



NEWSLETTER

– Save Water, Save Lakes –

International Lake Environment Committee Foundation

This newsletter is also available in Japanese.



The 17th World Lake Conference in Ibaraki, Japan

The 17th World Lake Conference (WLC17) was held in Tsukuba, Ibaraki Prefecture from October 15th to 19th under the theme of “Harmonious Coexistence of Humans and Lakes: Toward Sustainable Ecosystem Services”. This was the second time and the first time in 23 years for the conference to be organized by Ibaraki Prefecture, where Lake Kasumigaura is located. It ended up as a big world conference with a total of 5,500 participants from 50 countries and regions.

The opening ceremony was held in the presence of Their Imperial Highnesses Prince and Princess Akishino in addition to guests from Japanese ministries, local cities, and international organizations, with an attendance of about 1,000 people. The ceremony started with greetings from Governor Kazuhiko Oigawa of Ibaraki Prefecture and President Kazuhiko Takemoto of ILEC, and then His Imperial Highness Prince Akishino gave remarks. Additionally, Dr. Keith Alverson, Director, UNEP International Environmental Technology Centre, expressed his expectation for issues of Water Quality, Integrated Water Resources Management and Ecosystem Services of Lakes and Reservoirs to be discussed in the conference.



Including the Student Conference which was held as a pre-conference event, a Policy Forum, Japanese and World Lake Sessions,

and Thematic Sessions were organized at Tsukuba International Congress Center as the main venue of WLC17. In addition, two excursions were held. At Lake Kasumigaura Session, stakeholders in Kasumigaura region discussed specific actions in an effort to maintain sustainable ecosystem services. The night before the last day, a networking party was held and participants enjoyed cuisine made from local ingredients and exchanged views across cultures and backgrounds. A ceremony for the best presentation award was also held at the party, with six awards for oral presentations and 11 for poster presentations being given.



Throughout the conference, the importance of collaboration was emphasized. Five Japanese Prefectures holding typical lakes announced at the conference that they had launched a partnership agreement for environmental conservation. This is one example of the various collaborations that were suggested taking the opportunity of this conference. If each conference participant, whether specialist or non-specialist, were to develop more interest in lakes and reservoirs, and other environmental issues, it will be a significant outcome of WLC17.

Finally, we would like to express our special thanks to WLC17 host organization, Ibaraki Prefectural Government and all other people and organizations involved.

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Lakes Session

In the World Lakes Session, case studies in Oceania, Africa and Latin America regarding the current state and future prospects of lake basin management were introduced.

- Both lakes and wetlands in the world including Oceania are in a rapid deterioration trend and therefore extensive cooperation is necessary.
- Lake clusters in the African Great Rift Valley are largely influenced by amplification of small external forces. It is important to incorporate Integrated Lake Basin Management (ILBM) into the national policy for long-term ecosystem restoration efforts.
- The challenge of Lake Chapala in Mexico is serious, but steady efforts are under way through regional collaboration. ILBM has played an important role in that effort.

Finally, the panel discussion concluded that the recovery process of ecosystem services should be reflected in the ILBM Platform Process, and it is important to continue



to accumulate many cases and share results widely.

In the Japanese Lakes Session, case studies on Japanese lakes involving citizens, administrations, researchers and private companies promoting cooperation within and among basins for solving environmental problems were introduced.

In connection with Shiga prefecture, a case study of removing an exotic aquatic plant, *Ludwigia grandiflora* subsp *grandiflora*, was introduced by the International Volunteer Union of Student Association (IVUSA). This activity was started by students who felt that “They want to protect Lake Biwa by themselves.” The cause was the multiplication of the plant. It was identified in Lake Biwa in 2009, and it spread out to 300,000 m² in seven years and was specified as an invasive alien species in 2014.

From now onward, they aim to improve the system of early detection and early removal of exotic aquatic plants, aiming at complete eradication.



Student Conference

On Sunday, October 14th, a Student Conference took place as part of the WLC17. It featured presentations and discussions on research or activities on water or lakes in order to raise awareness of children, the leaders of the next generation, on the water environment and encourage a love for their hometown where they can feel a sense of pride in the lakes and other bodies of water close to them.

The conference was divided into three sessions, namely, Elementary School, Junior High School and High School Sessions. Presentations and discussions were made on the theme “What can we do to preserve the gifts of nature to the coming future?” and “What can we do to live in harmony with lakes?”

Eight pupils participated in the Elementary School Session from Ramsar Biwa Kids Ambassadors Project which ILEC was contracted by Shiga Prefectural Government to carry out. At their presentation, they said “Fishermen and researchers we met through this project love Lake Biwa and take action and research to preserve water and

creatures of Lake Biwa. More people loving Lake Biwa makes somebody take actions to save Lake Biwa. So we want to increase the number of people who love Lake

Biwa, and convey the importance of the lake more and more.” This opinion was contained in the summary documents of the Elementary School Session.

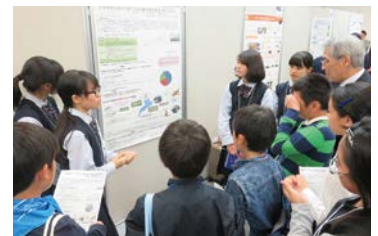
The summaries of each of the three sessions were as follows:

Elementary School Session: “The important thing is to have opportunities like this conference to discuss with many people and increase the number of people who love lakes.”

Junior High School Session: “We believe the following three issues are important; RECOGNITION by people of the importance of ordinary gifts from nature, COOPERATION for widening the circle of people with the same aspiration, and PARTICIPATION for continuing environmental conservation activities.”

High School Session: “The most important thing is for us to continue the present activities and relay them to the next generation.”

We hope the students’ opinions will be taken over to build a better future of lake environments.



Technical Sessions

Two day technical sessions were held on October 16 and 18 at the 17th World Lake Conference. More than 260 participants from 36 countries presented at nine parallel sessions each day. As with other World Lake Conferences, the conference was characterized by multi-sectoral participation, with researchers, government officials, company representatives, citizen-working groups and students all getting together in Ibaraki to discuss and exchange views and solutions for various environmental problems of the world's lakes and their basins.

ILEC delegates, mainly composed of its Scientific Committee Members, also presented their concrete efforts to address issues of the project lakes in their respective regions, or globally. At the end of each session, a lot of questions were received and active exchange of ideas was realized.

The technical sessions greatly contributed to the conference by serving as an arena of international exchange, crossing national borders and generations.

The following three groups from Shiga Prefecture introduced their



activities:

“Biwako Hojonosato”, a local citizen's association in Moriyama City aimed at the conservation of Lake Biwa and Akanoi Bay, introduced their activities including monthly river maintenance and environmental preservation studies for parents and their children.

“Suhara Sesaraginosato” introduced their activities on “Uonoyurikagosuden”, which is combined rice cropping and fish growth in paddy fields. They make fish ways from the lake to paddy fields and grow rice with reduced input of agricultural chemicals. Furthermore they provide opportunities for environmental education and for exchange between rural villages and the city.

“International Volunteer Union of Student Association, IVUSA” introduced their activities in Lake Biwa to remove an exotic aquatic plant, *Ludwigia grandiflora* subsp. *grandiflora* with other various groups.

After each session, presenters actively exchanged opinions with participants.



Ex JICA-ILEC Training Course Participants Gathering

A gathering for Ex JICA-ILEC Training Course participants was held at the WLC17.

Ten former trainees from Ghana, Kenya, Chad, Thailand, Azerbaijan and Turkey, mainly those who participated in the training from 1995 to 2014 gathered and they reported on the activities currently being undertaken in their countries based on the results of JICA-ILEC training. In addition two participants from Vietnam attended as observers.

In response to presentations by participants, reviews were given from former training course leaders.

After that, there was active exchange of opinions on the future establishment of JICA-ILEC Training Course networks and information exchanges among trainees.



Closing Ceremony (Ibaraki Kasumigaura Declaration 2018)

WLC17 closed on October 19th after 5 days program with many participants. At the Conference Summary, each session leaders presented about their summaries and, Prof. Saburo Matsui, Chairperson of WLC17 Project Promotion Committee, summarized whole conference and explained about contents and process of examination to draft “Ibaraki Kasumigaura Declaration”. In Closing Ceremony, Mr. Akira Saito from Ibaraki prefectural Government read “Ibaraki Kasumigaura Declaration” to the audience followed by the greeting from Governor Kazuhiko Oigawa.

The overriding principles of the Declaration are “sharing the benefits



of ecosystem services fairly and equitably” and “utilizing ecosystem services sustainably”. In addition, it indicates that we must affirm the importance of lakes and other lentic waters in the water environment and aim to raise their positions to be mainstream in the global water agenda.

Prof. Walter Rast, Chairman of ILEC Scientific Committee, stated he intended to act for mainstreaming lakes in the global water agenda at the chance of The 9th World Water Forum (WWF9) planned to be held in Senegal in 2021.

Lastly, ILEC President Kazuhiko Takemoto expressed his gratitude to all people to be involved and participated. We are looking forward to seeing you at WLC18 in Mexico.

Please visit our website and find the articles and deliverables of WLC17:

<https://www.ilec.or.jp/wlc/wlc-5005/>

Report from a Former JICA Training Participant

Itzel Patricia Velázquez Hinojosa (Mexico)

I am a lawyer and work as a Project Manager in the National Water Commission, which is a decentralized organization of the Federal Government of Mexico. The main functions we perform are reviewing and ruling on requests to grant concessions of national waters to individuals for the purpose of taking advantage of, exploiting or using the water resource, as well as providing legal training courses and workshops at the national level for the proper application of the National Water Law, as well as promoting water culture and the importance of its care, to be able to achieve the conservation of water resources.

I was one of the ten participants of the training course on Integrated Lake, River and Coastal Basin Management for Sustainable Use and Preservation of Water Resources held in 2017. The course was a unique and very rewarding experience. The concept of Integrated Lake Basin Management (ILBM), which was the main focus of the course, enables us to obtain an appropriate approach to achieve sustainable management of lake basin resources, through a governance arrangement based on commitment to continuous improvement of the six pillars of governance. The six pillars must be integrated with each other to achieve real progress. The concerned administration has to define the relevant policies which are the starting point of the actions to be carried out; there has to be support and collaboration among various government agencies and institutions; with involvement of all key stakeholders including ordinary citizens and the private sector; and use of relevant technological and information systems.

It was an enriching experience to interact and share experiences with other members of the training course with a diversity of thoughts, religion, values, practices, and socio-economic backgrounds. These differences allowed us to evaluate the positive aspects and the qualities that stand out in our countries, and most importantly they allowed us to know the elements and aspects that could be improved or modified to achieve real change towards becoming a developed country, combining economy, politics, education and financing.



Currently, the main challenge facing Mexico in terms of national water from the legal point of view is the need to fully update and adapt the National Water Law to the current needs, that is, to empower the National Water Commission to implement national water programs, environmental education, citizen participation, and social responsibility in companies, and to achieve a policy focused on the integral management of water, based on actions aimed at the proper administration and care of the resource, considering climate change, population growth, as well as the needs of industry, the countryside and urban supply.

Therefore, as a lawyer, I am interested in contributing to the implementation of the various legislation related to lake basin management and actively participating in the activities of the River Basin Council, with the purpose of implementing an education system that includes environmental education, knowing the use and exploitation of water, the importance of taking care of it, and avoiding its contamination. I hope that all Mexicans will have the firm conviction that care of the environment is everyone's responsibility, that continuing to enjoy the natural resources of Mexico is dependent on the awareness of the care and preservation of the environment that every Mexican has.



Looking in the Mirror - How Societies and Lakes Co-exist

Pieter van der Zaag

Professor,
IHE Delft and TU Delft



Many societies develop a puzzling relationship with lakes: while they depend on critical resources provided by a lake, they at the same time pollute it or divert too much water from it, compromising the lake's stream of benefits. It is not difficult to find evidence of societies trapped in such a paradoxical predicament - in the Americas, in Africa, Asia, Europe and Oceania. The associated images of drying lakes or lakes turning green are well known.

Although many local communities have traditionally been aware of their dependence on lakes, modern societies take time to acknowledge such a dependency and seem to prefer to remain in a state of denial. This obviously hampers their capacity to learn, take remedial action and adapt their economies and institutions towards more sustainable development pathways. In this context the experience of The Netherlands may be interesting.

◆ The Netherlands and its dependence on lakes

The Netherlands, made up of the estuaries of the Rhine, Meuse and Scheldt rivers, is surrounded by fresh, brackish and salt water bodies. It has a history of dealing with these water bodies, trying to control them - against riverine floods and storm surges from the sea, closing some of them off from the sea, turning others into land (polders), trying to curtail the pollution of the remaining freshwater lakes, and, most recently, giving polders back to nature!

Whereas Dutch water knowledge has a good reputation, its creation was unplanned and not always straightforward. This knowledge was often triggered by crises that could not be ignored - often flood events or pollution disasters. Knowledge evolved through "learning by doing". Completely closing off rich dynamic and biodiverse brackish estuaries to ensure safety from storm surges, for example, had the unintended consequence of creating inert and dead fresh water bodies. This triggered social tensions, political debates, technical experiments and innovative solutions - in the process new knowledge was generated.

Similarly, the combination of high population density and intensive agriculture created problems of diffuse pollution of nitrates and phosphates. The resulting eutrophic state of shallow lakes was considered a problem by many. But restoring them to their original state proved much more difficult than anticipated. Research found that eutrophic shallow freshwater systems could have alternative stable states (Scheffer, 1989), which not only made restoration more challenging, but also their anticipation. Now, 30 years after this novel insight, The Netherlands and Europe at large are still struggling to reduce nitrogen and phosphorus pollution from intensive agriculture, despite many policies, laws and regulations (Figure 1).

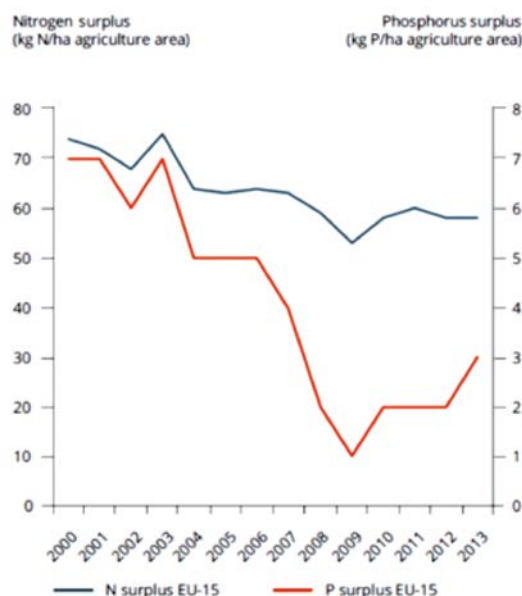
◆ The socio-hydrology of lakes

Lakes are like mirrors that reflect society - the state of a lake is an indicator of the state of the society and its values. Thus when societies have a deep look into the lake they depend on, whatever they see can reveal and somehow mirrors their own state of affairs.

The relationship that develops between a particular iconic lake and the society of which it is part can be complex. As a lake is a valuable resource that generates important streams of benefits, the capture and distribution of which may be culturally inspired and politically challenged. A lake may respond with delays to shocks, stressors and measures, because of a combination of vested interests, time lags and hysteresis effects. This in turn may lead to alternative explanations, competing interpretations and political and scientific debates about the way forward.

The multifaceted relationship that a lake develops with society thus makes it a compelling object of study: not only to understand the relationship between nature and society, but also how this influences the process of generation of knowledge. It is therefore worthwhile to develop a new research line that studies the socio-hydrology (Sivapalan et al., 2012) of lakes.

Pertinent research questions to address include: what are sustainable development pathways for such sensitive systems, and how do societies identify these? What lessons can be learnt for other lakes and for effective policies more generally? Desert lakes - end lakes of endorheic basins - would be particularly interesting to study from this perspective, as they are very vulnerable to human interventions, and thus sensitive mirrors.



(Figure 1)

Trend in nutrient surplus in agricultural areas resulting from inorganic fertilizer use in 15 EU countries (Source: EEA, 2018; p. 69)

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International Colloquium(Side Event of WLC17)

ILEC organized an International Colloquium as a side event at WLC17, on 14th October. The Colloquium was designed to focus on how best to recognize and mainstream lakes into the global water arena, and more than 50 people including related experts from various international and governmental organizations participated from 16 countries.

Presentations were made on regional and national level programs in Africa, East Asia, South East Asia, and Europe on the application of Integrated Lake Basin Management (ILBM), including the relevance of their experiences in regard to mainstreaming lakes into the global water agenda. Following these presentations, an open discussion involving all Colloquium participants was held based on the shared understanding that lakes are a major contributor to global human water security and aquatic biodiversity, containing more than 90% of the liquid surface freshwater on earth. Nevertheless, the state of lake environment is seriously deteriorating both in developed and developing countries. Moreover, lakes remain a “critical missing link” in the global water agenda.



The Colloquium proposed the following action points as a way forward to mainstreaming lakes in the global agenda:

- ◆ Promote country-level efforts to mainstream lakes at the national level.
- ◆ Initiate a global platform to mainstream lake issues at the global level.
- ◆ Promote efforts to consolidate and share data, information and knowledge on lakes on a global scale.
- ◆ Mainstreaming lakes into the global water agenda crosses many sectors, making it everyone's responsibility.

Scientific Committee General Meeting in Ibaraki

ILEC Scientific Committee (Sci Com) held a general meeting at the WLC17 in Tsukuba. Sci Com is composed of experts in the field of lake management from various countries, and they contribute to the international activities of ILEC. Prof. Pieter van der Zaag from the Netherlands was welcomed as a new Sci Com member.

At the meeting, members shared the visions of priority activities indicated in the ILEC Strategic Plan (2018-2022), such as global expansion of Sci Com activities through decentralization, mobilizing local human resources to contribute to ILEC activities, and developing collaborations with international organizations and the alumni of ILEC training programs.

After discussing about personnel matters for the 13th term of Sci Com starting from 2019, members reported their regional activities. From Asia participation in the International Lake Conference 2018 in Pokhara, Nepal, and a plan to present the outcome of WLC17 at an ILEC organized



side event at Ramsar COP13 in Dubai were introduced. In Latin America, it was reported that a presentation was made at the 8th World Water Forum (WWF8) in Brasilia. From Africa, the activities toward adoption of ILBM in the National Water Strategy of Kenya were reported. Likewise, ILBM activities in West Africa were reported.

We expect continued leadership of Sci Com for our global projects.

ILEC Received 2018 JICA President Award

ILEC was honored with the 2018 JICA President Award on October 1st, 2018 at JICA Headquarters. The award is to commend preeminent achievements to human resource development and social development in developing countries through JICA's international cooperation

activities. ILEC's long-term contribution through Lake Basin Management Training as a part of JICA's activities was recognized.

JICA理事長賞 表彰式



Our Activities Overview (FY2018)

- **April** 8-25 ILEC took part in the Ha Long Bay Project for Green Growth (Quảng Ninh Province)
- 25 Delegates from Ministry of Environment and Forestry, Indonesia visited Japanese Ministry of the Environment, Ibaraki Prefectural Government, Shiga Prefectural Government and ILEC
- **May** 7 ILEC received a donation from Kansai Urban Banking Corporation (Otsu) **[PIC①]**
- 11-13 ILEC attended International Lake Conference 2018 (Pokhara, Nepal)
- 24-25 ILEC visited World Bank, Global Environment Facility and UNEP to discuss the promotion of ILBM. (Washington D.C.)
- 25 ILEC received a donation from Kinki Rokin (Otsu)
- **June** 23 Ramsar Biwa-Kids Ambassadors 1st Pre-Workshop (Yasu)
- 25-28 Delegates from Terengganu, Malaysia visited ILEC and other related facilities
- **July** 9-13 ILEC organized “LAKES Workshop” in Indonesia (Bogor, Jakarta)
- 15 A Lake Biwa seminar for parents and children was organized in collaboration with Kinki Rokin (Kusatsu)
- 26 Ramsar Biwa-Kids Ambassadors 2nd Pre-Workshop (Hikone & Nagahama)
- **August** 20-21 Validation workshop on Kenyan national lake basin management strategy was held (Nairobi, Kenya) **[PIC②]**
- 22 Transgenerational exchange program for the Biwa-Kids Ambassadors (Kusatsu)
- 25- Delegates from the Ha Long Bay Project for Green Growth visited Japan (Otsu, Koka & Kusatsu, - Sep.2)
- **September** 16 Ramsar Biwa-Kids Ambassadors 3rd Pre-Workshop (Yasu & Kusatsu) **[PIC③]**
- 26-29 ILEC attended the 2nd international workshop of MEMS/ sensor system (Ho chi minh, Vietnam)
- **October** 1 ILEC received the 2018 JICA President Award (Shinjuku)
- 14 Ramsar Biwa-Kids Ambassadors participated in the WLC17 student conference (Tsukuba)
- 14 International Colloquium was held in Tsukuba
- 15-19 The 17th World Lake Conference was organized in Tsukuba
- 17 Ex JICA-ILEC Training Course participants gathering was held (Tsukuba)
- 17-19 ILEC participated in Biwako Environmental Business Exhibition (Nagahama) **[PIC④]**
- 19 ILEC Scientific Committee General Meeting (Tsukuba)
- 21 Activity Exchange meeting (Kusatsu)
- 25- JICA Training Program “Integrated Basin Management for Sustainable Use and Preservation of Water Resources” started (- Dec.21) **[PIC⑤]**
- 26- ILEC held a Side Event at Ramsar COP13 to report about the WLC17 (Dubai)
- **November** 12 Local high school students and teachers visited the JICA training participants at ILEC (Kusatsu)
- **December** 6 A technical exchange meeting of companies and JICA trainees was held (Kusatsu)
- 9 Ramsar Biwa-Kids Ambassadors participated in Ohmi children Eco-club activities exchange meeting (Kusatsu)
- 20 Opinion Exchange Session with Specialists Related to ILEC was held (Otsu)



2019

- **January** 9-10 Stakeholder workshop on Kenyan national lake basin management strategy was held (Kisumu, Kenya)
- 10-24 ILEC took part in the Ha Long Bay Project for Green Growth (Quảng Ninh Province)
- 11 ILEC held an annual meeting with UN Environment (Nairobi, Kenya)
- 16-17 ILBM workshop for West Africa was held (Abidjan, Cote d'Ivoire) **[PIC⑥]**
- 23-30 ILEC hosted the Japan-Asia Youth Exchange Program in Science (Otsu, Kusatsu & Omi-hachiman)
- **February** 24 Ramsar Biwa-Kids Ambassadors Final Report meeting (Kusatsu)
- 27- ILEC organized “LAKES Workshop” at ILEC (Kusatsu, Mar.1)

The 18th World Lake Conference will be held in 2020

The next World Lake Conference (WLC18) was announced to be held in 2020 in Guanajuato, Mexico by Dr. Sergio Silva, Vice President of University of Guanajuato. It will be the first time in 23 years for the World Lake Conference to be organized in Latin America after WLC7 in Argentina in 1997. Mexico has some unique lakes. Lake Chapala is scenic and the biggest lake in Mexico with many islands in it. Lake Texcoco is remarkably reducing in area due to reclamation. Mexico is a historical country where ancient Maya and Aztec civilizations developed, and has 34 registered world heritages.



Guanajuato is located in the middle of Mexico and is said to be one of the most beautiful cities in Mexico because of its colorful colonial-style lined streets, which are registered as a World Heritage Site. University of Guanajuato, the host of WLC18, is one of the oldest universities in Latin America and has a historical campus



built in the 18th century. You can also visit Yuriria, an artificial lagoon for agriculture, around the venue and enjoy its beautiful nature. More detailed information will be provided on our website.

We are waiting for your participation in the next World Lake Conference in this attractive place.



Introduction of New Board Members, ILEC (Replacement of Trustee and Director as of April 1st, 2018)

Trustee

Mr. Masaki Hirowaki (Director General, Department of Lake Biwa and the Environment, Shiga Prefectural Government) was appointed as Trustee to succeed Mr. Toshio Takasago.

Director

Mr. Katsuhiro Shimato (Director, Environmental Policy Division, Shiga Prefectural Government) was appointed as Director to succeed Mr. Hirofumi Takagi.

Thank You for Your Support!

● In the Fiscal Year 2018, ILEC received donation from the following Organizations



● In the Fiscal Year 2018, ILEC received sponsorship from the following Supporting Member Organization (90,000 JPY or more)



Your donation could provide funding to our activities on the world lake environmental conservation. Online donation system is also available. If you are interested, please visit our webpage at <https://www.ilec.or.jp/en/support/>



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