



NEWSLETTER

INTERNATIONAL LAKE ENVIRONMENT COMMITTEE FOUNDATION

— For Better Lake Management —

This Newsletter is also available in Japanese.

THE SIL WORKSHOP OF THE AFRICAN GREAT LAKES

— International Symposium on Resource Use and Conservation of the African Great Lakes —

The International Society of Limnology (SIL) workshop, "Resource Use and Conservation of the African Great Lakes" was held at Bujumbura, Burundi, north-eastern end of Lake Tanganyika, from 29 November to 2 December 1989.

The working group on the African Great Lakes was settled at the General Assembly of the SIL Congress at Hamilton, New Zealand, in February 1987, with Rosemary Lowe-McConnell of the United Kingdom as the convenor, and the workshop originally scheduled for late 1987 or early 1988. However, various reasons beyond our control forced it to be postponed several times, and the convenor changed to C. Roest of the Netherlands.

Over 100 scientists, officers and governmental decision makers from 23 countries; Austria, Belgium, Burundi, Canada, Chad, Finland, France, Italy, Japan, Kenya, Malawi, Mozambique, Netherland, New Zealand, Nigeria, Rwanda, Tanzania, Uganda, United Kingdom, USA, Zaire, Zambia and Zimbabwe attended the workshop.

Every day during the workshop schedule, presentation and discussion took place from 8 am to 10:40 pm. In the presence of several ministers of the Burundi Government, the workshop began with an overview of its aims and objectives by G. Ntakimazi of the National University of Burundi. During the mornings and afternoons five sessions were held under the following categories: Fish stocks and fisheries, Scientific value, Water, Oil, and Tourism. The evenings were given over to more intimate presentation and discussion on the following 8 sessions: Fisheries of Lake Tanganyika, Fisheries of Lake Kivu, Inshore fisheries, Conservation and management, Fisheries of Lake Victoria, Fisheries of Lake Malawi/Nyasa and Uganda, Water quality, and Scientific value.

The extremely important scientific value of the African Great Lakes from respective points of view, and their susceptibility to pollution and other artificial effects were emphasized and reconfirmed by all participants.

A heated discussion took place concerning fish stocking. In Lake Victoria, for instance, following the introduction of an exotic Tilapine fish and piscivorous Nile perch

serious damage has occurred to the native fish community. The situation has become so severe that along almost all shores of the lake native fishes have not been caught during the past 10 years, and all endemic Haplochromine fishes are facing extinction. In official fisheries statistics, however, the present fishery yield is several times greater than that of previous years. Accordingly, all pure biologists as well as some fishery scientists cautioned against the future stocking of exotic fish species to any natural bodies of water; whereas some other fishery scientists strongly favoured also introducing such species to some other lakes in Africa in order to increase protein resources. In this context, however, one participant's comments concerning the situation in Lake Victoria are particularly relevant. He noted that, formerly, small-sized native fishes could be caught by most native persons themselves, but that the exotic Tilapine and Nile perch are too big for the average fisherman to catch and are presently too expensive for native people to buy. If this situation prevails in most areas, then, contrary to the official statistics, native people around the lake have undergone



The shore of Lake Tanganyika on the North-western end of the lake, overlooking the Uvira Station of the CRSN(left). (Photo: Masahide Yuma on 23 April, 1988).

a dramatic decrease in their protein intake and economy. Finally, all participants agreed on the necessity of well considered assessments from natural and social scientific points of view prior to such kinds of stocking.

Another serious topic of discussion was oil pollution. Some oil companies are now making approaches for permission to drill the bottom of Lake Tanganyika and Lake Malawi/Nyasa. Experience of oil pollution in Nigeria and other parts of the world was well demonstrated, and all participants were extremely worried about the potentially catastrophic effects of such pollution in these deep and vulnerable lakes.

On the final day of the workshop, two excursions were

made. One was a visit to the source of the Nile and other scenic places in Burundi; the other was a visit to the Uvira Station of the National Research Centre for Natural Sciences (CRSN) in Zaire, formerly named the IRSAC-Uvira. All participants on the latter excursion greatly enjoyed and admired the cooperative research on the ecology and limnology of Lake Tanganyika between Zairean scientists and Japanese researchers, in which extremely important studies have been continued since 1979 and have resulted in the publication of over 300 papers and reports to date.

Hiroya Kawanabe
Faculty of Science, Kyoto University

4TH INTERNATIONAL CONFERENCE ON THE CONSERVATION AND MANAGEMENT OF LAKES "HANGZHOU '90"

ILEC is proud to announce the fourth bi-annual International Conference on the Conservation and Management of Lakes. This conference is being co-organized by the Chinese Research Academy of Environmental Sciences and other institutions including ILEC, and is scheduled to be held in Hangzhou, China between September 5 and 9, 1990.

This conference follows three previous conferences held since 1984 on Lake Biwa, Japan; Lake Huron, USA; and Lake Balaton, Hungary. Following the pattern of these conferences, "Hangzhou '90" will feature presentations on a broad range of topics related to conservation and management of lakes.

Also, in keeping with the tradition of these conferences, participants will be treated to a sampling of the local culture of the host lake and its surroundings. In Hangzhou, that lake is Lake Xi-Hu. Although the name "Xi-Hu" translates into English simply as "West Lake", it has been a symbol of Hangzhou for over 2,000 years. Lake Xi-Hu has blue waters, the surrounding is green hills, and its attractive landscape has earned it the reputation as "an earthly paradise", which is confirmed by an old Chinese saying: "Above us there is paradise, and here below we have Suzhou and Hangzhou."

The main topics of the conference are listed below. Those who interested in presenting a paper related to any of these topics are requested to send a typewritten

abstract (500 words or less-standard format) to the Secretariat of the Preparatory Committee by April 30, 1990. The conference proceedings will be compiled and published a few months after the conference, with contributors required to submit their final manuscripts before October 20, 1990.

◆ VENUE:

The Conference will be held at the Hangzhou Shangri-La Hotel in 2 Beishan Lu, Hangzhou, China.
Tel: 0571-22921 (during the conference), 4022542
(Before and after the conference) Beijing.

◆ MAIN TOPICS

1. Problem Identification and Case Studies:
 - a) Siltation, acidification, eutrophication, toxic contamination and other health problems.
 - b) Role and protection of bio-communities in water and wetlands.
 - c) Compatibility between different lake uses.
2. Sustainable Management of Lakes/Reservoirs and their Basins:
 - a) Strategies for the control of pollutant sources.
 - b) Choice of adequate technologies.
 - c) Water resource economics.
 - d) Modeling and planning.
 - e) Institutional and legal aspects.
3. Special Sessions on the Interaction of Local, National and International Agencies, Scientists and Citizens in Lake Management:
 - a) Integrated lake management.
(Sponsored by International Water Resources Association)
 - b) Citizen participation and environmental education in lake management. (Sponsored by ILEC)

◆ SPONSORS AND SUPPORTING ORGANIZATIONS (provisional)

China National Environmental Protection Agency
Chinese Research Academy of Environmental Sciences
International Lake Environmental Committee Foundation
United Nations Environmental Programme
International Water Resources Association
International Association of Theoretical and Applied Limnology



International Association on Water Pollution Research
and Control and other Chinese institutions

■ WORKING LANGUAGE:

The official language of the Conference is English and Chinese, and simultaneous translation between English-Chinese will be provided.

PROVISIONAL PROGRAMME

Sep. 4		
Morning	Arrival	
Afternoon	Registration	
Sep. 5		
Morning	Opening Ceremony (Chaired by Prof. Liu Hongliang) Keynote Addresses Mr. Qu Geping (Administrator of China NEPA) Dr. Tolba (Director of UNEP) Mr. Chai Songyue (Deputy Governor of Zhejiang Province) Mr. Xiu Yunhong (Deputy Mayor of Hangzhou City) Dr. Tatuo Kira (Chairperson of ILEC) Tea break Invited Speeches Lunch break	
Afternoon	Session I Problem-Identification and Case Studies, acidification, Session II Siltation, and toxic contamination and other health problems Tea break Afternoon Sessions Continued Welcome Reception	
Evening		
Sep. 6	Morning	Session I Integrated lake management. (Sponsored by IWRA) Session II Strategies for the control of pollutant sources
	Afternoon	Session I Role and protection of aquatic bio-communities and wetlands Session II Choice of adequate technologies
Sep. 7	Morning &	
	Afternoon	Field Trip
	Evening	Hangzhou Evening
Sep. 8	Morning	Session I Compatibility between different lake uses Session II Water Resource economy
	Afternoon	Session I Modelling and planning Session II Eutrophication of Lakes
Sep. 9	Morning	Session I Institutional and legal aspects Session II Citizen participation and environmental education (Sponsored by ILEC)
	Afternoon	Closing Ceremony Report on Session Meeting by Session Chairmen Address by Dr. Tatuo Kira Speech by the organizer of Next Conference Closing Speech by Prof. Liu Hongliang Farewell Party (with Entertainment)

* * * Logistical Information * * *

◆ ENTRY INTO CHINA

The Conference Secretariat will send you an official invitation issued by the Chinese Environmental Protection Agency. Please apply immediately for your entry visa at the Chinese Embassy or Consulate in your country as soon as you receive the invitation.

◆ HOTEL ACCOMMODATIONS

A selection of hotel rooms ranging from \$16(US)-\$80 single occupancy, and \$27.50-\$45 per person twin occupancy will be available for reservation. All rooms include private bath, air conditioner, color TV and telephone. Please note that a deposit of US \$100 is required.

◆ SOCIAL EVENTS

In addition to a full-day field trip, a Welcome Reception and Farewell Party are included at no extra charge. In addition, "Hangzhou Evening" — a banquet with dancing and performance of folk arts will be held at a small island on Lake Xifu for an additional \$20 per person.

◆ PROGRAMME FOR ACCOMPANYING PERSONS

This package includes the social events described above, as well as the following day tours: Lingyin Temple, Tomb and Temple of Yue Fei, Downtown Markets, Hupau Spring, Liuhe Pagoda, Silk Fabric, Dragon Well Green Tea Farm.

◆ POST-CONFERENCE TOURS

A selection of 5-10 day package tours of China will be made available to those who wish to extend their stay beyond the conference. Prices for these tours range from US \$736.89-\$1293.20 single, and \$625-\$1162.70 per person twin. Tours are arranged by Hangzhou International Convention Center, and full pre-payment is required.

◆ CONFERENCE REGISTRATION

	Advanced Registration	Late Registration
Participant	US \$250	US \$300
Student	US \$125	US \$150
Accompanying Person	US \$125	US \$150

HURRY !!! DON'T MISS OUT !!!

Please keep in mind the April 30, 1990 deadline for:
abstract submission,
advanced registration,
hotel reservation, and
post-conference tour reservation.

For registration forms and full details regarding the conference, related activities, and post-conference tours, please contact:

Mr. Zhang Yutian
Secretariat of Preparation Committee, "Hangzhou '90"
Foreign Affairs Office
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100012 Beiyuan, Anwai
Beijing, The People's Republic of China
Telephone: 4022542 Cable: 1064
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INTERNATIONAL SYMPOSIUM – "ECOLOGY FOR TOMORROW"

An ecological symposium entitled "Ecology for Tomorrow" was held during 2-3 November 1989 at Lake Biwa Research Institute in Otsu, Japan.

In recent years, rapid population growth, excessive industrial developments and urbanization ongoing worldwide have brought forth a marked rate of change in the qualities of the global natural environment. It has also influenced human activities of mentality to the extent that the problems about environmental degradation and even crisis are concerns of growing importance to our life in not only material but also spiritual terms. In view of the situation, this Symposium aimed at accessing recent achievements and future prospect of ecological studies in such context.

Taking the opportunity of the tenth anniversary of "Shiga Prefectural Ordinance on the Prevention of Eutrophication in Lake Biwa", Shiga Prefectural Government, which has been engaged in a special endeavour to preserve water environments of Lake Biwa and kept earnest concern for the development of ecological research as foundations for such conservation efforts, took initiative in organizing the symposium. Accepting the proposal by the Government, the Ecological Society of Japan and the International Association for Ecology

were joint organizers, and ILEC a co-sponsor.

The symposium was also placed as a satellite meeting of the Fifth International Congress of Ecology to be held in Yokohama, Japan in August 1990, hoping that the symposium will contribute to the further advancement of ecology toward the twenty-first century. One-fifty researchers and administrators attended the symposium, including 10 overseas lecturers and discussants from 7 countries.

The symposium was addressed by Shiga Prefectural Governor Minoru Inaba, Japan Ecological Society President Prof. Kawanabe, and International Association for Ecology President Prof. Golley, and two days' heated discussion was developed, covering such themes as basic research, civil participation, cooperation between research and administration. In particular, role of ecology and ecological researchers in regional development became core of the discussion, and need of cooperation between researchers as information-suppliers and administrators as policy-implementors was stressed.

On the third day, participants enjoyed a boat excursion on the southern Lake Biwa, with water quality surveillance on the boat and inspection of lakeshore landscape.

Program

November 2 [Thu.]	Lecture	John M. Cherrett	U.K.	Professor, School of Biological Sciences, University College of North Wales	The contribution of ecology to our understanding of the natural world: A review of some key ideas
	Lecture	Gregory J. Hinkle	U.S.A.	Department of Botany, University of Massachusetts	Symbiosis and Gaia hypothesis
	Lecture	John A. Endler	U.S.A.	Professor, Department of Biological Sciences, University of California, Santa Barbara	Ecology and natural selection
	Lecture	Ryohei Yamaoka	Japan	Kyoto Institute of Technology	Chemical approach for understanding the interactions among organisms
	Discussion	Paul F. Maycock	Canada	Professor, Department of Botany, University of Toronto	
		Hiroya Kawanabe	Japan	Professor, Kyoto University President, Japan Ecological Society	
November 3 [Fri.]	Lecture	Takehisa Oikawa	Japan	Associate Professor, Institute of Biological Sciences, University of Tukuba	Modelling primary production of plant communities
	Lecture	Wolfgang Haber	F.R.G.	Professor, Chair of Landscape Ecology, Munich University of Technology	Basic concepts of landscape ecology and their application in land management
	Lecture	Jose G. Tundisi	Brazil	Professor, School of Engineering, University of São Paulo Brazil S. Carlos	Ecology and development: Perspective for a better society
	Lecture	Gordon H. Orians	U.S.A.	Professor, Department of Zoology and Institute for Environmental Studies, University of Washington	Ecology and conservation biology: Mutually supportive sciences
	General Discussion	Frank B. Golley	U.S.A.	Professor, University of Georgia Institute of Ecology	
		Makoto Numata	Japan	Natural History Museum and Institute, Chiba	
November 4 [Sat.]	Excursion	Boat excursion on Lake Biwa			

HYDROLOGICAL INFORMATION REFERRAL SERVICE - INFOHYDRO OF THE WORLD METEOROLOGICAL ORGANIZATION

The aim of one of the major long-term projects within the Operational Hydrology Programme (OHP), one of the three component programmes of the Hydrology and Water Resources Programme (HWRP) of WMO, is to

promote the exchange of information on the status of hydrological activities of Hydrological Services/Agencies of Members. The implementation of this project is largely the responsibility of the WMO Secretariat, and

has evolved as a service to Members and other users.

INFOHYDRO is a service for the dissemination of information on:

- (a) National and international (governmental and non-governmental) organizations, institutions and agencies dealing with hydrology,
- (b) Hydrological and related activities of the bodies mentioned in (a),
- (c) Principal river and lake basins of the world,
- (d) Networks of hydrological observing stations of countries-number of stations and duration of records,
- (e) National hydrological data banks-status of collection, processing and archiving of data.

INFOHYDRO does not contain or handle actual hydrological data, nor does it duplicate national referral systems. It is designed to facilitate prompt dissemination of continually updated hydrological information to Member countries, particularly for the benefit of their experts, agencies and enterprises engaged in activities or projects related to water-resource assessment, development and management requiring support from national, regional or international agencies dealing with operational hydrology. The information available in INFOHYDRO provides a good indication of water-

resource assessment activities of Members. As a computerized service, INFOHYDRO is expected to be developed gradually into an "on-line" system which will be made available to Members and other users.

The INFOHYDRO Manual contains all hydrological information available at present in INFOHYDRO. Thus, the Manual comprises in a single volume comprehensive information on the Hydrological Services of the countries of the world and their data collection activities. Preparations are under way for issuing a revised version of the INFOHYDRO Manual which was published in 1987 as WMO Operational Hydrology Report No. 28 (WMO-No. 683). The new version, planned to be issued in 1990, is expected to include updating of the existing data based on information supplied by Members and to incorporate new information on availability of hydrological data sets in international and national data banks and the assessment of the basic hydrological network using information being provided by Members for the Basic Hydrological Network Assessment Project (BNAP). It is hoped that Members, international organizations and others involved in hydrology and water resources will fully utilize the facilities provided by INFOHYDRO.

John C. Rodda

Director, Hydrology and Water Resources Department

BOOK REVIEW "CONSERVATION AND MANAGEMENT OF LAKES"

edited by

Prof. J. SALÁNKI & Dr. S. HERODEK

AKADÉMIAI KIADÓ BUDAPEST

38 Symposia Biologica Hungarica, 645 page (1989)

This hard-covered book contains fifty academic contributions which were presented orally at the Third International Conference on the Conservation and Management of Lakes held at Keszthely, on the shore of Lake Balaton, Hungary. These papers are divided into six chapters: Eutrophication and its Control; Acidification and Toxic Pollutants; Lake Protection over the World (Africa, Asia, Americas and Europe); Management of Shallow Waters; Lake Management as an Ecological, Economic and Jurisdictional Complex; and Modelling in Lake Management. Editors preface and Dr. Golubev's Key-note Speech are notable as well.

One of the distinguishing characteristic is the number of East European contributions, which reaches no less than half of the total. The conspicuous countries are Hungary, Soviet Union and Poland. Among these East European papers we can find several outstanding contents, e.g. paper by Németh *et al.* and paper by Gitelson *et al.*

It was regretful this book could not record each interesting discussion, on the other side, most of those contents have stated precious information which were not presented at the congress. Additionally, after 621 pages of main content, list of whole participants was attached with courteous subject index.

On the whole, this book will undoubtedly offer a good

deal of fresh and useful information, the quality of which is certainly different from those given at Otsu(First) and Michigan(Second).

At last, reviewer will cite a part of editor's statement: "Limnologist and other ecologists, specialists and decision-makers in environmental protection and water resources management as well as students will find this book most useful."

Takeshi Goda

Faculty of Engineering, Setsunan University



Lake Balaton

LAKES OF THE WORLD

THE LADOGA LAKE



The Ladoga Lake is one of the largest lakes in the North of the Earth. It is situated in the north-eastern part of Europe in the USSR on the territory of Leningrad Region and Karelian autonomous republic. The lake surface occupies 18135 km² and water volume is 908 km³. The Ladoga water level exceeds the level of Baltic Sea on 4.8 m. Average depth of the Ladoga Lake is 51 m, maximum depth is about 230 m. Average annual amplitude of water level fluctuation is 69 cm.

The Ladoga Lake is situated at the junction of Baltic crystalline shield and Russian platform. The Ladoga Lake drainage basin is enormous, (250,600 km²). The basin has an intricate geological history. The differences in geological structure of the basin are reflected in structure of its depression and its shores. The northern and north-western shores are built by crystalline rocks. They are high and much dissected. Other shores are low-lying, cut weakly, set off by stone placers or sand beaches.

A peculiarity of thermic regime of Ladoga Lake is the existence of a thermal bar (during spring and autumn periods), which divides the lake into thermoactive and thermoinert regions. This phenomenon affects hydrochemical regime and biological processes.

Ladoga water is poorly mineralized, with an average value of mineralization of 62 mg/l. Average annual concentration of biogenic elements is as follows:

P_{tot} - 24mg/l, N_{tot} - 0.6mg/l, Si - 0.2~0.5mg/l. Dissolved oxygen concentration in the open part of the lake fluctuates from 9 to 15 mg/l and averages 80~120% of water oxygen saturation.

Both flora and fauna of the Ladoga Lake are rich with species. At present about 600 species of plants and more than 800 species of animals have been found. This fact reflects considerable diversity of biotopes in the lake and indicates good exploration of its vegetation and animal world.

There are 400 species, varieties and forms of algae in the phytoplankton. Among them Bacillariophyta, Cyanophyta and Chlorophyta prevail. The maximal number of 22 species of algae exceeds 1 million cells/l. Production of the phytoplankton during vegetation period in 1976-1988 was 44.9-54.5 gC/m², total annual production reached 800-970 thousand tons C.

The phytoperyphyton presents 344 species, among them Bacillariophyta represents 47%, Chlorophyta-37%. Biomass and production of periphyton in various lake regions differ greatly from one to another depending on character of substratum. In the whole the role of periphyton in formation of organic matter in the Ladoga Lake is insignificant.

Up to the present, 35 species of aquatic fungi have been found in the Ladoga, overwhelming majority among them are saprophytes.

Flora of higher water plants includes 62 species, their associations occupying an area of 105 km². Phyto-coenoses of *Phragmites australis*, *Scirpus lacustris* and *Potamogeton perfoliatus* predominate. Net annual production amounts to 24.2 thousands tons C.

There are lacustrine zooplankton species (378 species and subspecies), widely distributed in water bodies of temperate zone of Northern hemisphere of the Earth, which are in composition of the Ladoga Lake zooplankton. The great diversity of Rotatoria is found, and their number is also high. Average zooplankton biomass in August 1983 fluctuated from 6.1 to 19.4 g/m² depending on lake region.

408 species and forms of macrozoobenthos are revealed in the Ladoga Lake. The majority inhabited at littoral biotops. Fauna in deep-water part of the lake is poor. Among zoobenthos the significant roles are played by relict Crustaceae, especially *Pontoporeia affinis*, which is the important food source for fishes. Benthos biomass ranges from 0.1 g/m² in the deep water parts to 6.0 g/m² in silted sublittoral sand.

The Ladoga meiobenthos has great importance, its associations are numerous at all depths. Meiobenthos participation in total zoobenthos biomass ranges from 2 to 70%. The greatest biomass is observed in the southern shallow part of lake where it exceeds 1.2 g/m².

46 fish species inhabit in the Ladoga Lake. The most numerous species important for fishery are *Osmerus eperlanus*, *Coregonus albula*, *C. lavaretus*, *Stizostedion luciperca*, *Perca fluviatilis*.

Fishery catches during last 15 years were high and average 5800 tons.

The Ladoga Lake is the water body of active amateur fishery. Annual catch of amateur fishmen is accounted for 2,000 tons. Fish production, calculated by value of total fishery catches makes 9 kg/ha.

Relict seal is found in the lake, and musk-rat is met near the shores.

Great attention is paid to the Ladoga Lake water quality. The 5 million people of Leningrad are provided with Ladoga water. In 1984 the Resolution of Council of Ministers of the USSR on additional measures of the Ladoga Lake and the lakes of its basin protection had been passed. State program "Ladoga", in which about 70 institutes take part, has been elaborated. The Institute of Limnology of the Ac. Sci. of the USSR situated in Leningrad was fixed as coordinator of accomplishment of this program which connect with preservation and improvement of water quality of lake ecosystems.

A series of science books and many science and popular publications are devoted to the Ladoga Lake. The latest monographies are "Anthropogenic eutrophication of the Ladoga Lake" (1982), "Nature resources of the large lakes of the USSR and their probable changes" (1984) and "Present state of the Ladoga Lake ecosystem" (1987).

I. M. Raspopov

Institute of Limnology, Leningrad, USSR

LAKE BIWA FORUM

"Lake Biwa Forum", sponsored by "Japan-Asia-Africa Writers Committee" was held at Otsu from October 13-18, 1989.

This forum was born out of the Lake Baykal environmental protection movement led by advocate-author *Rasputin*; and was preceded by similar forums at Lake Baykal and Lake Sevan.

Soviet authors, including *Rasputin*, *Balyan*, *Belov*, *Astafiev*, *Ziedonis*, *Alimjanov*, *Krupin*, *Kaipbergenov* and Lake Baykal Limnological Institute former President G. I. Galaxy and others participated. With the participation of T. Baldorj from Mongolia and Karen Corrigan from USA it was truly an international forum. The forum was run primarily by literary figures, led by Hiroshi Noma and Wahei Tatematsu from Japan.

The theme of this forum was "what should humanity do about the destruction of the natural environment, and what should literature suggest be done".

In Session 1: "Scientists and the Popular Movement", Lake Biwa Research Institute President Tatsuo Kira led off with a special lecture entitled "The Present Condition

of Lake Biwa". Galaxy and others then reported on previously little-known environmental destruction of Soviet lakes. In these reports it was revealed that the advance of environmental damage leading to the serious nature of present conditions in the Aral Sea, and the damage to Siberian forests, although denied by Socialist governments until recently, is actually far more serious than previously imagined.

Session 2: "Literature and Environmental Problems", included a lively discussion of what authors and scientists, as concerned humans, can do about environmental destruction. Global perspective was evident in many opinions, such as the viewpoint that the protection of Japan's environment might actually lead to increasing destruction of the Third World natural environment.

In the end, although a communique was not issued, all agreed that similar forums should be held at various locations and discussion should press further.

The next such forum is scheduled to take place at Lake Hovsgol in Mongolia in August 1990.

Hiroto Maeda

Lake Biwa Research Institute

FORTHCOMING MEETINGS

1. ILEC INTERNATIONAL FORUM IN OSAKA: "THE WATER WE SHARE"

Date: February 20th, 1990 from 10:30 to 16:30

Venue: Mido Kaikan (Osaka, Japan)

Sponsorship: ILEC Co-sponsors: United Nations Centre for Human Settlement (HABITAT)/UNEP/UNCRD/Environment Agency, Japan/Ministry of Foreign affairs, Japan/Shiga Prefecture etc.

Programme: (1) Keynote Addresses

S. Evteev (Assistant Executive Director, UNEP)
HABITAT representative

(2) PANEL DISCUSSION "For better relationship between developing and developed countries (Coordinator): Hashimoto, M. (Vice Director-General, ILEC, Japan)

(Panelists): T. Goda, (Vice Director-General, ILEC, Japan), C.E. Bauer, (Honorary President Engineering and Environment Committee/WFEO, Argentina), S. Jørgensen, (Professor, Royal Danish School of Pharmacy, Denmark), N.B. Aiybotele, (Director, Water Resources Research Institute, Ghana), C.H.D. Magadza, (Director, Lake Kariba Research Institute, Zimbabwe), Liu, H. (President, Chinese Research Academy of Environmental Sciences, China), Salánki, J. (Director, Balaton Limnological Research Institute, Hungary).

2. FORUM ON LAKE ENVIRONMENT

(1) February 19-20, 1990 (Tsutiura, Japan)

Sponsorship: Ibaraki Pref.

Programme:

① Lecture

G.N. Golubev (Professor, Moscow State University)

J.G. Tundisi (Professor, São Paulo University)

② Free Discussion

(2) February 19-20, 1990 (Nagano, Japan)

Sponsorship: Nagano Pref.

Programme:

① Lecture

Heinz Löffler (Professor, University of Vienna)

Robert G. Wetzel (Professor, Alabama University)

② Free Discussion

3. THIRD EXPERT GROUP WORKSHOP ON RIVER/LAKE BASIN APPROACHES TO ENVIRONMENTALLY SOUND OF WATER RESOURCES

Venue: February 12-17, 1990 (Lake Biwa Research Institute, Otsu, Japan)

February 19-22, 1990 (Okazaki New Grand Hotel, Okazaki, Japan)

Sponsorship: ILEC/UNCRD/UNEP

CALL FOR ARTICLES

Those who wish to contribute to ILEC Newsletter are invited to send manuscripts to the secretariat.



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