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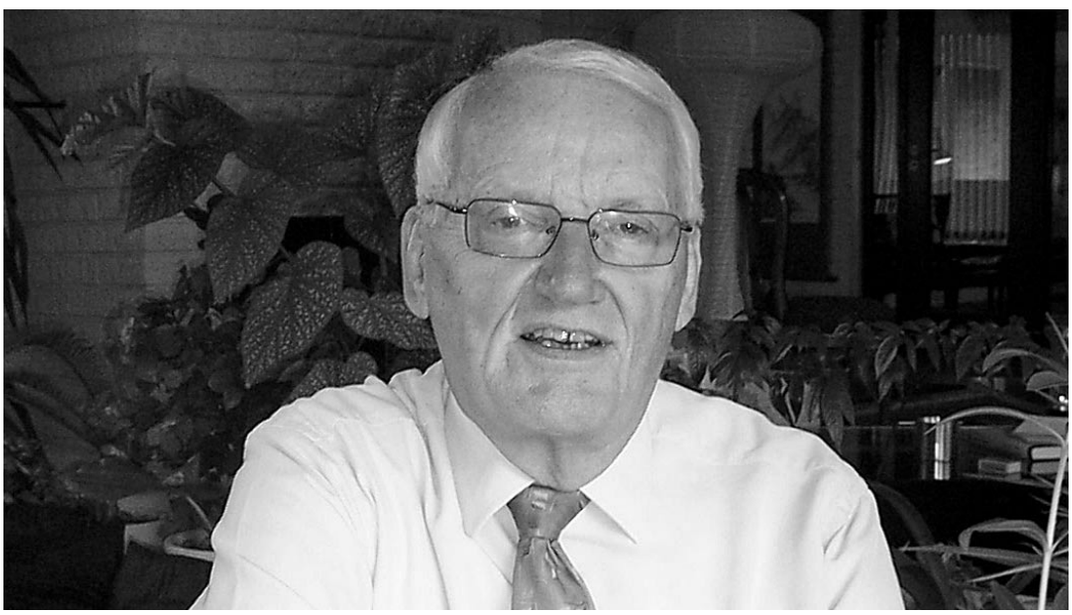
NEWSLETTER

International Lake Environment Committee

=Promoting Sustainable Lake Management=

This Newsletter is also available in Japanese.



Professor Jørgensen wins the 1st Prigogine Prize

Professor Sven Erik Jørgensen, Chairman of the ILEC Scientific Committee and Professor of Environmental Chemistry at the Danish University of Pharmaceutical Sciences in Copenhagen, has been awarded the 1st Prigogine Prize. This new prize has been jointly established by Siena University in Italy and the Wessex Institute of Technology (WIT) in Southampton, England, in honour of the late Professor Ilya Prigogine, the Nobel Prize winner for chemistry in 1977.

The prize, consisting of a gold medal and a cash sum of 10,000 Euros (approximately US$12,000), has been awarded to Professor Jørgensen for his contribution to evolutionary thermodynamics by application of thermodynamics on ecosystems. It is his use of the thermodynamic concept of exergy to give a deeper understanding of ecosystem reactions and evolution that has gained Professor Jørgensen particular recognition. He has, through the introduction of exergy as a goal function in ecological models, developed a new generation of ecological and environmental models, otherwise known as 'structurally dynamic models', that are able to consider adaptation and shifts in species composition.

Professor Jørgensen will be awarded the prize at a special ceremony at University of Siena on 16 June, when he will give the inaugural 'Prigogine Lecture'. The event will be organized by the University of Siena and the WIT-Press Southampton and sponsored by the Banca Monte dei Paschi di Siena.

A Junior Prigogine Prize, carrying a cash sum of 5,000 Euros (approximately US$6,000), will be awarded to a young, promising researcher in evolutionary thermodynamics. The winner of this Junior prize was not decided at the time this newsletter went to press.

In This Issue

Lake Basin Management Initiative Project - Nairobi Workshop

The 3rd and final Regional Experience and Lessons Learned Workshop for the ILEC-executed, Global Environment Facility (GEF) funded Lake Basin Management Initiative was held in Nairobi, Kenya from 3-6 November 2003. The Lake Basin Management Initiative is co-financed by USAID, the World Bank Netherlands Water Partnership Program (BNWPP), Shiga Prefectural Government of Japan and ILEC. The overall objective of the Lake Basin Management Initiative is to strengthen capacity for improved lake and reservoir basin management at local, provincial, national and global levels. To achieve this, the project is designed to assess and draw lessons from the achievements and implementation of several GEF (14) and non-GEF (14) lake projects.

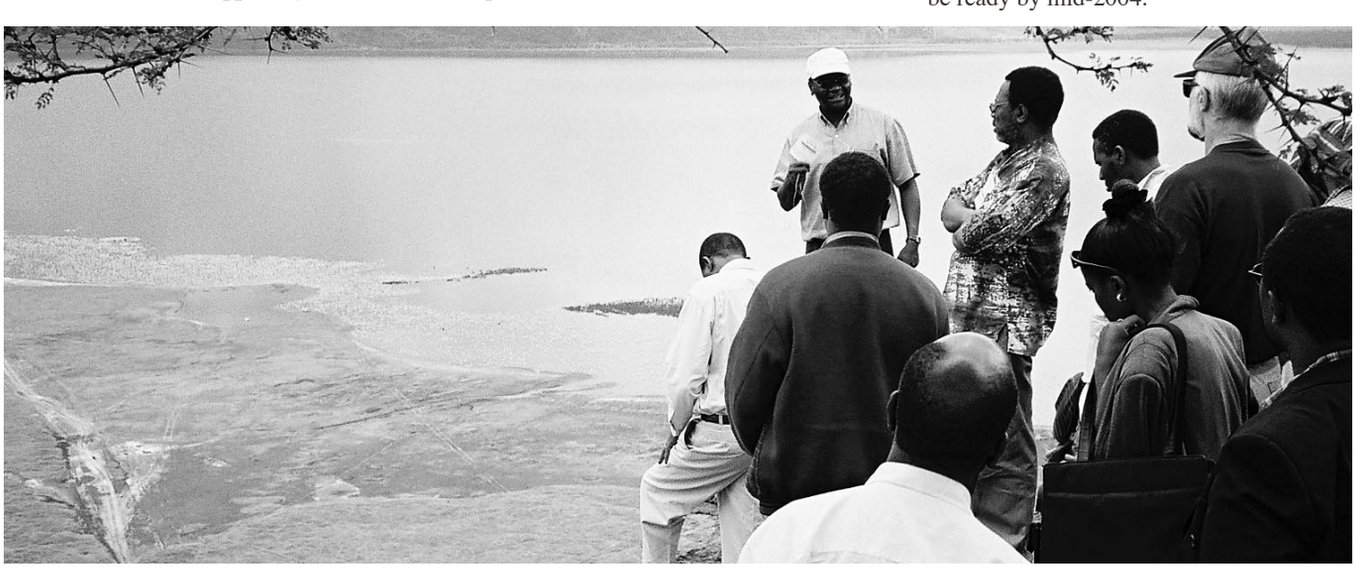
The Nairobi Workshop was hosted by the Pan African START Secretariat (PASS) – a regional scientific and capacity building network formed under the auspices of the International Council for Sciences (ICSU). The workshop brought representatives from 8 African lakes included in the project, namely, Baringo, Chad, Malawi/Nyasa, Tanganyika, Victoria (GEF funded); and Naivasha, Nakuru, Kariba (non-GEF funded). Lake George was also represented at the workshop. The purpose of the workshop was to facilitate the exchange of lessons learned and sharing of experiences as well as to solicit supporting information among professionals and stakeholders working on lake basin management issues at these lakes. More than 100 professionals and stakeholders from over 20 countries actively engaged in lake basin management projects.

The emphasis of the workshop was on the need for the conservation and management of lakes and reservoirs to enter the mainstream of the economic development process through comprehensive water resources management. Actions to improve management of lake basin resources on a sustainable basis are necessary due to the high levels of direct and indirect pressure on lakes and reservoirs from large populations inhabiting lake watersheds. Other pressures include rapid population growth, urbanization, industrialization, mining development, growth of irrigated agriculture and impacts of climate change. The conservation and management of lakes and reservoirs and their basins need, therefore, to be strengthened and assisted by sharing and exchanging knowledge, experience, technologies and dissemination of lessons learned and best practices which would be reflected in policy and institutional reforms, and individual and programmatic lending operations supported by the various funding agencies.

Keynote speeches were given by representatives from the Government of Kenya, UNEP and the World Bank. Case studies of project lakes were presented and discussed on the first, second and third days. The fourth and final day concentrated on discussions on thematic issues that were identified as key for lake basin management in Africa, namely, institutions, sustainability, participation, funding by development agencies, science and politics.

The case studies presented at the workshop and more information about the Lake Basin Management Initiative is available online at the project website at: www.worldlakes.org/programs.asp?programid=2. An electronic forum has been set up at www.worldlakes.org/programs.asp?programid=5 and everyone is encouraged to participate. ILEC would be most grateful to anyone who could take time to read and comment on any of the project documents posted at the above websites. Messages may also be sent to gefmsp@ilec.or.jp for comments/questions regarding the lake case studies or the project as a whole.

The final report for the project is now being prepared based on the case studies for the African lakes together with the ones from the 1st Workshop held in June 2003 (Americas, Europe and Central Asia) and the 2nd Workshop held in September 2003 (Asia). The draft final report will be posted on the project website for public comment. The final report is scheduled to be ready by mid-2004.



Field Trip to Lake Nakuru

Lake Basin Management Initiative Enters Last Phase:

Working Group Meetings in Progress

Since the official inauguration of the Lake Basin Management Initiative in March 2003, ILEC and its partner organization LakeNet have been focused on activities planned for the first phase of the Project leading up to the end of December 2003. Several interim outputs have been produced and posted on the project website (www.worldlakes.org/programs.asp?programid=2). These outputs include: individual lake case studies, thematic papers of importance in relation to individual lake briefs, comments and discussion memos prepared at three regional workshops, and comments received from the ongoing e-forum dialogues on lake briefs and other project documents. The project, now entering the second and last phase, has directed its effort toward integration of the interim outputs into a Comprehensive Experience and Lessons Learned Report (here after referred to as the Main Report).

For this purpose, a series of meetings (Working Group Meetings, WGMs) were recently organized and future meetings are planned. The zero-th and first working group meetings were held at ILEC Secretariat in Kusatsu from 10-15 December 2003 and 12-17 January 2004, respectively. The second working group meeting was held in Washington DC between 16-19 February 2004. Three further meetings are planned, one each for March, April and May 2004.

The WGMs have provided an excellent opportunity for integration of key lake and basin management issues through extensive and intensive elucidation through face-to-face interactions among key invited resource persons with a wide variety of backgrounds. The meetings have focused on drawing lessons from the 28 project lake case studies as well as the commissioned thematic papers and on converting those lessons into a coherent narrative that will become the project's main report. Among the key themes that have been identified for the main report include: effective institutions for responding to change, policy tools for identifying the appropriate response, management interventions for putting plans into action, involving people through education and participation, financing mechanisms for mobilizing sustainable funding and the role of knowledge in informing lake management. Project Manager, Dr. Masahisa Nakamura, noted that while there was still much work to be done, the basic ingredients of each chapter have become clearer and the different views expressed on them have been quite constructive for each of the chapter authors to make further revisions, modifications and improvements. Dr. Nakamura further observed that cross chapter flow and linkages seem to have emerged adequately, though more could be brought out before the third meeting through continued interaction.

Apart from preparation of the final report, revision and finalization of the 28 project lake case studies and thematic papers is underway. Draft copies of these documents have been posted on the project website (address above) to solicit comments from the public. The finalized case studies and thematic papers will be compiled in form of CD and distributed together with the final report that will be available in hard copy. We invite all our readers to participate in the process of finalizing the project outputs through making comments on the e-forum.

Graciela Martinez Serratos of Mexico City took time out from attending the 14th Group Training Course in Lake Water Quality Management to tell us what she has learned.

In this training course we were taught that lake and reservoir environments are dynamic; changing as the economic activities in its surrounds change. Many of the large impoundments were planned when world awareness of environmental issues, especially ecological management of freshwater resources, was low. The management structures put in place then reflected the concerns of that era. Now these issues are critical for the well being of humanity. States need to ensure functional and durable mechanisms for the management of lakes and reservoirs; mechanisms that are able to respond to ever changing challenges. These include proper institutions, adequate funding for management and research, stakeholders participation, and functional legal frameworks at both national and international levels.

Through the training we have become aware of the leading techniques of lake water management. It provides us with the best (the most expensive environmentally sound techniques) management options and alternatives available at the international level. Recent knowledge on water quality management will assist us in preparing for and achieving better sustainable development programmes, and though I still do not know how, I feel sure we will find solutions. We have become familiar with different types of catchment areas and their problems, and learned about lakes with similar conditions to those of our lakes (eutrophication, algae bloom, decreasing of water level). It is helpful and important to cope with the same problems but of course according to our conditions.

In my opinion it is a good opportunity to listen to famous international lecturers and professors to gain from their experiences and share, exchange our experiences. We have been able to observe new water treatment technologies, field and monitoring methods and water quality models, which are being applied today.

Thank you very much for the well-organized program which was full of useful professional, technological information and cultural activities. We can learn a lot form Japanese people both professionally and indeed from their behavior.

First National Congress on Philippine Lakes

Adelina C. Santos-Borja

The First National Congress on Philippine Lakes (LakeCon) was successfully held between 25-28 November 2003, at the Development Academy of the Philippines in Tagaytay with the theme: 'Sustain Lakes, Support Life'. Various lake stakeholders from all over the country participated. The objectives of the congress were: 1) to identify major lake-specific issues that will serve as inputs for R&D planning and policy advocacy; 2) to identify research gaps in lake resource management; 3) to develop a national agenda on lake resource management; 4) to organize the Philippine Lakes Network (PlaNet) and 5) to develop the Philippine Lake Vision.

The keynote speaker was Secretary Elisea G. Gozun of the Department of Environment and Natural Resources who underscored the importance of the Congress by stating that it came at a time when our lakes are succumbing to the enormity of our demands and actions and that sustainable development of our lake basin resources can only be accomplished through a committed partnership among us, as individuals, communities and institutions.

As an expression of support from overseas, Dr. Masahisa Nakamura, Director of the Lake Biwa Research Institute and a member of the ILEC Scientific Committee, gave a very timely message by telephone. He emphasized that much as we are all aware of the need for sustainable development, it has not been easy to achieve because we have been treating individual lakes as being independent from each other. We must be aware that we affect lakes in other regions on the globe, thus every lake is a global lake. In the same light, every Philippine lake is a global lake.

The Congress was also an opportunity for the author, who was a member of the World Lake Vision Committee, to present and highlight the importance of the World Lake Vision and the Laguna de Bay Vision and to encourage everyone to heed the call to action. The Asian Development Bank, represented by Dr. Christopher J. Wensley, Sr., was LakeCon's major sponsor.

Paper and poster presentations and workshops were divided into three main sessions namely: Science of Lakes, Management and Policy Issues, and Doing Something About It: Lessons Learned. A total of 22 papers and 28 posters were presented.

The Congress was made possible through the concerted efforts of the Department of Environment and Natural Resources through its attached agencies and bureaus namely the Laguna Lake Development Authority, the Forest Management Bureau, the Ecosystems Research and Development Bureau, the Protected Areas and Wildlife Bureau and the National Water Resources Board; the Philippine Council for Aquatic and Marine Research and Development, the Philippine Institute of Volcanology and Seismology; the Southeast Asian Fisheries Development Center, the University of the Philippines at Los Banos and the SEAMEO Regional Center for Graduate Study and Research in Agriculture (SEARCA) which served as the Secretariat of the Congress.

Financial support was also given by UNDP and the Department of Science and Technology, as well as by private corporations represented by San Miguel Corp., Jollibee Foods Corporation, Unilever Phil., Una Research Phil., Inc.

The Congress came to a close with the identification of priority issues and concerns based on the workshop themes, development of the Philippine Lake Vision, the creation and election of officers of the Philippine Lakes Network and the joint declaration on Philippine Lakes aptly called, the Tagaytay Declaration.

Delegates at the historic conference

Spaceship Earth

Professor Bill Williams (pictured above) served as the vice-chair of the ILEC Scientific Committee for a long time, and was an Emeritus Professor at Adelaide University, Australia. Just before he passed away he wrote an essay which he entitled 'Spaceship Earth'. (Unfortunately, due to limitations of space we are only able to publish the introduction here.) Bill dedicated his life to researching and writing about the environment. We think you will find this last piece of writing by him both pertinent and engrossing.

The Americans and Russians know a good deal about building spaceships: after all, they have been building them for the past several decades. They know that the international environment of the spaceship must be within certain tolerable limits for humans; that the right mix of gases must be maintained in the spaceship's atmosphere; and that the spaceship must have an effective plumbing system to deal with astronaut wastes and at the same time provide water for their drinking and washing. They also know that astronauts need feeding: adequate supplies of food, in the right blend, must be provided for the number of astronauts on board. Indeed, not the least important item of knowledge concerning spaceships is that all astronaut needs and requirements are contingent upon the number of astronauts in a spaceship. Perhaps the first rule for those who build a spaceship is: be sure not to overcrowd them.

Despite their considerable experience in building spaceships, neither the Americans nor Russians have been able to build one that is self-sustaining, in other words, one that does not need to receive supplies from earth. Even the supposedly self-contained 'spaceship' built on earth in the Arizonan desert eventually proved to be unsustainable - notwithstanding the best efforts of environmental scientists. In fact, the only sustainable spaceship we know is planet earth. It appears to be unique in the universe - leastways, there is no evidence yet that any extra-terrestrial body supports intelligent life (despite a continuous and intensive research). It has been suggested that this is because all intelligent life self-destructs after 1000 years, a mere blink in cosmological time!

For those who wish to read more, you can do so at our website: (www.ilec.or.jp/)

Board of Directors and Council Meeting

The 58th meeting of the Board of Directors and the 51st meeting of the Council of ILEC were held concurrently for the first time at ILEC's offices on 4 March. Items on the agenda were the current fiscal year's (from April 2003 to March 2004) supplementary budget, and the next fiscal year's (from April 2004 to March 2005) activities plan and budget. As usual discussions were thorough and vigorous, but at the end of the meeting all items on the agenda were passed.

Curious about who the Board of Directors and the Council of ILEC are and what they do? Well, the Board of Directors is broadly responsible for executive control of the normal business of ILEC in accordance with the Articles of Association. It meets at least twice a year and directors are unpaid. Directors are appointed for two years but may be reappointed. The Board elects a council (10-20 members) whose job is to advise the Board as appropriate. Now you know!

ILEC New Face

Yoshimi NISHIO joined ILEC's Support and Training Division this January. She has, so far, concentrated her energies on making sure the ILEC/JICA training program runs smoothly. She graduated from the University of Shiga Prefecture and first came to ILEC's attention when she organized the Student Session of the 9th World Lake Conference. She has also worked at the Shiga Prefectural Office in relation to the 3rd World Water Forum. She looks forward to using her experience to ILEC's benefit and hopes to get the chance to meet some of you soon.

Yoshimi Nishio

Lakes of the World - Lake Champlain Basin Program

William G. Howland, LCBP Manager, and Roland (Buzz) Hoerr, VT Citizens Advisory Committee Chair

The Lake Champlain Basin is a North American watershed that includes a diverse array of natural, cultural, and recreational resources. Extending west into New York's Adirondack region, east into Vermont's Green Mountains, and north onto Québec's fertile plains, the Basin's rich history of human inhabitance is closely connected to its natural features. Because the Lake Champlain Basin spans state and international borders, the need for international cooperation has been recognized for decades.

The Lake Champlain Basin Program (LCBP) is a partnership among the States of New York and Vermont, the Province of Québec, the US Environmental Protection Agency, other federal and local agencies, and citizen groups. Established and funded by the US Congress in 1990, its purpose is to coordinate the implementation of the management plan for Lake Champlain, *Opportunities for Action: An Evolving Plan for the Future of the Lake Champlain Basin*. LCBP's goal is to work cooperatively to protect and enhance the environmental integrity and the social and economic benefits of the Lake Champlain Basin. Although Lake Champlain is generally a clean lake, it exhibits significant pollution problems in several bays and near-shore areas.

Four highest priority actions identified in *Opportunities for Action* address key problem areas:

Reduce Phosphorus Loads in Tributaries: Phosphorus concentrations in parts of Lake Champlain are too high, and promote excessive algae growth and other problems. This results in reduced water quality, and odors, and is widely regarded to be the greatest threat to the human use and enjoyment of Lake Champlain.

Reduce Toxic Pollutants Entering the Lake: Toxins polluting Lake Champlain exhibit low concentrations compared to more industrialized lakes, but there is clearly cause for concern. Excessive polychlorinated biphenyls (PCBs) in fish tissues have caused New York and Vermont to issue health advisories limiting consumption of fish known to bioaccumulate these toxins.

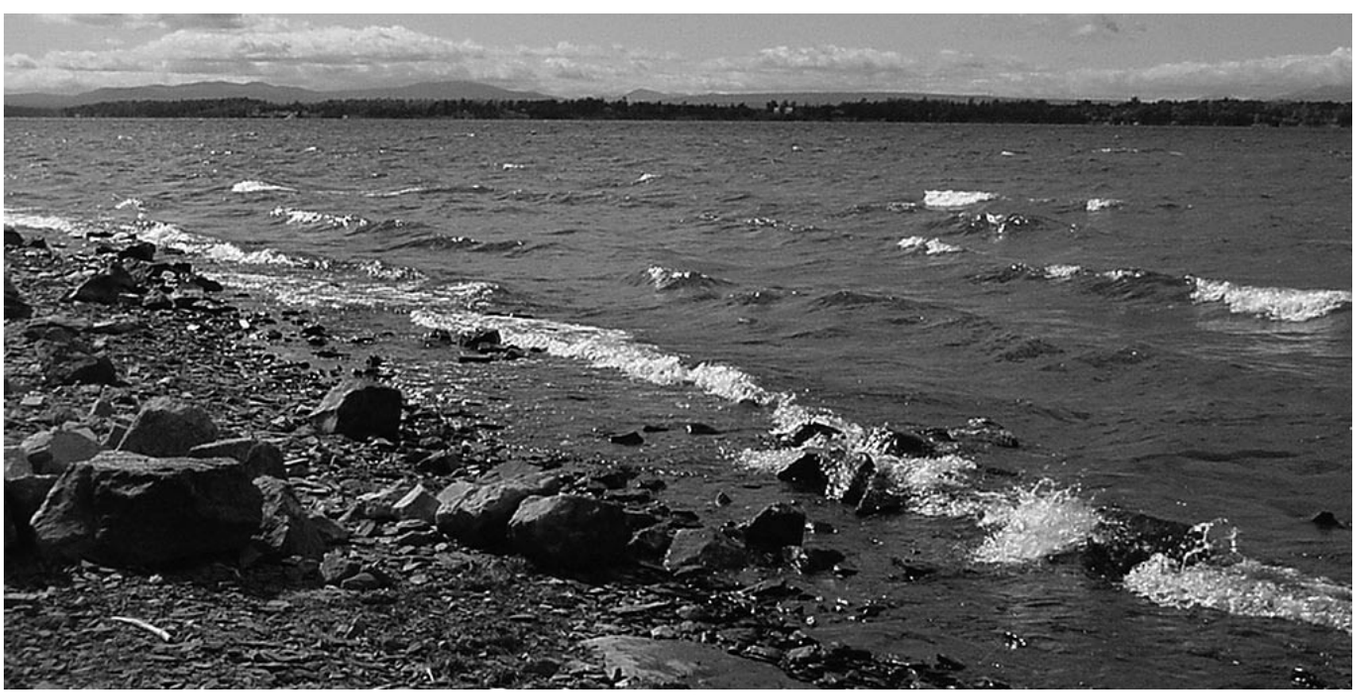
Manage Nonnative Aquatic Nuisance Species Effectively: Nonnative nuisance species have had a severe impact on the fish and wildlife resources of Lake Champlain. The introduction of the parasitic sea lamprey, water chestnut, Eurasian watermilfoil, and zebra mussels has significantly impacted the lake ecosystem and compromised the human enjoyment of the Lake.

Protect Human Health: Threats due to poor water quality in peripheral shallow areas of Lake Champlain include bacterial pathogens and parasites that can cause illness when ingested. The presence of pathogens causes occasional beach closings in late summer. Sources of pathogens include agricultural wastes, failed septic systems, combined sewer overflows, sanitary sewer overflows, and urban stormwater runoff.

Other management plan priorities include fish and wildlife management; wetland, stream and riparian habitat management; and cultural heritage and recreation resource management.

Implementation of the Plan

In implementing *Opportunities for Action*, the LCBP is guided by many stakeholder partnerships. The LCBP Steering Committee includes local, state, provincial, and US Federal agency leaders, the chairs



Lake Champlain

of citizen advisory committees from each jurisdiction, and the chairs of three specialized advisory committees: education & outreach, technical, and recreation & cultural heritage. Essential program funding from US federal appropriations, amounting to several million US dollars each year, is augmented by significant state and provincial appropriations and non-federal matching funds. Plan implementation tasks include several key action areas:

Long term physical and biological monitoring of 13 lake segments and 18 major tributaries tracks the progress and the needs in the cleanup effort;

Research programs address information gaps of importance to management policy;

Competitive grant programs enable local governments and NGOs to implement pollution prevention actions in their own communities;

LCBP resource staff coordinate technical, cultural heritage and educational projects basin-wide;

Website, publications, media productions and curricular development improve public understanding of ways to reduce pollution.

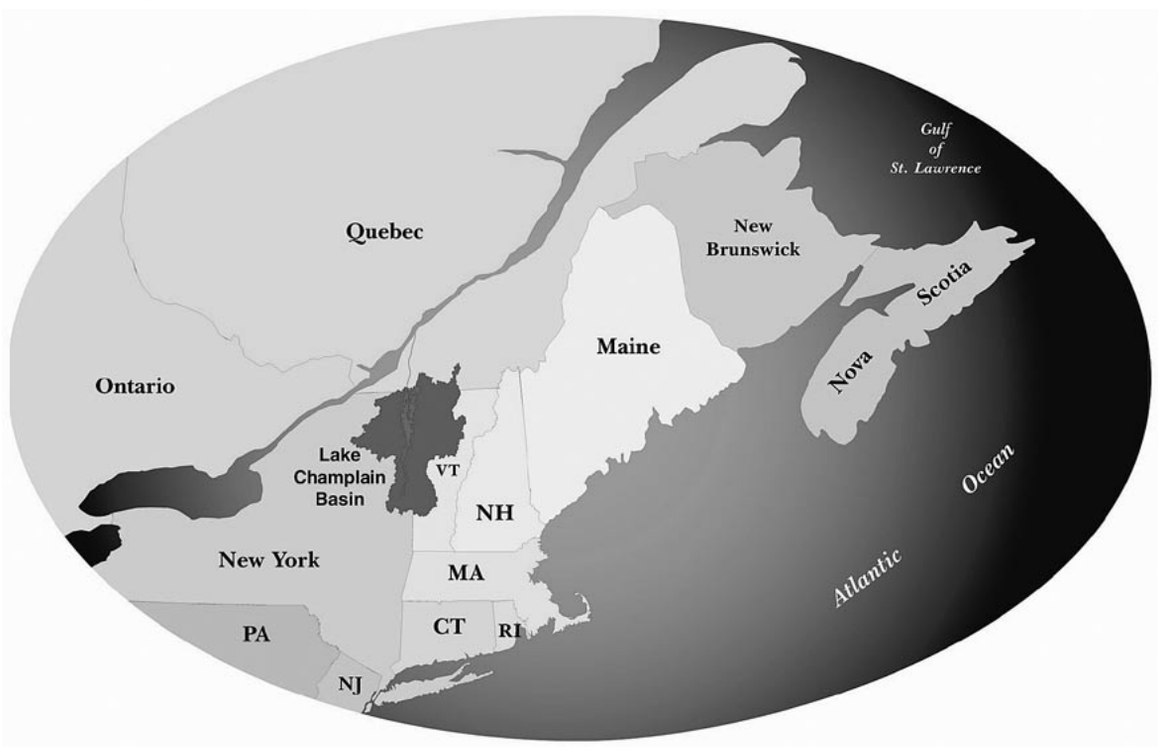
Stakeholder Involvement Guides the Program

Citizen Advisory Committees in New York, Vermont and Québec enable broad public stakeholder involvement in decision-making, and play a key role in LCBP governance. The CACs sponsored numerous public meetings around the Basin as the first version of *Opportunities for Action* was developed. Now, as the plan is implemented, the CACs invite stakeholder participation in the LCBP annual budget planning process, and regularly solicit advice on management and budget priorities.

The LCBP's Technical Advisory Committee (TAC), also reflecting community participation, plays a key role in informing the LCBP Steering Committee through recommendations of scientifically sound approaches to management issues. Steering Committee policies characteristically reflect the technical advice provided by the TAC.

A diverse array of stakeholders works together to manage Lake Champlain's resources. Citizen groups concerned about the health of local streams understand the connection between Lake management and the quality of life, economic opportunities, heritage and aesthetics. Because stakeholders, often through advisory committees, have been involved from the beginning of the LCBP planning process, they feel ownership of the policies that have developed, and a willingness to work to improve Lake Champlain.

Lake Champlain Basin Location



Call for Articles

We are always looking for articles for our Lakes of the World series. If you would like to let the ILEC Newsletter readership know about your particular lake, please send us your articles of about 800-1200 words in length with a few suitable photographs for us to choose from. Free publicity for you and some interesting information for our readers. You can send articles by email or post at the addresses given on the bottom of back page of this newsletter.

The 14th Group Training Course in Lake Water Quality Management

The trainees and some of their lecturers

The two–month-long 14th Group training Course in Lake Water Quality Management, one of JICA's group training courses, was held at ILEC from 18 January to 19 March, with 10 trainees in attendance. Course participants were from Argentina, Egypt, Benin, Brazil, China, Hungary, Mexico, Sri Lanka and Syria.

The aim of this course is for participants to gain comprehensive lake-water-quality management techniques and knowledge. In addition to lectures on various subjects at ILEC, the course included training on water quality analysis and analytical instruments. The trainees also visited plants and facilities such as water treatment and sewage treatment plants, and attended lectures and site visits in Tokyo and Hiroshima. They also participated in a home-stay program set up by the Kusatsu Inter-People Friendship Association.

All the trainees worked hard and enjoyed the course. We trust that they will take back with them a great deal of knowledge that they did not have before coming to Japan, and that they will use that knowledge to improve lake water quality management in their own countries. We also hope they take back happy memories of their visit to Japan. *Read Graciela Martinez Serratos's account of her course on **page 3** of this newsletter.*

Forthcoming Meetings

International Water Demand Management Conference
• 30/06/2004 - 03/07/2004: Amman, Jordan

World Water Week
• 16/08/2004 - 20/08/2004: Stockholm, Sweden

International Workshop and Special Session on Management of Poor Quality Water for Irrigation
• 09/09/2004 - 10/09/2004: Moscow, Russia

5th International Symposium of Ecohydraulics
• 12/09/2004 – 17/09/2004: Madrid, Spain

9th International Conference on Wetland Systems for Water Pollution Control
• 27/09/2004 – 30/09/2004: Avignon, France

World Lake Vision Executive Summary

ILEC is trying to translate the Executive Summary into as many languages as possible in order to disseminate the ideas of the 'World Lake Vision'. The Hungarian edition is now complete. You can take a look at the Hungarian, Spanish and German translations on our website (http://www.ilec.or.jp/).

If you can help us translate the Executive Summary into your native language, please contact us by post or email.

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