

The LNGG Monthly

Newsletter of the Lake Naivasha Growers' Group

Progress on the Water Allocation Plan

Inside this issue:

Water Allocation Plan	1
Occupational health and safety	2
DRIC opens	2
Algae in Lake Naivasha	3
Current Lake Levels	4

Agenda

* Public Holidays - Dec. 25, 26, 31 2009 and Jan. 01, 2010

* Upcoming from LNGG - seminar on heating greenhouses using steam from geothermal wells - Jan. 2010

WRMA has decided to use the Naivasha Water Allocation Plan, funded by the LNGG, as a pilot for all catchments within Kenya. Following is a brief update on the progress being made.

Since 2005, LNGG has been partnering with Rural Focus Ltd and the Water Resource Management Authority (WRMA), in order to create a way forward on water management issues that plague us in Naivasha. One of the projects under this partnership was the creation of a Water Allocation Plan (WAP) for equitable distribution of water to the environment (reserve), domestic, and commercial uses, as outlined in the Water Act (2002).

The WAP not only includes water from Lake Naivasha but also the rivers and boreholes associated with it. The final draft was presented by Rural Focus to LNGG and WRMA mid-2008, however due to other pressing needs such as the development of the Water Resource Users' Associations (WRUAs) who would be the ones who promote the WAP, as well as their respective Sub-Catchment Management Plans (SCMPs), which

would contain budgetary items to cover the cost of promoting and monitoring compliance to the WAP, the actual document was not pushed forward till this year.

Thus far, the WAP has been discussed twice by a small group of technical people from WRMA, Catchment Area Advisory Committee, Water Service Providers, WRUAs around Naivasha, LNGG, LNRA, WWF, and Rural Focus. The first meeting hosted by WRMA-Naivasha and supported by WWF-EARPO (based in Naivasha) held on October 15, 2009 resulted in a number of suggestions by the various stakeholders on the key issues that must be changed, included, or deleted from the WAP based on best management practice and these were forwarded to WRMA. Following this, WRMA Headquarters vetted the WAP independently, and their comments and corrections were discussed at a second meeting held on November 19, 2009. At this final meeting, the comments from WRMA Headquarters were discussed and based on consensus they were either adopted or rejected,

in the latter case with reasons recorded. The points discussed were purely technically-based, as a final wider-stakeholder meeting, hosted by WRMA, will be held next year to ensure that all interested stakeholders can comment on the WAP and only following that will the document be adopted.

This document is critical to our future in Naivasha. If we do not start to consider the environmental reserve when dealing with water distribution we shall have a complete collapse of the ecosystem. This collapse may not mean the lake and rivers go dry, but that the ecosystem stops providing us with those functions (such as filtration, pollination, etc) that are so critical to the maintenance of all lives, human and other, around the catchment. Hence, when WRMA organizes the meeting on the WAP for all stakeholders, you are all urged to attend, give your input and finally adopt the document both in word and action.

Occupational Health and Safety - *What you need to know*

Here we have a few points to keep in mind to ensure that you are compliant with the Occupational Safety and Health Regulations published in 2007

- ☐ You are **required** to have a trained **Occupational Safety and Health (OSH) Committee** that comprises six (6) members for 20-100 employees, 10 members for 100-1000 employees, and 14 members for more than 1000 employees. Only new committee members require retraining. Your committee should comprise members from all areas of operation to ensure that the OSH aspects of each department are covered. Your first-aiders and fire marshals are also members of this committee
- ☐ **First-aid personnel** need to be re-trained annually. The number of first-aid personnel for up to 100 employees is three (3), however for every additional 100 employees you require one (1) additional first-aider.
- ☐ Five (5) **fire marshals** are required on an average sized farm. The number is something your OSH committee can determine. Only new marshals require training in fire fighting.
- ☐ All **chemical handlers** from your spray units must be trained on correct usage and disposal of chemicals and spray equipment. Refreshers are a good idea, but this can be assessed by the Spray Unit representative on the OSH committee.

LNGG Secretariat has already held one joint-training course for members and is planning on more, let us know if you are interested in any particular training courses so we can organize them accordingly.

Disability Resource and Information Centre - *Opens with a bang*

In the October edition of the LNGG Monthly we brought you a story about a great achievement in Naivasha, the completion of the DRIC. Here is a report on the opening ceremony and how you can help them even now.

The Disability Resource and Information Centre (DRIC) for Naivasha District was officially opened on December 3, 2009 (see *LNGG monthly Oct 2009 for background*), which coincided with the United Nations Day for Persons with Disability, a day that is celebrated globally. The chief guest of the day was Safaricom Foundation Trustee, Joseph Ogut, who opened the centre and presented a donation from former Vice President Moody Awori. Among the invited guests was the Chairperson for the National Funds for People with Disability, Christine

Prasc who presented donations including tri-circles, clutches and a cheque for KES 100 000. Other guests included the former Naivasha MP Jayne Kihara, a representative from the National Council of Persons with Disability Muthoni Kihara and other dignitaries.

DRIC is a project aimed at uplifting the living standards of people with various types of disabilities. The centre will offer training to persons with disabilities in order for them to enter into income generating projects and employment, the center will also offer therapy and other services that are friendly to persons with disabilities.

Finally, once again we request on

behalf of the United Disabled Persons of Naivasha (UDPN) who have brought this center to life, that anyone wishing to assist can do so by providing new/used furniture and equipment for the office, ICT and Library and children's therapy clinic or through monetary assistance. Your donations will go a long way to helping a very large and neglected group in our region.

By David Kihagi

RED LAKE! *A rare species of algae becomes dominant in Lake Naivasha*

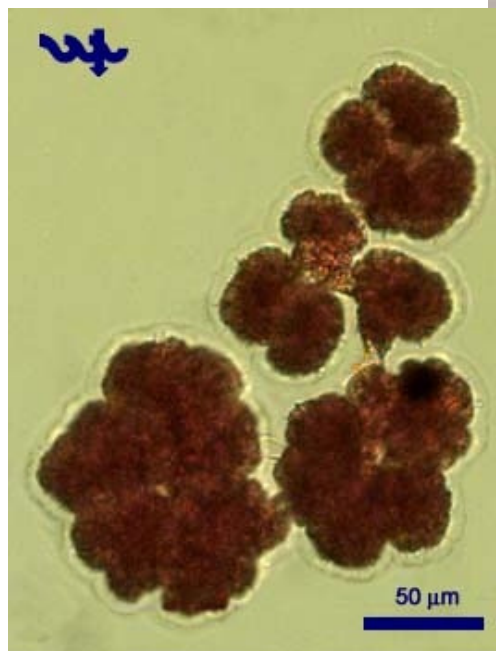
Our Lake has taken on a reddish tinge and here, Mbogo Kamau of the Lake Naivasha Riparian Association (LNRA) tells us why.

A rare species of blue-green algae known as *Botryococcus braunii*, which causes the lake water to appear red in color, has in the last few months become dominant in Lake Naivasha. This species is among other blue-green algal species such as *Microcystis* that are taking advantage of rising nutrient levels resulting from inflow of either domestic waste and sewage water, animal waste (livestock & wildlife), waste soap water (rich in phosphates), industrial/urban waste or/and the commonly used phosphate and nitrate fertilizers. This nutrient-rich inflow would otherwise have been filtered had the 48km² of *Cyperus papyrus* and other riparian vegetation still been intact around the lake. However, unfortunately, today we have less than 5km², a reduction that can be attributed to wildlife and cattle grazing, and land conversion for agriculture.

The status of nutrients in lake water is termed its trophic level. A lake can either have poor or deficient (Oligotrophic), moderate (Mesotrophic) or high (Eutrophic) nutrient levels. The amount of algae and the species composition of the algal community are directly proportion to the level of nutrients and undergo transitions as the nutrient levels change. At low levels, the algal species are dominated by a group of algal species referred to as green algae. As the nutrients increase towards Eutrophic levels, the species composition becomes dominated by blue-

green algae, some of which e.g. *Microcystis* are poisonous. The occurrence of *B. braunii* in Naivasha indicates that our lake is becoming more eutrophic as the dry season progresses.

When the lake reaches eutrophic levels, a chain reaction is set in place. Water visibility declines due to the development of algal blooms and as the algae die they sink to the lake bottom and decompose. This latter process creates very high biological oxygen demand causing anoxic (no



Botryococcus braunii shown at a magnification of x200
From <http://planktonnet.awi.de>

oxygen) conditions at the lower layers of the lake water column. This leads to decline in lake water quality and reduces the ability of the system to support life. As a result, the biodiversity of the lake declines starting with the loss of



An example of a *Microcystis* species colony shown at a magnification of x200
From www-cyanosite.bio.purdue.edu

submerged plants, then aquatic invertebrates who rely on these plants, then fish who rely on the invertebrates, and finally birds who feed on both fish and invertebrates and other animals that are dependant on the water. Finally, we have a lake that cannot support life.

However, this can be changed with an improvement in protection of the lake edge vegetation and proper management and wise use of the resources within the basin, including good agricultural practice, grazing away from the lake, and proper waste-water and sewage treatment before discharge into the lake.

Edited by S. Sarkar

HAPPY HOLIDAYS!!

The year 2009 has flown past so fast, it feels like yesterday that we celebrated the start of a new year with hopes of bettering ourselves and the world around us. We have succeeded to a certain degree. Early this year many of you supported, generously, a food drive to help those around us who were hardest hit by the drought; we almost have a complete water allocation plan, which has been in the pipelines for over 3 years; and finally, the recent signing of an MOU with the Municipal Council of Naivasha, which not only shows our commitment to the people of Naivasha, but helps build bridges rather than focus on negativity and mistrust. Our beloved lake has had it rough with the failure of both long and short rains as you will see below in the sad graph showing lake levels, but the LANAWRUA under the chairmanship of Richard Fox, has been able to make progress on various fronts to slowly improve the situation of Lake Naivasha in the coming years, but at this stage we need LOTS of RAIN and every effort to reduce water use and avoid wastage!

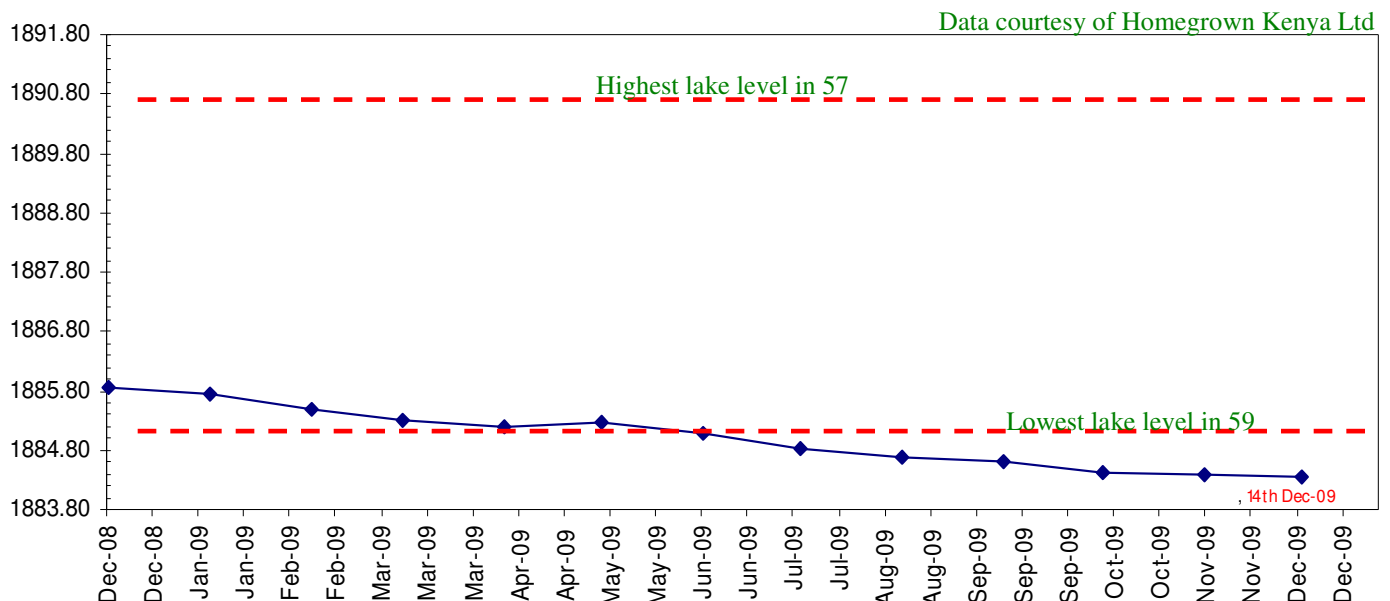
Members of the LNGG elected a new chairman with Peter Szápáry stepping down after 3 excellent terms to which he brought his enthusiasm and endless energy. He was replaced by the calm, collected and diplomatic Richard Fox who has already helped LNGG make great progress with the Municipal Council of Naivasha and other partners. LNGG Monthly was launched and we can only hope is making our efforts known to the public, especially since we put it on the web. We continue to improve our working relations with Kenya Flower Council, Fresh Produce Exporters Association of Kenya, and the LNRA, whilst aiming to provide the best services to our members.

Finally, David and I, the Secretariat of the LNGG, on behalf of the Select Committee, would like to wish all of you a relaxing, positive, and happy holidays. Thank you for all your support and patience throughout 2009 and we hope to continue serving you even better in 2010!

Sunita

NB: LNGG offices will remain closed between December 24 2009 and January 3, 2010, reopening on January 4, 2009. However, we can be contacted for emergencies on any of the lines below.

LAKE LEVELS - *although stabilizing, we are at an all time low!*



Lake Naivasha
Growers' Group

WE'RE ON THE WEB:
WWW.LNGG.ORG

PO Box 1356-20117, Naivasha
Phone: 020- 3510604
Mobile: 0722 272721
Email: lngg@africaonline.co.ke