



A Publication of  
the  
South African  
Water Sector  
Civil Society

| March 2012 |

# Adopt a River

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# Dear Reader

The role that civil society play at a community level is crucial and contributes towards the Department of Water Affairs responsibility to protect and conserve water resources and involve local communities. It is also the responsibility of communities through the civil society groups to look after water resources.

This edition of the newsletter is a continuation of the commitment the Department has made towards the showcasing and marketing Civil Society work and contribution to the sector.

This second CSO newsletter has profiled the successful stories and shared experiences done by Civil Society jointly with the Department in protecting water resources, and the THEME is "RIVER HEALTH PROGRAM".

For more information the newsletter, please can contact:

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# Adopt A River<sub>Western Cape</sub>

## Background

An initiative to create awareness amongst all South Africans of the need to care for our scarce water resources and to facilitate their participation in the protection and management of these resources was raised in Parliament in 2006. Parliament wanted to know from officials of DWAF whether South Africa's rivers are healthy and fit for use. Some members of Parliament volunteered to adopt a river and act as patron for that river. This was done to foster public participation in the protection and management of our rivers and also as a sign of their own commitment. Therefore, Adopt a River Programme was born.

The Adopt a River Programme aims to play a vital role in encouraging citizens to learn about water resources and become involved in the protection and management of these resources in their particular area.

Once awareness of the water resource (and its benefits and problems) is created, stakeholders (including volunteers) can gain knowledge and insight into the causes of the problems affecting the quality of the water resources in their particular area. They will then be able to act as watchdogs, but also be part of the prevention and problem solving group for the specific water resources in their area. It will also enable them to realistically evaluate service delivery and hold the relevant authority responsible where there is a lack of implementation of proper services as well as environmental and water resource management legislation.

## Aim and objectives

The main aim of the Adopt a River programme is to create an understanding among all water users and in particular the previously marginalized communities of the concepts of integrated water resource management to encourage them to become actively involved in the protection and management of these



“be part of the prevention and problem solving”

resources. Specific objectives include:

- Empowering all water users to protect their water resources and participate in water resource management;
- Facilitating the involvement of patrons and sponsors in stakeholder empowerment and water resource management strategies;
- Developing and making available the necessary tools for training and empowering local role-players;
- Ensuring optimum effectiveness, through involvement and linkages with other existing programmes and initiatives aimed at water resource protection and management. These include the River Health Monitoring Programme; as well as other monitoring programmes conducted by various institutions including local and district municipalities, academic and scientific institutions and other provincial and national Government Departments.

The linkages also include those being established between communities and the local authority responsible for services provision and the inclusion of water resource management in Water Service development Plans (WSDPs) and Integrated development Plans (IDPs).

- Promoting a volunteerism ethic in South Africa to benefit all levels of society and as encouraged by the United Nations.

A phased approach has been followed to develop the programme. Phase 1 was the initiation and development of a strategic framework document. Phase 2 was the development of an Implementation Plan and Phase 3 is the pilot implementation of the Programme in selected Rivers.

## Implementation

Phase 3 has been launched by the Deputy Minister during Water week in Stellenbosch with the adoption of the Eerste River by Stellenbosch Municipality as well as the Cape Winelands District Municipality. A stakeholder forum is in place – chaired by Department of Water Affairs (DWA) (Ms W Kloppers) and operational task teams are coordinated by the operational manager – Adv Hanlie Linde from Stellenbosch Municipality.

Various Adopt a River initiatives already exist in the Western Cape, notably in the Gouritz Water Management Area (WMA) (Southern Cape) with the Eden District Municipality (David Papier and Emmy Douglas from Eden DM) since 2005. The project is a collaborative venture between Eden District Municipality, Department of Water Affairs (DWA), Cape Nature and the Department of Education and involves a number of schools and Rivers in the area.

There are also other Adopt-a-River initiatives currently in the initiation phase:

o Grabouw, Klipdrift River with Waterwise Women, Theewaterskloof Municipality, department of Agriculture & other stakeholders. Initial meeting held with stakeholders and Adopt-a-River pledge signed. Project to commence in 2011.

o Preliminary discussions being held with schools in Paarl and Franschhoek areas.

# Adopt A River

## Eastern Cape

Program in the Eastern Cape by Department of Water Affairs”  
Name of coordinator: Unathi Makati-Tshayingca

The Adopt a River Program is an initiative of the Department of Water Affairs and has, as its broad focus, the development of an increased awareness of South Africa's water resources and increasing community participation in taking care of these resources. It is hoped that increased knowledge on water resources, will develop into an active participation by stakeholders in contributing to environmental management, and ultimately result in better management and protection of our environment and, specifically, of scarce and precious water resources.

The “Adopt-A-River” program started 01 September 2010 to 31 August 2011 first Phase in the Eastern Cape. The Buffalo River and its closest tributaries were identified because of being highly polluted. The stakeholders involved in this “Adopt-A-River” program were; Buffalo city Municipality councilors, the Traditional representatives, the Amahlathi Municipality councilors, officials and Implementing Agency representatives. The main aim of the “Adopt-A-River” program was to focus of the alien removal, clean-up, rehabilitation, community awareness – clean up of solid waste and community awareness.

The project makes use of women beneficiaries, selected through the involvement of Ward councilors, from areas closest to the river stretching from Amahlathi Local Municipality, near Lumphondweni village through Buffalo City Municipality around King William's Town and Zwelitsha to East London.

### Project Objectives

- To employ 100 women beneficiaries to clean up the Buffalo river from source to sea
- To allow communities to take care of the cleanliness of their rivers and the surroundings
- To encourage community members to guard against those

who dump next to their areas and or near the river Challenges of the “Adopt-A-River” Program in the Eastern Cape

- Some of the beneficiaries were often sick especially during winter season, as a result two of them passed on during first phase.
- It then became difficult to replace due to pre training requirements and as result we continued with 95 No beneficiaries.
- Some of the areas that were identified were not highly polluted; some beneficiaries had to be moved to newly identified sites.
- Unofficial or illegal dumping sites that are known to the municipality concerned that are closer to the Buffalo River. This dumping site makes the work of the beneficiaries difficult, and progress very limited, this waste is washed down to the river when heavy rains come.
- The recent heavy rains had a negative impact on the project, the project progress got affected, and beneficiaries could not go to work for few more days after the floods as it was dangerously wet next to the river.
- The solid waste coming with the floods

- Invitation of one of the beneficiaries to Parliament
- Project launch by the Deputy Minister on the 3rd June 2011

The “Adopt-A-River” Program in the Eastern Cape is approaching the second phase. Herewith the photos

taken during the “Adopt-A-River” program to share with.



First Aid training



Water Safety Training



Beneficiaries at Work

Training of 100 women who were recruited by members of the Alexandra Environmental Management Forum was conducted from 30/11/2011 to 01/12/2011 at East Bank Hall, Alexandra.

#### Project Commencement

Volunteers commenced working in September 2011 after the project was launched by the Deputy Minister Mabudafasi at East Bank Hall, Alexandra.

The project volunteers were 100 and all females. This to empower women

as they are in most cases the bread winners. Volunteers were not paid by end of September due reports from the Department alleging that they were not aware that work had commenced and that even though they had supplied volunteers with protective clothing, training has to be done before work. Mveledzo, Shomang and SELOF had to intervene as beneficiaries were recruited by them. Our intervention was that beneficiaries have to be paid for September as they have worked. Those who had no banking details were assisted in opening accounts and all beneficiaries were paid.

Beneficiaries were requested to wait until they had been trained and tools being purchased.

#### Purchasing of tools and storage

Tools were purchased by the Forum on the 01/12/2011. It was agreed by all members of the Forum that the tools will be stored at Mveledzo Community Organisation, No. 898-3rd Street, Marlboro, 2063. The tools are transported by Mveledzo to and from daily.

## Energy and Water Sector Education and Training Authority written by Candice Moodley

### INTRODUCING EWSETA

Be it in your world of work, family or community life, it is considered polite practice to introduce yourself to those you are meeting for the first time. This immediately accomplishes two important objectives – first, it allows people the opportunity to get to know you better and second, it opens up the possibility to strengthening the relationship.

Although our partnership with the Department of Water Affairs (DWA) is well established and our colleagues know us well, we are honoured to have been given the opportunity to “meet” a key component of our stakeholder base – Civil Society Organisations (CSOs). We view this opportunity as the beginning of a new era in engagement with our CSOs and as such, would like to begin by way of an introduction.

The Energy and Water Sector Education and Training Authority (EWSETA) is one of 21 statutory bodies established through the Skills Development Act of 1998, as amended, to facilitate skills development for Energy and Water stakeholders, through providing integrated, value-added education and training services.

In order to achieve this mandate, partnerships between EWSETA and employers, public education institutions, private training providers and government departments have played a key role. However, in ensuring increased access to training and skills development opportunities and thereby achieving the fundamental transformation of inequities linked to class, race, gender, geography, age, disability and HIV/AIDS, partnerships with CSOs, who have the core interests of their communities at

heart, become the key driver in making the access to these skills opportunities a reality for all South Africans.

In this regard the National Skills Development Strategy (NSDS) III is the overarching strategic guide for all SETA's, providing direction with regards to our sector skills planning and implementation. The NSDS III ensures that our Strategic Plans are at all times aligned to government and industry development strategies such as the Human Resource Development Strategy for South Africa (HRDS-SA), the New Growth Path (NGP), the Industrial Policy Action Plan (IPAP) and rural development strategies. Most notable is the National Skills Accord (NSA) which was signed by the Minister of Higher Education and Training with representatives of organised business, labour and community-based structures.

The important role that CSOs and other organisations like Cooperatives and SMMEs are set to play in the education and training landscape of our country has been firmly entrenched in the NSDS III under Goal 4.6. Outcome 4.6.3:

**NSDS Goal 4.6: Encouraging and supporting cooperatives, small enterprises, worker-initiated, NGO and community training initiatives**

- NSDS Outcome 4.6.3: Worker, NGO and community-based education programmes are supported and their impact measured and reported on

We are pleased to inform our water services sector stakeholders that EWSETA has set specific targets within our 2011/2012 – 2015/2016 Strategic Plan in support of NSDS III Goal 4.6 and in order to deliver successfully on the Outcomes identified, EWSETA will be undertaking the following:

- Embarking on Research Initiatives
- Incorporating the research findings into our Sector Skills Plan
- Developing appropriate strategies that address the skills needs as identified through our research
- Establishing new partnerships with CSOs active in the water sector

- Strengthening our partnership and collaboration with DWA and other departments
- Hosting CSO workshops
- Updating our CSO database
- Implementing special projects identified through partnerships with all relevant stakeholders

The task at hand is a critical one and our Water Sector team, under the leadership of our Water Sector Manager, Ms. Tsholofelo Mokotedi, is certainly up for the challenge and she and her team look forward to strengthening engagement with their water sector stakeholders in the months to come.

EWSETA has been through a challenging time but we have come out on the other side with a clear focus and

stronger commitment to delivering on our mandate. This is an important time in EWSETA's legacy and now more than ever, we urge all CSOs to come forward and with EWSETA embrace the spirit of our nation - TOGETHER, WE CAN DO MORE.

Should you require any assistance or information with regards to EWSETA water qualifications, learning programmes, Sector Skills Plan or any other sector related matter please contact:

the EWSETA on (+27 11) 274 4700 or visit our website at [www.eseta.org.za](http://www.eseta.org.za).



From Left to Right: Nonhlanhla Mazibuko - Administrator; Ntandose Gamede - officer; tsholofelo Mokotedi - Manager; Joana Seabi - ETQA Officer; Patience Montshiwa - Administrator

# How development impacts on the Liesbeek

Written by: Friends of Liesbeek

The Friends of Liesbeek have become increasingly concerned about the number of proposed and approved developments that are taking place on properties abutting or close to the Liesbeek. Some of our concerns include the following:

## 1. A river must be viewed in its totality i.e. as a riverine system Often proponents of new

developments only consider the impacts that might be caused by a planned development in the immediate riverine area that is abutted by the property in question. This is very short-sighted. The river is a continuous system that flows through the entire catchment and impacts must be considered cumulatively not only along the river course but in the entire catchment.

It is usually the lower reaches that are affected by developments upstream resulting in an ever increasing pollution load and the accumulation of biomass that greatly affects the water quality and aesthetics of the river. In the lower reaches of the Liesbeek, the Liesbeek Lake in Observatory has been heavily impacted.

The cost of addressing these problems is currently being carried by the ratepayers of Cape Town through the work that the City of Cape Town, the Friends of Liesbeek (FoL) and its sponsors have to do to maintain the river.

## 2. Increased hardening of surfaces

Proposed new developments and other human activities in the catchment area of a river can affect the river channel form thereby altering the magnitude and frequency of flooding. Changing the path of a river allows water to flow more rapidly downstream increasing the risk of flooding. Buildings and the creation of hard surfaces within the floodplain as well as in the overall catchment area, removes areas previously available

as flood storage. Peak flows during episodes of heavy rainfall become stronger thus increasing the probability of flooding along the river in particular in the river's lower reaches.

Developers aim to achieve maximum return on their investments and thus proposed new developments will use the property to its fullest permissible potential. In the layout or design of the development no consideration is given to features that would allow for rain permeation thus creating new areas for flood storage or for groundwater replenishment.

The developments are generally wall to wall concrete and hard surfaced. Only the footprint of the building or buildings is used to determine coverage and the surrounding areas that are brick-paved or hardened are not considered.

## 3. A critically impacted system

It is often stated by the proponents of these new developments, that the Liesbeek is a "critically impacted system" or that the Liesbeek is "already a heavily degraded system". The fact that sections of the river have been canalised is also used as an indication that the river has no active aquatic habitats or functioning ecosystems and hence that there will be no impacts from the proposed new development.

There may be parts of the river that are degraded but this is not so for the entire catchment. It is of grave concern to the Friends of the Liesbeek that this river, which has irreplaceable aesthetic, educational, recreational, spiritual and resource value to the inhabitants of Cape Town, is often merely regarded as a sewerage or storm-water system and treated as such.

We like to point out that regular testing (especially in the areas flowing

through Bishopscourt, Newlands and Rondebosch) has shown that the Liesbeek is one of the cleanest rivers in South Africa! There are many sections of the river that carry viable and healthy functioning ecosystems. Recent sightings of the Cape Clawless Otter and the Cape Porcupine in the vicinity of Esme Road, Newlands further suggest that these shy terrestrial and freshwater creatures are finding the Liesbeek a safe haven. The Liesbeek is also home to various species of birds and there have been regular sightings of Gymnogene, Goshawk and Pied Kingfisher.

A great deal of time and resources have been invested in The Liesbeek Maintenance Project (LMP) which has been operating now for five years. The purpose of this project is to develop robust management activities and partnerships to ensure that the Liesbeek is kept clean of litter that paths are trimmed, canals are maintained and that invasive alien plant species are controlled. This has resulted in a remarkable change in the quality of the water and in the upkeep of the surrounding riverine environment.

The FoL would like to see the Liesbeek being rehabilitated and one of the long-term goals would be to have sections of the concrete base of the canal removed to allow for an improved aquatic environment that would allow for the development of a healthy, functioning riverine ecosystem.

## 4. Buffer Zone

In terms of the City of Cape Town's Floodplain and River Corridor Management Policy, watercourses and their adjacent riparian and associated fauna and flora must be protected or "buffered" from the impacts of adjacent development or activity. These buffers vary in width from 10 m to 40 m depending on the classification of the watercourse. Buffer zones provide:

continuous corridors and habitat for flora and fauna

- water quality improvement of point or diffuse sources of pollution
- stream bank and erosion protection
- space for appropriate water sensitive urban design elements
- socio-economic benefits in the form of public open space
- opportunities for recreation and environmental education
- enhancement of waterway, visual and property values
- access for maintenance
- adequate space for possible future restoration activities

We have found in some instances that proposed buildings have extended into the 10 metre buffer zone (the requirement for concrete canals) and in other instances no allowance has been made for the required buffer zone.

#### 5. 1:50 and 1:100 year floodplains

The above mentioned policy also requires the developer to determine flood lines. A table is used to indicate the permissible land use, development or activity within the floodplain. The developments we deal with are mostly residential and these are not permissible in the <2, 2 – 20 and 20 – 50 year floodplain zones. In the 50 – 100 year zone, floors must be above the 1:100 year flood level and basements are to be flood proofed to the 1:50 year flood level.

#### 6. Alien vegetation currently on the property

Proponents of new developments especially on vacant land will often use the existence of alien vegetation to motivate for an approval to develop. Whilst we acknowledge that a new development may correct the situation, we do not see this as viable reason to approve the particular proposed development. The City of Cape Town can make use of other laws to ensure that the owner of the property removes the invasive vegetation and maintains the property in question.

#### 7. Size and aesthetics of the proposed development

Although this may not directly impact on the Liesbeek we often find that new developments are completely out of character with existing or surrounding properties. Again, this could be the result of developers' greed or of wanting to get the most out of the investment. We then question the need for such a large scale dwelling on the subject property and show how it would be out of keeping with the surrounding dwellings. What would the need be for such a development in the particular neighbourhood.

In conclusion, whilst the Friends of Liesbeek (FoL) are not opposed to development nor to the City's densification policy we would like to see development that takes place in a well planned, integrated and holistic manner. There must be associated development and maintenance of existing services and infrastructure. New buildings must be appropriate for the area in question so that they will enhance what already exists in the area. Finally, the planning of new developments must include interventions that promote sustainable urban water usage and drainage management.

# Liesbeek Maintenance Report

1 May 2011 – 30 July 2011

By: James Cooper (Project Manager)

## The River Team

The team have worked 4 days a week during this period due to Grant in Aid funding being secured to clean the banks of the Liesbeek in Observatory. The team consisted of a supervisor and three staff members for this period.

We have found it easier to plan work in four areas during the month, concentrating on one area per week, while continuing with the 2 days of cleaning for the rest of the week.

## General Maintenance

### Litter clean ups

The team continued with weekly cleans from Newlands Swimming Pool to the siding in Rondebosch and cleaning the banks in Observatory. Paradise Park didn't need to be cleaned as City Parks staff is now cleaning this area regularly.

### Weeding

The team has completed weeding all the flowerbeds from Roslyn Park in Rondebosch up to South African Breweries in Newlands.

They continued weeding the planting site before Belmont Bridge and the rehab site behind Newlands Swimming Pool.

### Cleaning Alfred stream

Alfred stream has been cleared once a week following heavy rains.

### Path Maintenance

All Kikuyu has been trimmed along the path behind Newlands Swimming Pool. The team continued to maintain the path from Breweries to the railway siding in Mowbray, with the focus on cutting the num num hedges at the Church, Telkom Bridge, Roslyn Rd and Bridge Rd.

## Canal Maintenance

The team completed the final section of canal maintenance in Mowbray in front of Rygersdaal Sports Club, trimming all the overhanging vegetation in preparation for winter rains (preventing flooding).

### Painting over graffiti

The team completed painting over all the graffiti from San souci Rd to the Railway siding in Mowbray. A watery cement mix was used to paint over the graffiti.

### Alien vegetation removal and planting

The team concentrated on a number of invasive alien species during the period, namely Kikuyu grass, Tree of Heaven, Cestrum, Spanish Broom, Purple Loosestrife, Poplars, Canna, Wild Ginger, Eugenia and Crofton weed. On many occasion cleared areas needed to be planted with indigenous plants to prevent soil erosion and to create areas more suited for indigenous Fauna species.

### Kikuyu grass

Kikuyu is found along most stretches of the Liesbeek. Control is based around maintaining certain sections where it is either threatening to outcompete and grow over indigenous plants, or encroach into rehabilitation sites. All control of Kikuyu is done by physically digging or hand pulling the plants and roots. No Herbicide has used.

Three sites were focussed on in this period. The first was the Arboretum, below Kirstenbosch. Here one still finds many indigenous plants and a natural ecosystem. The Kikuyu has begun to grow over all of these indigenous plants, smothering them and having serious implications for the biodiversity of the area. The team removed most of the Kikuyu from these plants and in future will be creating buffer zones around the indigenous plant communities, by planting



Fig 1 Rehab site in Newlands with buffer zone against Kikuyu.

indigenous ground cover plants (Sour fig), which can outcompete Kikuyu.

The second site was the Rehabilitation site behind Newlands Swimming Pool. Here the team continue to remove Kikuyu from the site and have begun creating a buffer zone by planting Sour Fig and Plecranthus around the edges of the site (figure 1).

The third site was the rehabilitation site at Belmont Bridge. Again the team continually remove Kikuyu from the site, and have planted Sour Fig as a buffer. Other plants that were planted in the area included Crysanthemoides, Psorelea, Athanasia and aloes (figure 2). Our Chasmanthyes bulbs that we planted last year are now in full flower at this site.

### Tree of Heaven

Tree of Heaven has been identified by the City of Cape Town as a high priority invasive species, which could be eradicated as it is still in the early stages of invasion. The LMP is working in partnership with the City to eradicate this species.

## Cestrum

A number of individual Cestrum plants were controlled between San Souci Rd and Riverside Mall. The method used was a cut stump treatment.

## Spanish Broom

Spanish Broom has been identified by the City of Cape Town as a high priority invader species. Only two plants have been found on the Liesbeek thus far. The method used for control was cut stump.

## Purple Loosestrife

While single Purple Loosestrife plants found along the banks Liesbeek have been easy to control in the past two years, those found as dense stands in Fragmites reed beds have not. Accessing plants through the dense reeds provides one problem and adequately treating them with herbicide, another. To combat this, the LMP team began clearing reeds before the Loosestrife growth seasons (spring and summer), cutting them as low to the ground as possible using a brush cutter, piling the brush on site to prevent seed dispersal. The first section in the Valkenberg Wetlands was cleared in May and monitored closely. The results were very interesting. As we moved to the beginning of July it was noted that the Lythrum had begun to resprout from root stock (figure 3), and that the disturbance and removal of the reeds had enabled thousands of Lythrum seeds to germinate and begin to grow in a concentrated area (figure 4), something we hadn't seen before.

After consulting with SANBI's EDRR (Early Detection and Rapid Response) unit and the City of Cape Town's EDRR the decision was taken to undertake the same process at the remaining two reed beds where Loosestrife has been identified as forming large stands, namely a site at the River Club and a site in Raapenberg Bird Sanctuary. By doing this we are encouraging germination of seeds that could lie dormant for up to 30 years and we are creating easier, more efficient working conditions within the reed beds that



Fig. 3 Loosestrife sprout from root stock



Fig 1 Rehab site in Newlands with buffer zone against Kikuyu.

will allow for thorough control method. The team are currently working on the River Club section and will complete the initial clearing by mid August.

## Research on Lythrum control methods

Research is currently underway to establish the best control methods for Loosestrife. Plants have been grown from seed at a nursery in Stellenbosch and various clearing techniques and herbicides will be tested at three different growth stages; seedlings, saplings and flowering plants. Three 5m by 7 m plots have also been set up in the Valkenberg reed bed to test the effectiveness of the different treatments and herbicides on older, resprouting plants, with a well established tap root system.



Fig 4 Concentrated Loosestrife seedlings

By the end of this growth season we should have established the optimal clearing technique, which will aid in our attempt to eradicate this invader before it spreads to other wetland systems. Chester Chauke, the conservation student conducting the research, was chosen to represent the City of Cape Town at this year's Fynbos Forum. At the forum he presented a poster (figure 5).

## Poplars

The team concentrated on removal of Poplars around the Valkenberg wetlands, in front of the Wild Fig restaurant. The method used was a



Fig 1 Rehab site in Newlands with buffer zone against Kikuyu.

cut stump treatment. This was done in the hope that a channel will be dug in order to link the Liesbeek to the surrounding wetlands. This will supply the wetlands with more water during winter,

creating many habitats for birds, amphibians and fish, while helping to naturally clean and filter the water. Removal of these Poplars has also taken away the likelihood that vagrants will utilise this area.

A number of Poplars were also removed from the wetlands in Mowbray, using cut stump treatment. All the removed Poplar branches have been used to stabilise the river banks in other sections.

### Canna indica and Wild Ginger

The team concentrated on clearing Canna and Ginger behind Newlands Swimming Pool. The South African Breweries staff joined for a day of clearing as part of their corporate investment programme. The banks were stabilised using felled poplar branches and the area has been planted (figure 6)

It has been extremely encouraging to note the number of Arum lily bulbs that have begun to grow in the areas that the Ginger and Canna were removed.

### Eugenia

More and more Eugenia is being seen along the Liesbeek. The luscious red fruits make attractive morsels for birds using the river, and seeds are dispersed far and wide in the bird's droppings as they frequent other areas along the Liesbeek. The LMP team have cleared a number of Eugenia's from San – souci Rd to Riverside Mall using cut stump treatment.

### Other activities

### Species lists

The team have been compiling species lists along the Liesbeek. This has been made possible thanks to a generous donation of field guides from Struik Publishers.

The Liesbeek has been allocated a slot on the Biodiversity database. All our records of flora and fauna will be sent to Westlake where they will be uploaded onto the website.

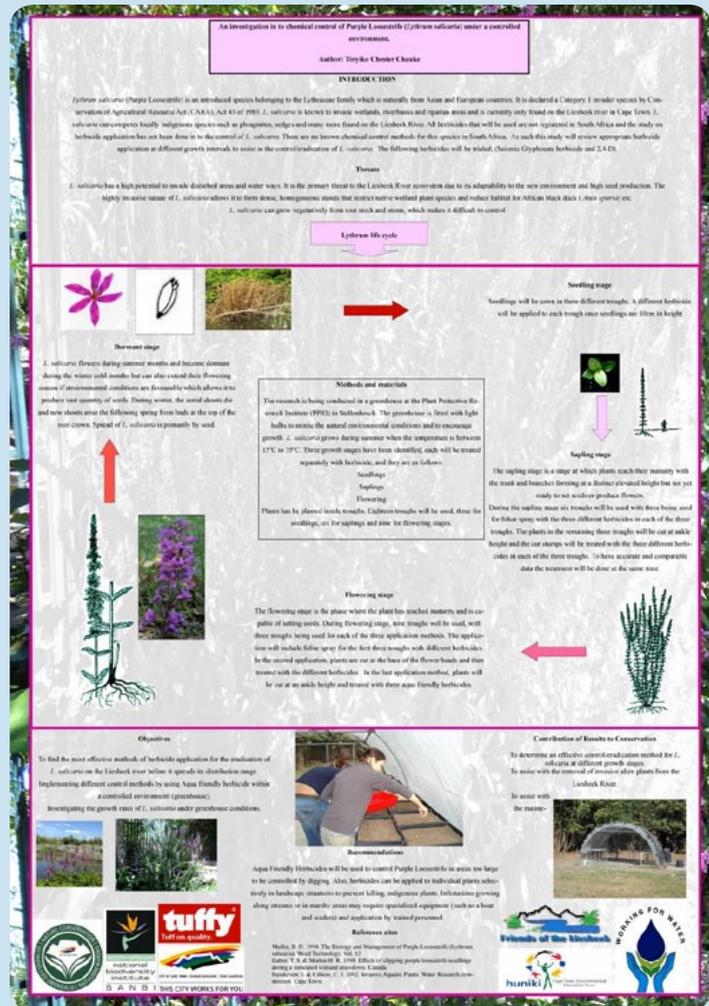


Fig 5 Chester's Fynbos Forum Poster

### Enviro centre maintenance

During 2 days of rain the team did maintenance of the Enviro-centre. This included an audit of all the items found in the centre, mopping the floors, vacuuming, weeding the flowerbeds and cutting up Eucalyptus branches and placing them around the flowerbeds (figure 7).

### Peninsula Paddle

The LMP team helped clear paths through the Water Hyacinth found on the Black River in preparation for the annual Peninsula Paddle. The team

spent three days clearing the paths, which enabled the paddlers to pass through difficult sections of the river (figure 8).

The team also installed the litter trap across the Black River during this exercise to demonstrate how effectively it works (figure 9)

Fig 9 Ntobeko and Klaas with the litter trap having caught all the floating litter released from the Hyacinth.



Fig 6 Canna indica and Wild Ginger



Fig 7 Weeded and maintained flowerbeds



A meeting had been hold in order to promote the conservation of our environment and this focused on the rehabilitation of the Kuils River at the Cape Peninsula University of Technology.

A group of student conducted the South African Scoring System (SASS) training in order to indicate the health of the river by measuring the general quality of water in that river in connection with the Adopt a river project. Samples were collected by a student assisted by a member of the department of water affairs and forestry.



Fig 8 Ntobeko (right) and Klaas (Left) finish clearing the path through the Hyacinth

This is an indication to ascertain the community living along the Kuils River in Macassar to realise the danger that they are exposed to especially for children without any conscience. This training was also part of the educational system for the students to correlate the theories seen in class and the real world. This is in preparation for a campaign for a long term rehabilitation of the Kuils River that should commence in 2012.

The analysis of the sample collected showed that the Kuils River is critically modified and needs to be rehabilitated.

# The River Health programme Report

Written by Thulani Guzana

Chapter 14 of the National Water Act, 1998 (Act No. 36 1998) (the Act), places a duty on the Minister to, “as soon as practically possible, establish national monitoring systems that would allow for the collection of appropriate data and information that is necessary to assess various aspects of aquatic resources”, including the health of aquatic ecosystems (the Act, 137 (2) (f)). The Department has, as a result, developed an overarching Framework for the National Water Resources Quality Monitoring Programmes to ensure that all National Water Resources Quality Monitoring Programmes comply with the requirements of the Act and that these programmes are effectively and efficiently implemented.

The National Aquatic Ecosystem Health Monitoring Programme (NAEMHP) forms part of this portfolio of national water resource quality monitoring programmes. In response to the Department’s drive to align its national water resources quality monitoring. The River Health Programme (RHP) forms part of the NAEMHP. The RHP was initiated in 1994 as a response to the need for more detailed information on the state of South Africa’s aquatic ecosystems. The programme was initiated by the then Department of Water Affairs and Forestry (now the Department of Water Affairs), the Department of Environmental Affairs and Tourism (now the Department of Environmental Affairs) and Water Research Commission.

The RHP is designed to develop the capacity and information base, enabling reporting on the ecological state of our river systems, in an objective and scientifically sound manner. The information generated by the RHP assists in identifying areas of sustainable utilisation and unacceptable ecological deterioration.

The programme is based on assessing the condition of biological communities of rivers (such as fish, aquatic invertebrates and riparian vegetation) as well as river habitats to provide an integrated measure or health of the river systems.

The RHP was designed to meet the following objectives:

- Measure, assess and report the ecological state of aquatic ecosystems.
- Detect and report spatial and temporal trends in the ecological state of aquatic ecosystems.
- Identify and report emerging problems regarding aquatic ecosystems.
- Ensure that all aquatic ecosystems health reports provide scientifically relevant information for the management of aquatic ecosystems.
- Create public capacity and environmental awareness.

The following categories are used in the RHP to establish the ecological health state of a river:

Ecological (Reserve) Categories	River Health Category	Description	Colour
A	Natural		Blue
B	Good	Largely natural with few modifications	Green
C	Fair	Moderately Modified	Yellow
D	Poor	Large Modified	Red
E	Seriously Modified	Large Modified	Purple
F	Officially Modified	Critically or Extremely modified	Black

River Health Category	Ecological Perspective	Management Perspective
Natural	No or negligible modification of in-stream biota and riparian habitats	The river is relatively untouched, no dam impede flow and no waste discharges enter the river.
B	The biodiversity is largely intact and the ecosystem is essentially in a good state.	Human related disturbances have a low impact on the river
C	Few sensitive species may be absent and biological populations are less abundant - invasive or opportunistic species may be present.	Multiple disturbances are associated with economic development and include impoundment, water quality degradation and habitat modification.
D	River habitat diversity and availability have declined and only tolerant species are present. The species that survive are often diseased and population dynamics are disrupted.	High human densities or extremely resource exploitation have greatly altered the river. Management intervention should already be in place to improve the health of the river, restoring flow patterns, water quality and river habitats.

The initiation of this programme since 1994 saw the production of State of Rivers report in South Africa from 1994-2004 (Achievements of the RHP 1994-2004: A national perspective on the ecological health of selected South African Rivers); with the reports for Greater Cape Town's Rivers, Olifants/Doring and Sandveld, Mokolo River, Rivers of the Gouritz Water Management Area, Mthatha River being produced in 2006, 2007 and 2008 respectively.

Currently, the RHP has been implemented by these Regional Offices on seasonal basis in the following rivers:

#### EASTERN CAPE

Mzimvubu, Mbashe, Mthatha, Mngazi, Mngazana, Shixini, Ngadla, Jujura, Mtentu, Mthakatyi, Great Kei, Nahoon, Gonubie, Chalumna, Buffalo, Kowie, Kromme, Kouga/Gamtoos, Great Fish, Groot (East), Bloukrans, Storms, Elandsbos, Elands, Lottering, Baviaans and Baakens.

#### WESTERN CAPE

Olifants, Doring, Groot, Verlorenvlei, Berg, Diep, Eerste, Salt, Hout Bay, Breede, Hex, Riviersonderend, Palmiet, Bot, Klein, Duiwenshoks, Goukou, Gouritz, Hartenbos, Klein Brak, Maalgate&Gwaing, Touw&Karatara, Knysna, Bietouw&Keurbouws.

#### MPUMALANGA

Elands River (Ngodwana site) and (Sappi plant upstream of site), Crocodile River (Poplar Creek) and Sabie River (Upper Sabie).

#### LIMPOPO

Luvuvhu River and its tributaries, namely Dzindi and Mvudi. The following Regional Offices are not directly doing the monitoring but work with other sector partners:

#### FREE STATE

Free State utilised desktop reserves studies and sub-catchment management studies to determine the state of the following rivers; Sand River, Modder Riet River and Schoon/Koekemoerspruit.

#### KWAZULU-NATAL

The KwaZulu-Natal Regional Office has just appointed the Umgeni Water Board to implement the programme on behalf of the Region. They have not started with the monitoring.

#### NORTHERN CAPE

The monitoring has been done on the Harts River. The Department of Environmental Affairs has been the one conducting the monitoring. The Regional Office: Northern Cape is in a process of getting data from them.

#### NORTH WEST

The Department of Environmental Affairs is the one doing the monitoring as the Department of Water Affairs is experiencing capacity challenges to implement the programme.

#### GAUTENG

The Regional Office: Gauteng utilises data from the water quality testing and has not started with the seasonal river monitoring. The data collection is populated onto the Rivers database that is at Resource Quality Services (RQS), and the technical reports are submitted into the RHP website within the Department of Water Affairs.

# Villiersdorp Water Forum: ADOPT A RIVER - 3rd place winners at the Women in Water competition 2011.

Villiersdorp Water Forum won the third price on the category of “adopt a river”. Villiersdorp entered a competition, Women on Water 2011, run by the Department of Water Affairs. The competition ceremony was held in Limpopo and the Villiersdorp Water Forum representatives were Mrs. Rachel Fatyela and Nothembelani Noswili.

The Villiersdorp Water Forum is a women project, this group has adopted 4 of the rivers at Villiersdorp. It consists of 16 unemployed women and 16 new volunteers. They clean these four rivers; they also educate the schools around them, farmers and the rest of the community on the importance of taking care of the rivers. Villiersdorp Water Forum also do education and awareness on saving water and water use at schools and the rest of the community.

With the little money they have won, Villiersdorp Water Forum, committed to use the money to sustain their project, as they are still struggling because they have no uniform, cleaning equipment and transport as some of these rivers are quite far from where they reside.



Women receiving their Awards

# Interesting Publications.

## 1 Rainwater harvesting for Sustainable communities – Issues, Lessons and Strategies

This fieldnote discusses various issues on rain water harvesting, including lessons from implementation, the concept of Integrated Rainwater harvesting (IRWH) as applied in Ehlanzeni District, and recommendations from the RWH harvesting symposium held in 2010.

## 2 BIOGAS FOR SANITATION: Closing the Nutrient Loop through Sanitation, Hygiene, Environmental Protection and Food Security in Lesotho.

The lesson looks at the Biogas Systems for Decentralized Wastewater Treatment (or Biogas DEWATS) technology as it is implemented in Lesotho. The case study contributes to the collection of information on sustainable sanitation technologies implemented in Southern Africa within the Southern Africa Knowledge Node on Sustainable Sanitation (SAKNSS) network.

## 3 Growing up at School – A Guide for Menstrual Management For School Girls.

This booklet, written by Annie Kanyemba of Zimbabwe, is also a contribution to the Africa within the Southern Africa Knowledge Node on Sustainable Sanitation (SAKNSS). It has been written help school girls manage the critical period when they enter adolescence between the ages of 10 and 14 when menstruation starts.

## 4 What happens when the toilet is full? A story of pits, PETs and managed sludges.

Most urban toilets need emptying within five years or less of being built. This note explores the range of practical steps that can be taken by local government and its allies and shows, from real experience, that meeting this challenge can help to safeguard the health of today's children, even as we protect the environment for those generations to come.

## 5 What happens when the toilet is full? Developments in On-Site Faecal Sludge Management

This note captures the proceedings of a two day seminar held in Durban to discuss latest developments and innovations in Faecal Sludge Management (FSM). The note hopes to share some of the insights discussed and make research, learning and best practice available to a wider audience.

## 6 SANITATION MATTERS

This newsletter is published under the Southern Africa Knowledge Node on Sustainable Sanitation (SAKNSS) project and the second issue focused sanitation various issues, including urban planning and consequences for sanitation, onsite faecal sludge management and urban sanitation.

## 7 Integrating Science, Policy and Practice: A win-win working collaboration between eThekweni Water and Sanitation and the University of KwaZulu-Natal in enhancing local service delivery

This fieldnote looks at the EThekweni Beneficiation Model, in which the municipality has partnered with the University of KwaZulu-Natal to undertake applied research aimed at enhancing water and sanitation service delivery in the Municipality.



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