



# GLOBAL INTERNATIONAL WATERS ASSESSMENT

NEWSLETTER No 9 December 2001

## Dear GIWA friends,

as this Newsletter goes to print, the Nobel price award ceremony is going on. As you all have learned, this years Noel Piece price was awarded to the United Nations. Our congratulations is given to the General Secretary Kofi Annan. We, GIWA, are proud to be part of UNEP and the United Nation's family and share the gratitude for this honor.

The Christmas season is now coming up and the end of the year is approaching. It has certainly been a year of success for GIWA. We have strengthened our capabilities and our operations enormously. The sub-regional task forces together with the focal points, the Core Team and the UNEP staff in Nairobi are forged together in a strong unified team. Hundreds of high level experts in all fields of interest for the GIWA has joined the project and are continuously turning out new results. Scaling/scoping workshops are being carried out and reports are following.

Being the scientific director I am proud of the GIWA team and all the good work carried out. I want personally to thank everybody who has contributed. Your efforts are very much appreciated. I am also grateful for the interest you, the readers of this Newsletter and the visitors to our Web site, show for the GIWA and for the feedback you give. Your comments are taken seriously and adhered to.



Finally, I send you all seasonal greetings and wish you A Merry Christmas and A Happy New Year.

Dag Daler  
Scientific Director

## Scaling and scoping workshop in East African Rift Valley Lakes

The East African Rift Valley Lakes are some of the oldest, deepest, and most diversely speciated natural lakes in the world. The lakes are generally considered as a homogenous system because of their similarity in response to climatic and hydrological changes although each lake has its own unique physical and ecological characteristic, and each has evolved differently. Similarly, the lake basins are impacted or experience the same type of problems due to anthropogenic activities, and natural processes which differ in scale and intensity. During the recent GIWA workshop on scaling and scoping, the following transboundary lakes were selected for the East African Rift Valley Lakes (EARVL) sub-regional assessment: Malawi, Tanganyika, Kivu, Victoria, Edward, Turkana, Natron, Jipe, Albert and Chala.

Most of the issues outlined in the GIWA methodology are relevant to the EARVLs sub-region but with various degrees of scale and severity. The only exception is thermal and radioclide pollution, which have no known impact.

Water shortage is a major concern in EARVLs considering that most lakes are subjected to continuous reduction of stream inflow due to abstraction of river water for irrigation and hydropower generation. This is coupled with sediment translocation (soil erosion) being emptied in lakes with the effect of shallowing depths, transparency and nutrient fluxes. Pollution pressures that have increased pollution impacts mainly as result of municipal and industrial discharges coupled with other human activities (agricultural nutrients etc) is evident everywhere along the shores of the lakes. As a result of these high levels of pollution the aphotic zone of lake Victoria is reported to be getting anoxic. The Secchi transparency index has declined from 5 meters in the 1930s to less than one meter in the 1990s. There is increased abundance of epiphytic algae in addition to increasing shift from diatoms to toxic cyanobacteria which cause toxins into the food chain that occasionally result in fish kills.

In terms of fisheries exploitation, the EARVLs have been experiencing gradual loss

of biodiversity and an increase in invasive and introduced species. The population of economically important fish and cichlids has undergone modification with even some having been extincted. The presence of water hyacinth – *Eichhornia crassipes* in Lake Victoria has interfered with fishing operations, commercial transportation services, increased the cost of water supply from the lake, threatened hydropower operations, and reduced fish populations through de-oxygenation. Loss of biodiversity is considered critical at this point considering that more than 90% of the breeding stocks are biologically castrated. Another issue facing the sub region is the continued encroachment on wetlands and riparian vegetation due to human activities. Issues of water quantity and quality, and unsustainable exploitation of fisheries that now mar the EARVLs are partly responsible for the increased cases of poor health, reduction in saving and investment, malnutrition, deterioration in socio-economic well being and gender differentiation with women and children bearing most of the suffering.





### The GIWA General Assembly Boosted Sub-Saharan Africa Network

Much as the GIWA General Assembly boosted GIWA work, it boosted Sub-Saharan Africa network much bigger in the sense that it brought together all the seven Focal points who took the advantage and not only socialized but also made solid commitment to work together in the remaining phases of GIWA. At one of the meetings held after the GIWA General Assembly, the Focal points agreed to strengthen networking among themselves in all future GIWA work, create a website where they can chat and communicate on water and environmental related issues affecting the continent, establish a mega region host site office and overall, do everything possible to fight poverty in Africa. This attitude is a confirmation that African scientists are willing to cooperate in their day-to-day work to promote development in the continent. Indeed, it offers a bright working relationship in GIWA and other development related work.

## Scaling and Scoping for the Sub-Regions Yellow Sea, Bohai Sea and East China Sea

The Report on Scaling and Scoping for GIWA Sub-Region 34 (the Yellow Sea), Sub-Region 35 (the Bohai Sea), Sub-Region 36 (the East China Sea), has successfully been completed by the task team members who have worked tirelessly for a few months. The scaling results noted the need for modifying the original GIWA sub-regional boundaries and revised the borders based on the principle that the sub-region should encompass the major causes and effects of environmental problems associated with each transboundary water area (whether river basin, groundwater table, lake and/or sea)



High priority issues on environmental impacts include: eutrophication; loss of ecosystems or ecotones; modification of ecosystems or ecotones and overexploitation of living resources in the Yellow Sea. Overexploitation of living resources; excessive bycatch; destructive fishing practices; impact on biological and genetic diversity were the results in the Bohai Sea. In the East China Sea eutrophication; loss of ecosystems or ecotones; overexploitation of living resources; and destructive fishing practices are considered to be the worst problems in the East China Sea.

## All sub-regions in Latin America have completed the First activity of GIWA Assessment

GIWA Sub Region 64 (Humboldt Current) and Sub region 65 (Eastern Equatorial Pacific), Guayaquil-Ecuador, 26-28 September. Focal Point: Mr Ulises Munaylla, Permanent Commission for South Pacific-CPPS, Prof Marcia Marques and sub-regional task team.



Sub Region 40a Northeast Brazil Shelf, Fortaleza, State of Ceará-Brazil, 16-18 September. Focal Point: Assoc. Prof. Irlles Mayorga (Federal University of Ceará), Prof. Marcia Marques and sub-regional task team.



Sub Region 39 Brazil Current, Rio de Janeiro, Brazil, 3-5 October, 2001. Focal Point Prof. Marcia Marques Rio de Janeiro State University -UERJ Brazil, and GIWA sub-regional task team.



Sub Region 40b Amazon, Belém do Pará - Brazil, 25-27 October, 2001. Focal Point: Dr Ronald Barthem, Emilio Goeldi Museum, Brazil, Prof. Marcia Marques and sub-regional task team.