments.

In recent years, topics related to ecosystems have been discussed at the World Lake Conferences. In 1992, The Convention on Biological Diversity was adopted based on the fact that biodiversity supports human existence and brings a variety of benefits to humanity, and plants and animals have no national borders so it is important that issues surrounding ecosystems are tackled globally. Countries around the world are mutually cooperating in research and information exchange.

Meanwhile, the Basic Law for Water Circulation came into force in Japan in July 2014 with the aim of comprehensively and integrally promoting policies concerning the water cycle in order to reassert that water is a resource that all humanity shares, to allow water to circulate healthily, and so that humanity can continue to enjoy the blessings that it brings. The law is based on fundamental concepts including the importance of the water cycle and integrated lake basin management, and establishes the respective responsibilities of local public organizations, businesses, and citizens, and the coordination and cooperation that should occur among them.

Humans have enjoyed the blessing of ecosystem services such as food and water supplied by ecosystems built on biodiversity. However, development activities and climate change have caused a drastic loss in biodiversity. At the 17th World Lake Conference, we will discuss how ecosystems can be maintained through greater conservation efforts – namely, the development of a society where humans and lakes can support each other and coexist in harmony. **Furthermore, information sharing and opinion exchange around what measures need to be taken in order for humans to continue to sustainably enjoy ecosystem services will be held among people involved with lakes, including residents, those engaged in agriculture, forestry, and fisheries, businesses, researchers, and government agencies.**

This conference is hoped to be a trigger for a variety of people to strengthen coordination with each other based on their individual responsibilities, bringing about new progress in the solving of lake-related issues.

## Ibaraki Prefecture and the World Lake Conference

In 1995, the 6<sup>th</sup> World Lake Conference – Kasumigaura '95- was held in Ibaraki Prefecture's Tsukuba City and Tsuchiura City. It has been 23 years since the conference was held in the prefecture, and the 17<sup>th</sup> conference will be Ibaraki's second time to be a host prefecture.

At the 6<sup>th</sup> World Lake Conference, we gained the opportunity to learn about the latest research results in the world to solve various problems such as eutrophication of lakes. It also triggered the promotion of citizen to participate in water conservation activities.

Through discussions at this conference, the current situation and challenges of lakes in the world were clarified. We also realized the importance of people collaborating on the conservation of lake environment and the necessity of international cooperation. On the final day, we sent out the "Kasumigaura Declaration," a guiding principle for the 21<sup>st</sup> century, to the world.

During the International Lake Environment Policy Forum, the governor of Ibaraki Prefecture proposed the conservation of water environment of rivers and lakes in the prefecture starting with Lake Kasumigaura, and established the "Ibaraki Kasumigaura Environmental Science Center (IKESC)" in 2005. IKESC aims to effectively perform its four functions - research and technical

development, environmental education, cooperation with and support for citizen's activities, and information exchange. These functions performed through partnership with citizens, researchers, businesses, and governments bodies.

In addition, in 2007, Ibaraki Prefecture fully revised the "Ordinance on the Prevention of Eutrophication of Lake Kasumigaura", which aims wastewater regulations containing nitrogen and phosphorus of factories and workplace. And Ibaraki Prefecture has enacted the "Lake Kasumigaura Water Quality Conservation Ordinance" which aims at all people in the basin of Lake Kasumigaura to work towards the conservation of lake water quality in all aspects of living and production.

Furthermore, in 2008, we introduced the forest and lake environmental tax, which is a voluntary tax revenue source for the purification of water, for the first time nationwide. Utilizing taxes, we are working on reducing pollutant loads such as domestic wastewater, measures against runoff from agricultural land, promoting water quality conservation activities by residents, conservation of waterside environment, and so on.

We hope to contribute to solving the problems surrounding the water environment around the world by disseminating the results after the 6<sup>th</sup> conference to the world. The organizers are looking forward to your visit.



Ibaraki Kasumigaura Environmental Science Center (IKESC)

### About World lake Conference

The history of the World Lake Conference (WLC) dates back to the Shiga Conference on Conservation and Management of World Lake Environment of 1984, known as LECS'84, which was held on the shore of Lake Biwa, Japan.

The aim of the LECS' 84, which was to contribute to promoting scientific approaches in the world lake basin management, has been inherited to the World Lake Conferences held in various parts of the world.

Today, the Conference is globally recognized as a place for multi-sectoral participants (i.e., academia, government, citizens, NGOs and enterprises) to exchange their views and experiences on the sustainable management of lakes and their basins.

As a summary and results, we are disseminating the declarations of conservation of lakes to the world from the venue.

The conference is held jointly by the International Lake Environment Committee (ILEC) and organizations of host countries and is held every two years. It has been held in Japan, the United States, Hungary, China, Italy, Argentina, Denmark, Kenya, India, and Indonesia.

### About ILEC

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.

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## Conference Schedule (Draft)

| Date                                    | Morning   | Afternoon                      | Evening                     | Full Day   |
|---|---|--------------------------------|-----------------------------|------------|
| October 14 <sup>th</sup><br>(Sunday)    | Student Conference  |                                | Welcome Party               | —          |
|   | Registration  |                                |                             |            |
| October 15 <sup>th</sup><br>(Monday)    | Opening Ceremony<br>Ibaraki Kasumigaura Prize<br>Award Ceremony | Keynote Speech<br>Policy Forum | Reception                   | Exhibition |
| October 16 <sup>th</sup><br>(Tuesday)   | Lakes Session   | Lakes Session                  | Workshop                    |            |
|   | Technical Sessions  | Technical Sessions             |                             |            |
| October 17 <sup>th</sup><br>(Wednesday) | Excursion   |                                | Workshop                    |            |
|   | Satellite Session   |                                |                             |            |
| October 18 <sup>th</sup><br>(Thursday)  | Kasumigaura Session   | Kasumigaura Session            | Participant<br>Get-Together |            |
|   | Technical Sessions  | Technical Sessions             |                             |            |
| October 19 <sup>th</sup><br>(Friday)    | Conference Summary  | Closing Ceremony               | —                           |            |
| October 20 <sup>th</sup><br>(Saturday)  | Optional Tour   |                                | —                           | —          |

※The schedule of the conference may change from time to time.

### Kasumigaura Session

Stakeholders in the Kasumigaura region discuss specific efforts regarding sustainable ecosystem services.

### Lakes Session

Citizens, administrators, researchers, etc., of lake regions in Japan and other countries discuss and share their specific and common problems, achievements and challenges in various aspects of lake basin management.

### Satellite Session

Forums and environmental events in the vicinity of main venue. (e.g., the Lake Kasumigaura and Lake Hinuma regions )

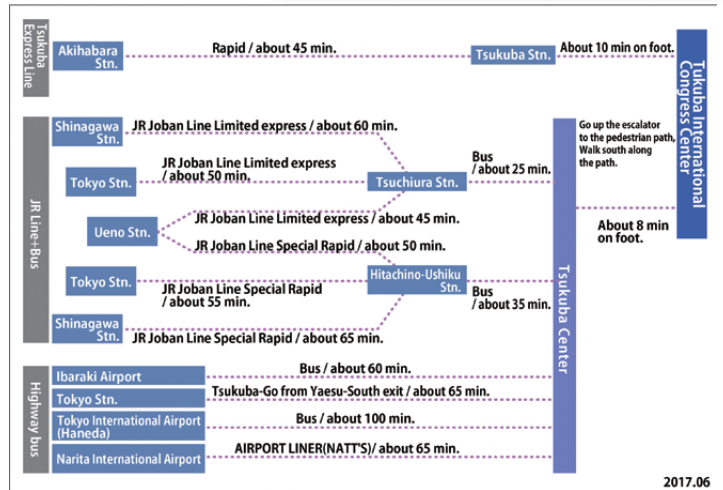


# Venue

## Main Venue: Tsukuba International Congress Center

Tsukuba International Congress Center was built with the aim of strengthening research exchange capabilities in Tsukuba and revitalizing the regional economy through holding conventions. In 2016, G7 Science and Technology Ministers' Meeting was held in Tsukuba, Ibaraki Prefecture.

It is 45 minutes by the high speed train "Tsukuba Express (TX)" from Tokyo (Akihabara), and about 1 hour by direct bus from Narita International Airport and Ibaraki Airport.



## Satellite Venues

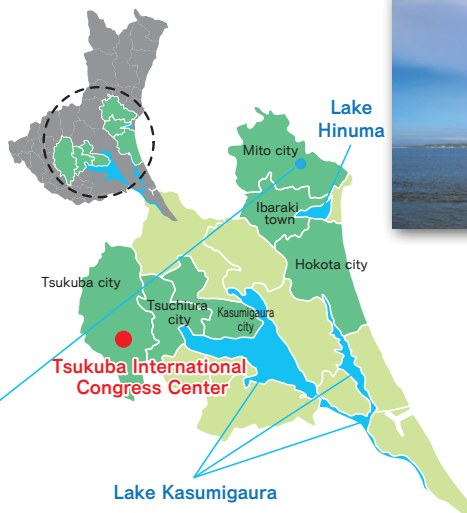
We hold environmental related events (Environment Festival, symposiums etc.) in cooperation with civic groups and other organizations in five cities and towns neighboring Lake Kasumigaura, Lake Hinuma and Lake Senba (Tsuchiura city, Kasumigaura city, Hokota City, Ibaraki Town and Mito City).

Events are held before the plenary session and the results of activities at satellite venues will be announced at the Kasumigaura session and lakes session at the main venue Tsukuba International Congress Center.



Lake Senba is located in the middle of Mito City, the capital of Ibaraki Prefecture. It is a freshwater lake that spreads out under Kairakuen, one of the Three Great Gardens of Japan.

From the viewpoint of biodiversity, due to its natural and rich environment, Lake Senba has been recognized by the Ministry of the Environment as an important high wetland.



Lake Hinuma is located in the central part of Ibaraki Prefecture and is a nationally rare brackish lake. Many organisms live in the basin, including more than 200 confirmed species of wild bird. In May 2015, it was registered in the Ramsar Convention as an internationally important wetland.



Lake Kasumigaura is the second largest lake in Japan with a lake area of about 220km<sup>2</sup>.

Lake Kasumigaura plays an important role in securing stable water resources in the metropolitan area including water supply sources. Lake Kasumigaura is a valuable asset that has brought diversified blessings to people, such as nurturing rich fishery resources and constituting a good landscape as part of the Suigo-Tsukuba Quasi-National Park.

# Overview and Themes of Breakout Sessions (TBD)

## Technical Sessions

During Technical sessions we will conduct discussion pertaining to the current status, sustainability, and issues surrounding lake ecosystem services.

### Technical Session 1 Biodiversity and Biological Resources

This session focuses on evaluation and conservation issues in regards to biodiversity and ecosystem services in lake, wetland, river and riparian areas.

**KEYWORDS** biodiversity assessment, biodiversity conservation, endemic species, threatened species, alien species, fisheries

### Technical Session 2 Preservation of Freshwater Resources

This session focuses on the sustainable utilization of freshwater resources, delving into discussion of water quantity related matters such as the regulation functions of river flow and water balance in watershed; water quality related matters such as pollution and sediment load from basin; pollution by chemical compounds; eutrophication; and lake management.

**KEYWORDS** water use and development, groundwater vs. surfacewater, pollution, sediment load, chemical pollution (pesticides, heavy metals), eutrophication issues

### Technical Session 3 Water Quality and Ecosystem Functions in Lake Environments

This session discusses lake ecosystems' functions such as water quality purification capacity, primary production, organic matter degradation, sediment oxygen consumption, sediment release, and other matters pertaining to water quality in lake environments.

**KEYWORDS** lake ecosystems functions, water quality purification capacity, primary production, organic matter degradation, sediment release, nitrification and denitrification, bottom dissolved oxygen, transparency, eutrophication, water blooming, climate change.

### Technical Session 4 Lakeside History and Culture

This session will focus on the wide variety of roles lakes play in facilitating things such as history, culture, lifestyles, tourism, and recreation.

**KEYWORDS** riparian areas, recreation, tradition, culture, community, community morale, landscape, tourism, nature hospitality, environment leaning, SATOYAMA, Ramsar Convention

### Technical Session 5

## Regional Activities and Matter Cycles

This session discusses the nitrogen and phosphorus cycle and the dynamics of chemical substances with a focus on how human activity impacts the material cycle in lake and basin areas.

**KEYWORDS** nitrogen and phosphorus cycle, chemical substances, forest preservation, SATOYAMA conservation

### Technical Session 6

## Monitoring Based on Scientific Knowledge

This session focuses on lake and river water quality and ecosystem monitoring techniques, discussing new knowledge-based techniques and the supporting advanced technologies and analytical practices utilized.

**KEYWORDS** Water quality instruments, monitoring technologies for lakes or rivers, monitoring technologies for ecosystems, data analysis technologies

### Technical Session 7

## Countermeasures and Technologies to Secure Sustainable Ecosystem Services

This session discusses various countermeasures to harness ecosystem services sustainably for the future including effluent regulation, domestic wastewater control, control of waste from agriculture and livestock, runoff quality control, technologies for water purification and reclamation, in-lake restoration technology and constructed wetlands.

**KEYWORDS** effluent regulation, domestic wastewater control, appropriate use of fertilizers, livestock waste control, runoff quality control, water purification and reclamation, sediment remediation and dredging, in-lake restoration technology, remediation technology of water environment, management based on environmental capacity

### Technical Session 8

## Citizens' Activities and Environmental Education

This session focuses on citizen activity and environmental education, exploring region-based practices to leave better lakes and basins for future generations.

**KEYWORDS** civil activity, public participation, environmental learning, environmental education, collaboration, SATOYAMA conservation, access to waterside, community revitalization, town planning

### Technical Session 9

## Integrated Lake Basin Management (ILBM)

This session will discuss various ways for the basin stakeholders to collectively pursue Integrated Lake Basin Management (ILBM) through incremental, sustained and long-term improvement of basin governance, prospectively resulting in successful conservation and improvement of basin ecosystem services.

**KEYWORDS** lake basin features vs. lake basin management, Integrated Lake Basin Management(ILBM), Integrated Lentic and Lotic Basin Management (ILLBM), lake basin governance (institutions, policies and programs, participation, technology, knowledge and information, funding and financing) , hardware-software-heartware, Relationship between ILBM and IWRM / IRBM, Ecosystem Service Shared Value Assessment (ESSVA)



## Introduction of Ibaraki Prefecture

Ibaraki Prefecture, home to Mt. Tsukuba and Lake Kasumigaura, is blessed with rich nature and a comfortable climate, a distinct history and culture, and coastlines covering a total length of 190 kilometers.

Ibaraki prefecture is a region with an array of attractions. In addition to its wealth of cutting-edge science, technology, and sophisticated manufacturing industries, Ibaraki Prefecture is renowned for its agriculture—boasting the second largest domestic agricultural output, and well-maintained land, sea and air wide-area transport networks.



Fukuroda Falls



Tsukuba Science City



Ushiku Daibutsu (Tallest Buddha)



Hitachi Seaside Park



Kairakuen



Kashimajingu-Shrine Ichinotorii

## Future Information

The 2<sup>nd</sup> announcement will be issued around January 2018.

The content of the 2<sup>nd</sup> announcement will consist of:

Paper submission guidelines and submission deadlines, instructions for conference registration, Exhibition registration, Publicly offered workshops, etc.

### 【Contact Information】

#### The 17<sup>th</sup> World Lake Conference (Lake Kasumigaura, Ibaraki, 2018) Executive Committee Secretariat (Environmental Management Division, Ibaraki Prefecture)

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