



No.3 MARCH 1987

# NEWSLETTER

*INTERNATIONAL LAKE ENVIRONMENT COMMITTEE*

*— For Better Lake Management —*

This Newsletter is also available in Japanese.

## THE FIRST ANNIVERSARY OF ILEC

### The Second General Meeting of ILEC

The Second General Meeting of ILEC was held at Lake Biwa Research Institute in Otsu on February 18–20, 1987. The primary keynote address, during the opening, was delivered by Prof. T. Kira, Chairperson of ILEC, followed by addresses from Hon. Minoru Inaba, Governor of Shiga Prefecture, Dr. Hidehiko Sazanami, Director of United Nations Centre for Regional Development (UNCRD). Messages from Hon. Toshiyuki Inamura, Minister of Environment Agency, Dr. M.K. Tolba, Executive Director of United Nations Environment Programme (UNEP) and Mr. N. Nakahira, Director-General of United Nations Bureau, Ministry of Foreign Affairs, were also read. Receiving proposals from Members and a progress report from the Secretariat during the first day session, work party meetings on data collection, training and guidelines were held at the Biwako Hotel on the second day, to explore the feasibility of the proposals. At the plenary session on the last day, after the report from each work-party, projects for fiscal 1987 were discussed, followed by approval of project plans and budget for fiscal 1987.

Among the major themes of plenary sessions were:

#### 1) Juridical Character of ILEC

The proposal was approved: that ILEC take the necessary steps to become a juridical foundation as a

non-profit public interest corporation to serve the public interest as approved by Japanese Civil Law. The Shiga Prefectural Government had guaranteed to provide 200 million yen, the minimum required as an endowment funds, to permit ILEC recognition as a juridical person under Japanese Civil Law.

#### 2) Cooperation to World Lake Conferences

Prof. J. Salánki, Dr. E. Szenes and Dr. S. Herodek reaffirmed the intention of the Hungarian National Authority for Environmental Protection and the National Academy of Sciences to host the Third World Lake Conference - Balaton'88 - in Hungary in September 1988, outlined proposed topics and invited further suggestions from ILEC Members. ILEC's role in relation to future World Lake Conferences was discussed. The intention of the National Environment Protection Agency of China and the Chinese Research Academy of Environmental Sciences to host the Fourth World Lake Conference in Hangzhou, China, in 1990 was announced.



Prof. T. Kira, Chairperson of ILEC, delivers opening address.

## LIST OF PARTICIPANTS

### REGULAR MEMBERS

Prof. Takeshi Goda (JAPAN)  
Prof. Sven E. Jørgensen (DENMARK)  
Prof. Tatsuo Kira (JAPAN)  
Prof. Liu Hongliang (CHINA)  
Dr. Kenneth M. Mavuti (KENYA)  
Prof. Jurgen Overbeck (WEST GERMANY)  
Prof. János Salánki (HUNGARY)  
Prof. José G. Tundisi (BRAZIL)  
Prof. Richard A. Vollenweider (CANADA)  
Prof. Gilbert F. White (U.S.A)  
Prof. T.N. Khoshoo (INDIA, proxy of Prof. M.G.K.Menon)

### SECRETARY-GENERAL

Dr. Michio Hashimoto (Japan)

### OBSERVERS

Dr. Ervin Szemes (HUNGARY)  
Dr. Sándor Herodek (Balaton Limnological Research Institute, HUNGARY)  
Dr. Zhang Jiqiang (Chinese Research Academy of Environmental Sciences)  
Mr. Hisao Sakimura (UNEP)  
Dr. Hidehiko Sazanami (UNCRD)  
Mr. Hiromichi Sakamoto (Environment Agency)  
Mr. Akira Kido (National Land Agency)  
Mr. Koji Tsuji (Ministry of Health and Welfare)  
Mr. Toshimichi Okamoto (Ministry of Agriculture, Forestry and Fisheries)  
Mr. Sukio Okamoto (Ministry of International Trade and Industry)  
Dr. Masahisa Nakamura (Lake Biwa Research Institute)  
Hon. Minoru Inaba (Governor, Shiga Prefecture)  
Mr. Masayoshi Fuchida (Director, Department of Plan-

ning, Shiga Prefecture)

Mr. Kenji Furukawa (Director, Department of Civil Life and Environment, Shiga Prefecture)  
Mr. Seiichi Kawase (Vice-Director, Department of Civil Life and Environment, Shiga Prefecture)

## WORK-PARTY ON DATA COLLECTION

1) The progress of the editorial work on the Data Book of World Lake Environments was reported. It is anticipated that the number of lakes covered by the new edition will increase from 52 in the old edition (1984) to approximately 80. The first part of the new edition will be printed in a simple filing form during the next fiscal year (1987).

2) A new proposal was made to initiate a project different from the above project. It intends to collect much simpler sets of basic information (mostly qualitative) from as many lakes of the world as possible. The proposal was agreed on and the kinds of information to be collected and the method of collection were discussed. This new project will start immediately, while the Data Book project will be continued as previously planned.

3) On request from UNEP, some in-depth study on environmental trends and expected management schemes in a limited number of lakes and a synthesis of the global trends of lake environment will also be carried out in 1987, based on the results of the above two projects.

## WORK-PARTY ON TRAINING

Objectives and target group in each course should be

## New Regular Member to ILEC

In view of the transfer of Dr. Ferenc Máté, Senior Scientist of Balaton Limnological Research Institute of the Hungarian Academy of Sciences, into another important sphere of activity, Professor Dr. János Salánki has been appointed a Regular ILEC Member for the remainder of Dr. Mate's term.

Prof. J. Salánki, born in 1929, is a Corresponding Member of the Hungarian Academy of Sciences, Director at the Balaton Limnological Research Institute and Vice-president of the International Union of Biological Sciences (IUBS). He also serves as organizer of several international symposia, and is a member of the Organizing Committees of numerous international congresses, and has been nominated by the Hungarian Academy of Sciences and the National Authority for Environment Protection and

Nature Conservation as chairman of the Organizing Committee for the "Third Conference on Conservation and Management of World Lake Environment - Balaton '88. His main research interest is comparative neurobiology and environmental biology.



Prof. János Salánki

given: as well, required background of participants must be specified. Evaluation of each course is strongly recommended, to improve courses concurrently on the basis of gained experience.

In accordance with Dr. Sazanami's proposal in his congratulatory address, seminar-cum-workshop under the joint sponsorship of UNCRD/ILEC/UNEP should be held, bringing together the environmental and development sides — senior administrators and scholars — preferably by using case studies as a basis, for instance Zambezi river basin, Lake Laguna and/or Lake Songkhla. Besides, tentative plans for the realization of the general management course were proposed.

The following is an example of proposed general course in lake and lake basin management.

1) Objectives: A general course, which should focus on all steps from understanding of the ecosystem, data collection, mass balance and/or models, social-cultural aspects, regional development aspects, management decisions, evaluations, economy. The development and environmental aspects should be brought together in the course.

2) Target group: Senior administrators and scholars.

3) Required background knowledge: Experience in environmental management problems of lakes and lake basins, either from an administrative or natural science viewpoint.

4) Duration: 3-4 Weeks

5) Topics:

- (1) The use of lakes and reservoirs. Basic knowledge of ecosystem structure and function
- (2) Lakes and reservoirs as ecosystems.
- (3) Data about lakes and reservoirs (incl. readily available data).
- (4) Data collection
- (5) Qualitative and quantitative assessment of lake problems. Watershed viewpoint.
- (6) Problems of lakes, reservoirs and their watersheds.
- (7) Ecological engineering methods applied to lakes and reservoirs (water treatment, reaeration, change of hydrology, sediment removal, biomanipulation, regional planning, agriculture management etc.)
- (8) Use of mass balances and models (also in data-poor situations)
- (9) Economy of lake management
- (10) Soil-cultural aspects of lake management
- (11) How to make the right decisions
- (12) Action plans
- (13) Evaluation of the decision
- (14) Management in a political context

Topics 1-6 can be covered by a broad minded ecologist (limnologist). Topics 7-8 can be covered by an ecological engineer (a modeller). Topics 9-14 require an economist and/or a manager. The guideline booklets Vol.1 and Vol.2 would provide a suitable (partly) basis

6) Evaluation: During and 6 months after the course.

The evaluation should be used for concurrent modification of the course.

## WORK-PARTY ON GUIDELINES

It is agreed to write the guidelines for advisers to the decision makers, but said guidelines should be prepared in such a way that the decision makers and the adviser's assistants can understand the entire content.

It is of great importance that the guidelines focus directly and entirely on management aspects. Scientific explanations or aspects will be omitted, but a rather comprehensive bibliography will be included.

The guideline books, although closely related to the training courses, will be edited in such a way as to be useful reading also for those not attending the corresponding training courses, as the content can be considered a direct working tool.

It is furthermore proposed that a series of booklets be written which will permit more rapid publication of the guidelines. The guideline booklets, in which watershed management views should be strongly emphasized, will be either general or specialized.

The following booklets are foreseen:

- 1) Principles of Lake Management
- 2) Social-economic-cultural aspects of Lake Management
- 3) Fish production in lakes and reservoirs
- 4) Eutrophication of lakes and reservoirs
- 5) Acidification of lakes and reservoirs
- 6) Toxic substances in lakes and reservoirs
- 7) Management of reservoirs
- 8) Lakes, reservoirs and erosion
- 9) Integrated basin management

### Tentative schedule:

#### Vol.1 on Principles of Lake Management:

May, drafts sent to editors, the editors to edit the booklet during the period May-November 87. Printing, Dec.87 - March/April 88.

#### Vol.2 Social-economic-cultural Aspects of Lake Management:

The volume will be launched at the coming UNCRD/ILEC/UNEP course. Potential authors are invited. Outlines, authorship etc. will be decided on that occasion. Publication of Vol.2 to follow a few months after Vol. 1.

#### Vol.3 on Fishery:

Authors to be decided on at a later meeting (next General Meeting in 1988).

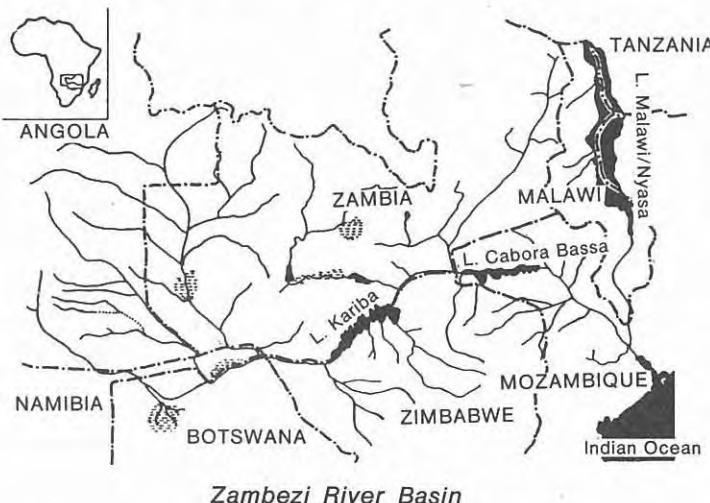
Distribution and possible sale are to be decided by the board of ILEC at a later stage. It is emphasized that ILEC should be more widely known through scientific journals, newsletters and other means. This is considered of great importance for the distribution of ILEC's forthcoming publications.

# THE 3RD MEETING OF WORKING GROUP OF EXPERTS ON THE ZAMBEZI RIVER SYSTEM

In response to the invitation of UNEP, Dr. M. Hashimoto, Secretary General of ILEC, participated in the 3rd Meeting of Working Group of Experts on the Zambezi River System, held at Gaborone, Republic of Botswana from 20-23 January, 1987. Related to the implementation of Zambezi Action Plan, Dr. Hashimoto expressed the following standpoint of ILEC.

As a non-governmental organization, ILEC can contribute to the environmentally sound management of lakes in the Zambezi River System (including swamps) through three on-going programmes under the advice and direction of the UNEP:

- (i) Training and expert seminar courses
- (ii) Lake environment data system through "Survey of the State of World Lakes" programme, and
- (iii) Series of guidelines for environmentally sound lake management.



Zambezi River Basin

## Background

UNEP has launched a comprehensive new programme on the Environmentally Sound Management of Inland Waters (EMINWA) to assist Governments in the integration of environmental concerns into the management of water resources.

One of the main sub-programmes of EMINWA is the African Inland Water Programme (AIWP), which gives high priority to water management and reducing the effect of droughts in Africa. Following requests from the Governments of the Zambezi river basin countries to develop regional cooperation and to promote sustainable development, it has been decided that the first element of the implementation of this programme should concentrate on the common Zambezi river systems, which encompasses the territories of following countries and constitutes: Angola, Botswana, Malawi, Mozambique, Namibia, Tanzania, Zambia and Zimbabwe.

Thus, UNEP has assisted the Governments of the Zambezi river basin countries, in cooperation with other organizations of the United Nations system and donor



Meeting at Sun Hotel, Gaborone

agencies, in developing and launching an Action Plan for the Environmental Management of the Common Zambezi River System (ZACPLAN) as a first step in its comprehensive EMINWA programme.

The framework of ZACPLAN has also been included in the Cairo Programme for African Cooperation, adopted by the first African Ministerial Conference on the Environment, which met at Cairo in December, 1985. In light of the EMINWA programme, a Working Group of Experts on the Zambezi River System was established in 1985.

## Main agenda and discussion

Finalization of the Draft Agreement in the Action Plan for the Environmental Management of the Common Zambezi River System: The Working Group agreed to the structure of the proposed ZACPLAN draft and amended some paragraphs after detailed discussions.

## Focus

- 1) Contribution of all Participating Countries to the Zambezi River Basin Trust Fund: Total contribution be equally shared by all participating countries.
- 2) The Zambezi Action Plan projects for the period of 1987-1989: It was agreed that the suggested ZACPRO projects grouped into priorities - I and - II should be grouped under categories I and II and that the review of the projects proposed for ZACPRO should be discussed at the first meeting of the Zambezi Inter-governmental Monitoring and Coordinating Committee (ZIMCC).

## Timetable for 1987

- 1) By mid March, 1987: Approval of the Draft Agreement of ZACPLAN in the Participating Countries.
- 2) Late April, 1987: Inter-governmental Meeting in Harare, Zimbabwe.
- 3) June, 1987: Taking note of the progress of the Action Plan and approval of the Trust Fund at 14th Session of UNEP's Governing Council.
- 4) October-November 1987: First meeting of the Zambezi Intergovernmental Monitoring and Coordinating Committee (ZIMCC).

## "KYOTO PRIZE" GOES TO PROF. G. E. HUTCHINSON

Prof. George Evelyn Hutchinson of Yale University was awarded the 2nd "Kyoto Prize", together with Professor Nicole M. LeDouarin of the Institute d'Embryologie, Nogent-sur-Marne, and Dr. Isamu Noguchi. Each received the Kyoto Prize medal and 45 million yen (\$300,000) at a ceremony held in Japan on November 11th, 1986.

The prize, one of science's newest and biggest prizes, was established in 1985 by Kazuo Inamori, founder of Kyocera Corporation, Japan's most famous and fastest growing high-technology ceramics company. The aim of the prize is to encourage balance between scientific and technological development on the one hand and psychological and emotional maturity on the other.

Prof. Hutchinson, known both as an essayist and a scientist, did much to establish ecology as a science, through the field of limnology, and was first to develop the concept of the ecological niche. Born in England in 1903, Prof. Hutchinson, now an emeritus professor, is still writing and researching. Publications: *A Treatise on Limnology* (1957), *Homage to Santa Rosalia* (1959), *The Ecological Theater and the Evolutionary Play* (1965), *An Introduction to Population Ecology* (1978) etc.

## UNEP Advisor to ILEC

Mr. Hisao Sakimura, Chief of Supporting Measures Branch, UNEP, was installed as Advisor to ILEC on 15 November, 1986. Responding to the request from Governor of Shiga Prefecture, which was solely financing ILEC, through the Ministry of Foreign Affairs of Japanese Government for the despatch of Mr. Sakimura to assist ILEC for its smooth and rapid development, Dr. Mostafa K. Tolba, Executive Director of UNEP, favourably arranged Mr. Sakimura's mission to Japan for approximately a year. Though a year assignment seems not to be sufficient time, it must be understood that UNEP would not be able to afford to keep such a senior post as Chief of Supporting Measures Branch vacant for a long time.

Mr. Sakimura, in his capacity as Advisor to ILEC, will work for coordination among ILEC, Japanese Government and UNEP as well as other UN organizations. He will also assist the ILEC Secretariat for effective implementation of the proposed joint projects with UNEP and UNCRD.

Mr. Sakimura, Former Far East Manager of an American environmental consulting firm, joined UNEP as Deputy Director of Environmental Management Service

early in 1979. In April 1986, according to the organizational change of the Office of the Environmental Programme of UNEP, he was appointed as Chief of Supporting Measures Branch. Mr. Sakimura is married, with two children.



Mr. Hisao Sakimura

## ACTIVITIES OF LABORATORIES OF LIMNOLOGY IN HYDROELECTRIC COMPANIES, IN BRAZIL, PARTICULARLY IN THE AMAZON REGION.

The consolidation of management techniques in reservoirs is possible only when a basic information on limnological mechanisms and processes is provided. With this background, the Hydroelectric companies in Brazil are expanding activities in limnology. Reservoirs in the Amazon region present a series of new ecological problems and many management perspectives. For this reason, the limnological basis in these artificial ecosystems in this region is even more necessary. Management problems of these reservoirs are enormous, due to great inundated forest area, relocation of population and maintenance of water quality downstream. The hydroelectric companies operating in the Amazon Region, are actively engaged in limnological research as a tool for management.

With that objective, ELETROWORTE, the Amazon Operating Company, has established a Laboratory of limnology at Tucurui Reservoir, where 10 limnologists are working with managers of the reservoir to find adequate solutions. The scientific support for the development of this activity is given by the University of S. Paulo in close collaboration with the Hydroelectric Companies. This initiative opened a new series of operational systems of reservoirs in Brazil and particularly in the Amazon region providing a solid ground for management related with multiple uses with an environmental perspective, including human and social aspects.

J. G. Tundisi

# LAKES OF THE WORLD

## LAKES, LAGOONS AND RESERVOIRS OF THE ARGENTINE REPUBLIC (CEB)

The continental territory of the Argentine Republic has more than one thousand lakes and lagoons in its total area of almost three million square kilometers. They differ not only in depth, which is greater in lakes and allows the stratification of aquatic environments with different ecological potentials, but also in their location, natural conditions, water quality, uses and possibility for exploitation.

### Glacial lakes

The lakes of glacial origin are distributed mainly south of the 36°S line along the Andean range Patagonicos-Fueguinos. Their altitude and size are quite varied, ranging from a couple to hundreds of square kilomethers in surface area. Standing out in its size is Lake Buenos Aires with an area of 2,240km<sup>2</sup>, of which 39% is Argentinian and the rest belongs to Chilean. It is followed by Argentino (1,450km<sup>2</sup>), Viedma (1,088km<sup>2</sup>), Nahuel Huapi (550km<sup>2</sup>) and Lacar in turn.

These glacial lakes are very deep and fed by melting glaciers, which in L. Argentino reach the lake's level of 185 m above sea level, creating an exceptionally beautiful landscape. The mountainous area to the west of these fjord-like lakes, with its humid lakes, with its humid climate, is covered by dense forests that creep down to the ice fringe, emphasize scenic beauty and help control erosion. The eastern shore, on the other hand, extends into the arid Patagonian plateau.

The lake district have remained almost undisturbed without the deterioration of original lake water quality and are sparsely populated except for such lakes as Lacar with San Martin de Los Andes (population 10,000), Nahuel Huapi with San Carlos de Bariloche (population 50,000) and Argentino with El Calafate (1,500). These cities serve as tourist centers in National Parks where human

activities are partly regulated. Urban development has destroyed lake-shore forests, modified slopes due to road construction and spoiled water quality. This is especially marked near Baliliche, where the necessity is felt to install a sewage treatment plant and to start an educational campaign for the conservation of natural resources.

The lakes in the Patagonian Andes range, are the biggest source of freshwater for the Patagonian plateaus where the climate is arid/semiarid (annual rainfall less than 500 mm). Some of the lakes owe their origin to Pleistocene glaciation and are now scarcely fed by glaciers, resulting in a marked decline of water level, and salinization. Many lakes in this region like Trapalco and Gualicho have been dried up and turned into saltwater lagoons or salt mines.

Some other lakes, for instance two connected lakes Musters (434km<sup>2</sup>) and Colhue Huapi (800km<sup>2</sup>), occupy wide tectonic depressions. L. Musters is fed by a river from the Andes and supplies water through a water channel to Comodoro Rivadavia (population 100,000), the oil center on the Atlantic coast.

### Lagoons in the Pampa and Northern regions

In the rest of the Argentine territory, we find only lagoons of diversified origins, water systems and associ-



San Roque Reservoir

ated environments. There are thousands of temporary lagoons in the Pampa, a flat land with subhumid/humid climate and dedicated to the production of grains and meat. Many of them have been drained or filled up, while the salt lagoons of Mar Chiquita lost salinity owing to an unusual flood disaster during the last decade.

Among the existent lagoons in this region, some have had their water quality seriously endangered owing to the discharge of solid and liquid wastes. Meincue, de Gomez, Chascomus, de Monte, Mar Chiquita (Buenos Aires), etc. are the examples which used to be local recreation centers and are now suffering from water pollution. This seems to be the fate of most lagoons close to Pampean cities in the densely inhabited area.

In the arid and semi-arid regions of mountains Northwest and West, there are also a great number of lagoons of varying salinity. Although their water quality has received little influence from human activity, those on the plain/mountain borderland are generally suffering from decreasing water volume due to the use of inflowing river water for irrigation in large horticultural oases where fruit production and population are concentrated. We must mention the disappearance of Guanacha lagoons as one of the most notorious cases.

In the hot tropical/subtropical plains of the Northeast with annual rainfall exceeding 800mm, the flat landscape is often interrupted by the margins of rivers with poor drainage. There marshes, swamps and hydrophyte vegetation give place to real embalsados (embankments) and floating islands supporting an extraordinarily rich amphibian fauna. The marsh group of Ibera (200,000km<sup>2</sup>) in the center of Corrientes Province is the most important as an almost unique area in the world with respect to its physiography, biota and human life. It has remained nearly pristine and is inhabited by rare species that have already been extinguished elsewhere or are not yet known to science. However, its future is endangered by hydraulic projects which could flood it completely and raise unknown ecological consequences.

## Reservoirs

Apart from natural waterbodies, there are manmade ones used for energy supply (El Nihuil, El Chocon-Cerro Colorado, General Belgrano, etc.), flood control and irrigation (Cruz del Eje, Rio Hondo) or multiple purposes (Salto Grande). In all the cases with the exception of Salto Grande, no ecological studies were

carried out before construction, and few effective measures were taken to conserve water quality and ecosystems. The best known case of pollution is the reservoir of San Roque Dam.

San Roque reservoir (1,639 ha), built in 1888 and enlarged in 1944, is located in Cordoba Province at the geographical center of the Republic. Its water is used for the public water supply to Cordoba City (population over 1,000,000) and for irrigating downstream farmlands, while the surrounding area serves as a familiar tourism zone. Increasing number of tourists and the construction of a highway to Cordoba resulted in a high growth rate of permanent population in the area, especially Carlos Paz,

the resort center on the lake shore, causing progressive eutrophication of the lake water during the last two decades. A strong demand for irrigation water during growing sea-

son brings about a low water level, which in turn accelerates eutrophication.

No treatment or control measures have been adopted for urban and industrial effluents. Several studies were made to cope with the situation, and it is now planned to construct sewage works for Carlos Paz city with a summer population of some 100,000. The treated effluent may be disposed of on land for afforestation. An aqueduct construction is also planned to supply additional water from an adjacent river to the reservoir to make it feasible to operate San Roque Dam's discharge with a broader margin.

This is an example in which the planned management of the catchment basin as a whole is of utter importance for environmentally sound use of lakes. Not only an adequate control of nutrient inflow but also an effective discharge regime is also required for the rational management of water resources, which has to take into consideration various requirements of different users involved that may often oppose to each other. This is particularly the case with such small lakes as San Roque Reservoir where the ratio of water supply capacity to demand is small.

Conrado E. Bauer



*Occurrence of water bloom at a reservoir*

## PROF. GOLUBEV VISITS SHIGA

Prof. Genady N. Golubev, ILEC Member and Assistant Executive Director of UNEP, called on Hon. Minoru Inaba, Governor of Shiga Prefecture, in Otsu on November 20, 1986, in appreciation of the overall support of Shiga Prefectural Government to ILEC. In reply for the questions from Gov. Inaba, Prof. Golubev suggested that UNEP could assist ILEC in its development in such ways



Prof. G. N. Golubev (right) talks with Hon. M. Inaba (left).

as: dispatching a senior staff member to ILEC, bearing travel expenses of participants from developing countries to ILEC meetings, and entrusting a part of UNEP projects to ILEC.

## FORTHCOMING MEETINGS

International Conference on Reservoir Limnology and Water Quality

15–20 June 1987. České Budějovice, Czechoslovakia. Enq.: Dr. M. Straskraba, Hydrobiological Laboratory, Institute of Landscape Ecology, Czechoslovak Academy of Sciences, Na sadkach 7, 370 05 České Budějovice, Czechoslovakia.

XVIth Pacific Science Congress (Section A, Ecology, conservation and environmental protection; Section I,

Freshwater sciences)

20–30 August 1987. Seoul, Korea. Enq.: Organizing Committee, K.P.O. Box 1008, Seoul 110.

22nd International Association for Hydraulic Research (IAHR) Congress on Advancements in Hydraulics: Its Uses in Engineering, Environmental Sciences and Geophysics

31 August–4 September 1987. Lausanne, Switzerland. Enq.: Prof. Walter H. Graf, Laboratoire d'Hydraulique, Ecole Polytechnique Federale, CH-1015 Lausanne.

Balaton Limnological Institute Jubilee Symposium on Trophic Relationships in Inland Waters

1–4 September 1987. Tihany, Hungary. Enq.: Dr. P. Biro, Balaton Limnological Institute of the Hungarian Academy of Sciences, H-8237 Tihany.

International Symposium: Comparative Study on Risk Assessment and Management

26–30 October 1987. Osaka, Japan. Enq.: Prof. T. Sueishi, Faculty of Engineering, Osaka University, Suita, Osaka 565.

IUBS International Symposium on Biomonitoring of the State of the Environment

6–8 November 1987. Tokyo, Japan. Enq.: Dr. M. Yasuno, National Institute for Environmental Studies, Yatabe, Tsukuba 305.

International Symposium on Red Tides - Biology, Environmental Science and Toxicology

10–14 November 1987. Takamatsu, Japan. Enq.: Prof. T. Okaichi, Faculty of Agriculture, Kagawa University, Mikicho, Kagawa 761-07.

3rd Conference on Conservation and Management of World Lake Environment

11–17 September 1988. Keszthely, Hungary. Enq.: Dr. S. Herodek, Balaton Limnological Institute of the Hungarian Academy of Sciences, H-8237 Tihany.

## CALL FOR ARTICLES

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



INTERNATIONAL LAKE ENVIRONMENT COMMITTEE

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