

# First aid for damaged wetlands

By Michelle Nel

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**Your wetland may be drained, eroded or overgrazed. While big rehabilitation jobs require experts, Mondri Wetlands Programme suggests that good wetlands management goes a long way towards healing small scale damage.**

“Much rehabilitation can be done by simply managing a wetland properly,” says Vhangani Silima Mondri Wetlands Programme’s (MWP) Community Conservation Programme co-ordinator. This means that you can improve the wetland while still working with it, an important principle for the MWP.

Good management is based on remembering what the purpose of the wetland is in the first place – to control water by spreading it out, storing and purifying it. To do this the wetland needs good plant cover and as few disturbances as possible such as drains or erosion. Some things to bear in mind when working with your wetlands:

- **Avoid changing the amount of water** in the wetland or the way the water flows. Remember the job of a wetland is to spread water out and slow it down, not concentrate it into narrow channels where it flows quickly.
- Try to **disturb the soil as little as possible** when grazing and cropping .
- Try to **leave as much indigenous plant material** in the wetland as possible.
- **Avoid polluting your wetland** (pollutants include muddy water, dirty washing water, fertilisers and pesticides)

In fact all the tips in our previous articles on the correct grazing and cropping methods in a wetland will add to this list of management techniques.

## **Warning signs of problems**

- Too little vegetation.
- The wetland starts to dry out.
- There is less biodiversity in the form of plants, birds and insects.
- Soil is eroded in parts; perhaps there are gullies or channels forming.
- Head-cuts form (a head cut is a severe type of erosion that eats uphill towards the flow of water, leaving a huge donga behind it). These channels drain the wetland, drying it out, and ultimately killing it. They also increase the amount of sediment in the water thereby decreasing water quality and polluting it for downstream water uses.

“Perhaps the most important management rule is to avoid the deeper and more central areas of the wetland for both grazing and cropping,” says Damian Walters, MWP’s co-ordinator of the Agricultural Programme. This is where the greatest damage can be done in times of flooding since it is the core of the wetland that manages the strongest flow of water.

So what do you do if you do come across a problem? “If you notice head cuts or gullies forming, keep all animals and crops away from the area for as long as is necessary until the wetland vegetation comes back,” advises Walters. In this way the wetland is allowed to heal itself. It is also useful to have a community meeting to work out how the problem developed in the first place and make sure it doesn’t happen again. This is important because you want to remove the cause of the problems and not the effects.

## **Why are drains and dongas a problem?**

Drains and dongas damage wetlands because they lead water out of the wetland very fast which dries it out. They also produce excess mud which then smothers more of the wetland below, and pollutes the water. To undo the damage you need to close the drains so that the wetland soils will again become wet, plants will re-establish and the old water flow patterns will be revived.

### **More healing techniques**

- If shallow drains were made for an old disused vegetable garden, fill these in as soon as possible with soil, or block them up at a couple of points. When reusing the garden, these drains can be unblocked.
- If you have crops in the wrong part of the wetland take them out (you could use the crops as a mulch if there is bare soil left) and wait for the wetland vegetation to return.
- If you notice weeds in the wetland, take them out since they take space away from indigenous plants. Indigenous plants hold the soil better and offer better grazing for animals.
- If you have small (less than half a meter) drains or gullies caused by headcut erosion, try to plug them with rocks, and if possible find some wetland plants such as grasses, sedges, reeds or bulrushes from healthier parts of the wetland to plant there. Wetland plants are helpful because they can spread rapidly and have a dense mat of roots near the surface. This helps to stabilise the soil. You should do this work in the dry season. The aim is to get the drains to fill up with sand and close over.
- With headcuts, the idea is to get them to stop growing. It's called 'deactivating' the face of the head cut. You need to pack rocks right up against its face to prevent further backward erosion. This can be tricky and you may need advice from an expert.

### **Some big don'ts**

**The following are guaranteed to wreck your wetlands:**

- **Making large scale drains (deeper than 30cm)** in a wetland to plant for commercial agriculture– this will dry it up. You will lose the water and the protective functions of the wetland.
- **Overgrazing and over trampling especially in the wet season.** This will cause erosion. These eroded areas may develop into dongas which drain the water out of the wetland.
- **Burning a wetland every year with very hot fires at the wrong time of year.** This will destroy the vegetation and also result in erosion.

### **What if the problem is too big for you to handle?**

Large-scale rehabilitation of badly eroded and drained wetlands needs to be done by professionals. Communities can apply to an organisation such as the MWP who will put them in touch with the Working for Wetlands (WfWet) a partnership between MWP and the national Departments of Agriculture, Water Affairs and Forestry and Environmental Affairs and Tourism. During 2002, this initiative rehabilitated 55 wetlands and gave 1 800 employment, especially the poorest of the poor including women, the disabled and youth. In fact it was as a result of much persuasion on the part of the MWP and examples of MWP rehabilitation on the ground that this far sighted public private partnership was developed. It cleverly combines the need to rehabilitate wetlands with the creation of jobs to help alleviate poverty in South Africa. Water is therefore secured for future use, poverty alleviated and biodiversity protected. During the past 2 years, the partnership has spent R30 million a year on wetland rehabilitation. As a result of its success, a further R90 million has now been allocated for the following three years." However not every community that applies to WfW automatically receives help. Budgets are limited and wetlands are prioritised for many different reasons including their size, the number of people that depend on them, conservation value or value in supplying water in a particular catchment.

If you are not able to get help from WfWet, your local agricultural extension officer, or perhaps a MWP staff member can go a long way in advising you on managing some of your bigger wetlands problems.

**The MWP Wise Use and Community Programmes** help people use their wetlands sustainably. They work with the forestry, livestock and crop industries, and rural communities.

### **Contacts:**

Damian Walters (083 684 8000) for commercial agricultural information  
Vaughan Koopman (083 228 7949) for commercial agricultural information