



**Lake Tana Symposium
Bahir Dar University
Bahir Dar, Ethiopia**

**Address by David Read Barker,
President, LakeNet
drbarker@worldlakes.org**

24 September 2004

Lake Tana is emerging as one of the world's most important inland water bodies, so it is proper that this Lake Tana Symposium attracts international attention. LakeNet became attracted to Lake Tana starting in 1999, when it emerged as one of the global top 250 lake regions most important for biological diversity. Its importance to north-eastern Africa is that the lake is largest in Ethiopia, with a surface area of 3,1507 km² and a watershed of 16,500 km². It forms the headwaters of the Blue Nile, which carries more than 80% of the total volume of the Nile River at Khartoum, Sudan.

This key water resource is at the core of Ethiopia's prospects for developing the lake's enormous potential for producing hydroelectricity and irrigation lakeshore and downstream lands. It is a positive step, worthy of recognition, that the three countries that share the Blue Nile basin—Ethiopia, Sudan, and Egypt—have reached some understanding of their shared fate. The multilateral donor mechanisms, including the African Development Bank and the World Bank, are actively promoting regional cooperation through the Nile Basin Initiative, Eastern Nile Technical Regional Office (ENTRO), the Eastern Nile Subsidiary Action Program, and through activities such as the Integrated Development of the Eastern Nile (IDEN) project and many studies.

With such an immense natural resource at stake, there is naturally underway now a highly competitive struggle to control it. Over the long run, if there is to be sustainable development rather than destructive short-term exploitation, some balance must emerge that protects the interests of: (1) local people living on and around the lake; (2) the Amharaland regional government; (3) the national government of Ethiopia; and (4) the downstream population of Sudan and Egypt.

We at LakeNet embrace Ethiopia's development aspirations, consistent with Agenda 21, and we applaud the efforts of Bahir Dar University to hold this important Symposium.

LakeNet is a **network** of more than 1,600 individuals and organizations, in more than 100 countries. LakeNet's mission is to protect and restore the health of lakes throughout the world in order to meet the needs of the human and natural communities that depend on them. LakeNet's information services, exchanges, assistance programs and policy work are all aimed at improving the stewardship of lake ecosystems by inspiring people, cultivating leadership and strengthening lake organizations, including Bahir Dar University, with which LakeNet signed a Memorandum of Cooperation last year.

In expressing LakeNet's support for this meeting, I would like to sketch a broad agenda with four main points: (1) Limiting lake level drops; (2) joining the Ramsar Convention on Wetlands; (3) conserving the lake's biodiversity; and (4) using Geographic Information Systems (GIS) for generating maps of the region. The objective is to maximize benefits from the Lake Tana ecosystem as soon as possible, while at the same time ensuring that the development is sustainable indefinitely, for many generations to come.

1. Lake-level Fluctuations and Environmental Flows

The Government of Ethiopia is continuing to develop Lake Tana's hydroelectric potential. Lake Tana has become a reservoir whose level is controlled by a weir across the Blue Nile at Chara Chara, approximately one or two km downstream from the point where the river flows out of the lake. The 75 Megawatt Tis Abay II hydroelectric power plant, located at the site of the famous Tis Issat waterfalls, some 32 km downstream on the Abay River (Blue Nile), now diverts almost all of the flow to its turbines. This has virtually destroyed one of the most prominent tourist attractions in the area.

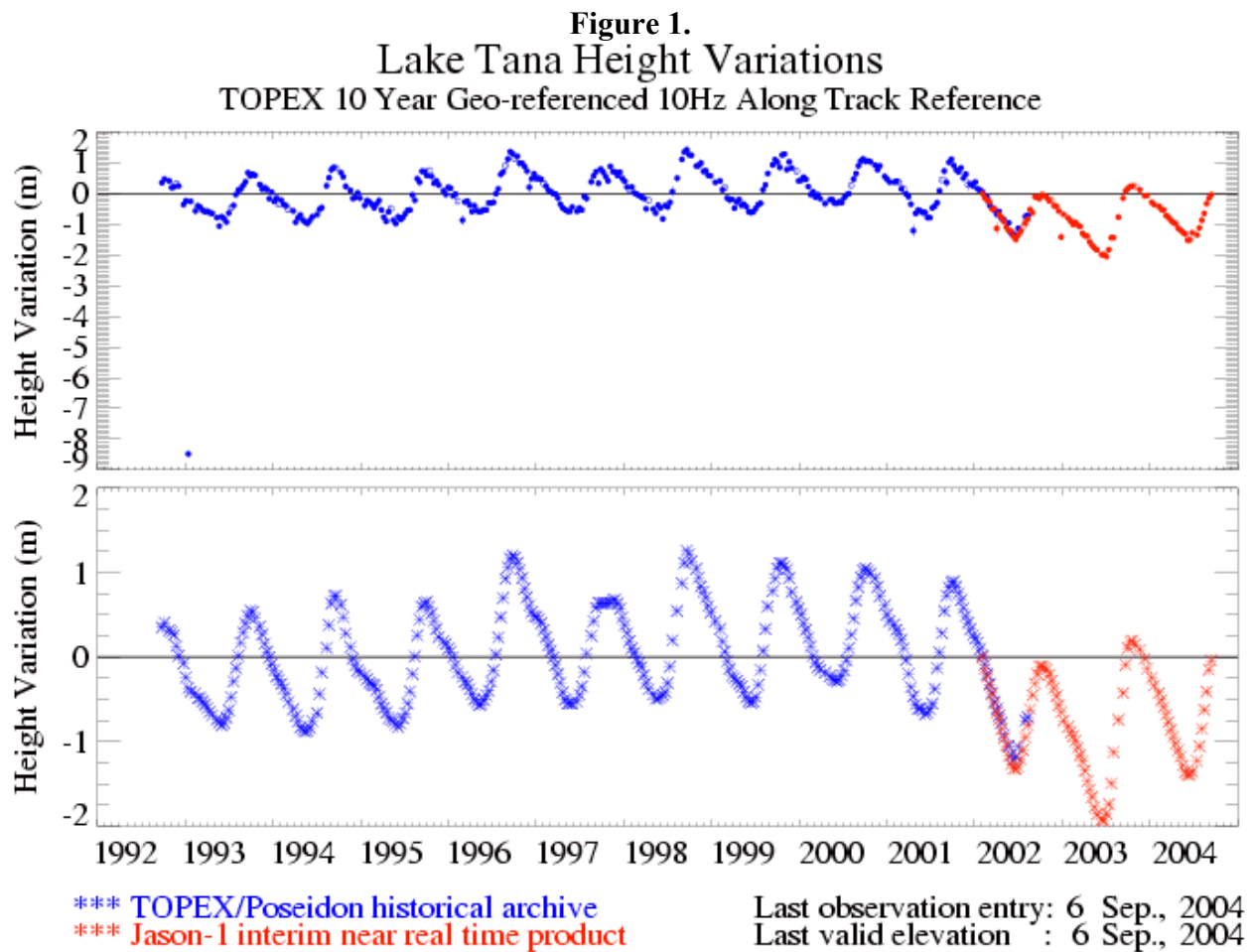


Tis Issat Falls, November 2003



Tis Issat Falls before completion of Tis Abay II

The power project has also severely disrupted the normal height variation of the lake. The extent of this disruption is readily apparent from satellite radar altimetry from the TOPEX/Poseidon historical archive and the Jason-1 interim near real-time product. As shown in Figure 1, the height of the lake varied approximately one meter up and down annually between 1992 and 2001, since which time it has fallen dramatically, to a low of -2 meters during 2003. This water withdrawal disrupted commercial ferry service between Bahir Dar and lakeshore towns, because the boats could not use the docks.



We cannot say with any certainty that the water requirements of the hydroelectric power plant caused the low water in the lake, but this seems to be more than just coincidence. According to a senior official of the Government of Ethiopia, the Ethiopian Electrical Power Company (EPCO) held three public meetings in Bahir Dar to develop the operational rules of the dam, which require that at least 30 m³/second be released over the falls at all times. It was perfectly obvious that not nearly this much water was being released when LakeNet staff visited the falls in November 2003. The rest was being diverted into the hydroelectric station.

The World Commission on Dams established a framework for decision-making based on five core values—equity, sustainability, efficiency, participatory decision-making and accountability. It proposed:

- a rights-and-risks approach as a practical and principled basis for identifying all legitimate stakeholders in negotiating development choices and agreements;
- seven strategic priorities and corresponding policy principles for water and energy resources development - gaining public acceptance, comprehensive options assessment, addressing existing dams, sustaining rivers and livelihoods, recognizing entitlements and sharing benefits, ensuring compliance, and sharing rivers for peace, development and security; and
- criteria and guidelines for good practice related to the strategic priorities, ranging from life-cycle and environmental flow assessments to impoverishment risk analysis and integrity pacts.

Ensuring public trust and confidence requires that the Government of Ethiopia and EEPKO meet the commitments made for the operation of Tis Abay II. An ongoing forum for communication between these national entities and local stakeholders would facilitate this, and we hope that this Symposium will initiate sustained, ongoing dialogue about the water levels and environmental flows in the lake. The operational rules and compliance plan of Tis Abay II should be made public, and the performance in relation to the operational rules should be monitored by independent stakeholder bodies such as Bahir Dar University.

2. Wise Use of Wetlands: The Ramsar Convention

Like most large lakes, the Lake Tana basin contains many types of habitats, including the open freshwater lake and several types of surrounding wetlands. Drainage and irrigation of 40,000 hectares are proposed for sites along the Lake Tana shoreline, as described by the African Development Bank.

Without making any judgments about the costs and benefits of individual proposals for irrigation development on the shores of Lake Tana, we note that Ethiopia does not yet have a national policy for wetland development. The proposed IDEN Irrigation and Drainage Project on the Lake Tana shores would proceed with much greater confidence that it represents the wise use of the resource, if Ethiopia were a Party to the Convention on Wetlands of International Importance, known as the Ramsar Convention. The Convention is a creation of the World Conservation Union (IUCN). Today, the 141 countries that are Parties to the Convention have designated more than 1300 “Ramsar sites” totaling more than 122 million hectares of land and water. Participation in the Ramsar Convention is entirely voluntary for all of the Parties. Over the course of eight Conferences of the Parties, the Ramsar Convention has generated excellent technical guidance on the wise use of wetlands, and it sustains an active global network of wetland managers and policy makers. The next Conference of the Parties will be held in Kampala, Uganda, on 7-15 November 2005.

Ethiopia is not yet a Party to the Ramsar Convention. One reason that has been given for this is a concern among Government officials that designation of Ramsar sites will restrict the

development activities that take place there, for example, converting natural wetlands into irrigated agricultural lands. This fear of internationally-imposed restrictions is an unfortunate mis-judgment of the benefits of participation in the Ramsar Convention process, which the participating countries view as a help and an important success story.

In April 2003, the LakeNet Secretariat and the Ramsar Bureau signed a Memorandum of Cooperation (MOC) that calls for both sides to promote the development of a global network for lakes conservation and wise use. The MOC was developed by the Ramsar Committee of LakeNet. Approximately 650, or one-half, of the world's Ramsar sites are on lakes. In carrying out its work with Ramsar, LakeNet supports workshops, publications and exchange programs to develop and implement lake basin and wetland management plans, drawing entirely from Ramsar's technical guidance on "wise use."

Given these arrangements, LakeNet will support Ethiopia becoming a Contracting Party to the Ramsar Convention. Lake Tana is at or near the top of the list of "wetlands of international importance" that are not yet Ramsar sites. It is also the most obvious candidate to be designated as the first Ramsar site in Ethiopia, consistent with the requirement that every Party must designate at least one site at the time of accession to the Convention.

3. Protecting Lake Tana's fishery and its biodiversity

Lake Tana is an important source of fish both for the people immediately around the lake and elsewhere in the country. Recent studies show serious declines in fish stocks, most probably due to overexploiting their spawning grounds. There is a large and growing body of experience in managing fisheries on the Great Lakes of East Africa, including Lakes Victoria, Tanganyika and Malawi. Fisheries experts from Lake Tana would clearly benefit from increased contacts with their colleagues to the south of Ethiopia.

From a global perspective, there appears to be a special kinship between Lake Tana and Lake Lanao, on the island of Mindanao, the second largest lake in the Philippines. Both lakes have endemic flocks of fish of the genus *Barbus* ("barbs"), but the fishery of Lake Lanao has been greatly disrupted by the introduction of invasive alien species. This has not yet occurred on Lake Tana, but it is only a matter of time unless effective precautions are taken.

4. Geographic Information Systems (GIS)

Bahir Dar University is clearly a local leader in acquiring GIS capability and compiling the data layers that will guide the successful development of the watershed. LakeNet wishes to support all efforts to promote the use of GIS at Lake Tana.

List of Website Resources

Lake Tana Profile: <http://www.worldlakes.org/lakedetails.asp?lakeid=8568>

E. Nile Trade Power Study: www.afdb.org/knowledge/pressreleases2004/adf_17_2004e.htm

ENTRO: www.eastern-nile.com

Tis Abay II: www.mediaethiopia.com/Engineering/BlueNile_ii_hydroelectric_project.htm

Stealing the Nile: <http://www.msnbc.msn.com/Default.aspx?id=3727491&p1=0>

IDEN Project: www.nilebasin.org/overview_eastern_nile.htm

Lake Level variations:

www.pecad.fas.usda.gov/cropexplorer/global_reservoir/gr_regional_chart.cfm?regionid=metu®ion=&reservoir_name=Tana