

**Herders are successfully using cattle to restore the land and to regenerate the rivers in a devastated region of Zimbabwe. They are demonstrating what was once known but has been widely forgotten: that cattle and other large herbivores play a vital role in maintaining ecosystems in arid parts of the world. They are working with nature, not against it.**

# Watershed cattle

JOHN WILSON

**W**e rose with the sun, around 5.30 a.m., and made our way to the cattle kraal. The air was misty, moisture rising from the morning dew, remnant of last week's rain. The cattle herders were walking slowly through the kraal looking for any signs of sick animals. They found two with Corridor disease (Theileriosis) and treated them. The cattle obviously know the herders well, in their orange overalls.

They were now ready to take the animals to graze. First they counted them out of the kraal, making sure that none were missing (this is done day and night), and kept the young calves back to graze near the kraal. They have 368 animals, about a third of them belonging to residents of the nearby communal area. A biggish herd, but nowhere near the 1,000 or so they are aiming for.

One could call them the watershed cattle. Their role is to restore the health of the land. In the 10 or so years that they have been healing the land at Dimbangombe, the river that had ceased to run now flows again as a small perennial river, thanks to the cattle. Water, cattle, grass, people: all are bound in one interconnected whole.

The herders work in two teams, one until midday and the other for the afternoon and early evening. They know exactly where to take the animals, because the grazing has been carefully planned according to a step-by-step process. They do this twice per year, once for the rainy season and once for the dry season. They keep the animals bunched as a herd and always moving on to new grass. All

their movements are quiet and gentle. There is no shouting at the animals or hitting them with sticks or throwing stones. This is skilled herding that does not stress the animals.

I have just spent 10 days at Dimbangombe, which is where the Africa Centre for Holistic Management is based.<sup>1</sup> The land is held by a Trust of nine people, five of whom are the Chiefs in the Hwange area. I have been there before, but this was the first time I have been able to really see their work in action and get a good understanding of it.

Around 80 per cent of Zimbabwe is rangeland of some kind, and just about all of it is degrading, contributing to the fact that Zimbabwe doesn't have any more internal rivers. They are all silted up. They run briefly, after heavy storms, with muddy water. What was once a web of real rivers (much of Zimbabwe is a watershed for Mozambique) is now sandy river beds. More and more water runs off to Mozambique, sometimes causing severe flooding in parts of that country. As in many parts of the

**John Wilson** is a Zimbabwean facilitator, who works to strengthen local civil society in the field of sustainable agriculture. He helped to set up Fambidzanai Centre and then joined others to set up the Participatory Ecological Land Use Management (PELUM) Association, a regional organisation active across eastern and southern Africa.



19



Photo: ACHM

*The management herd*

<sup>1</sup> The Africa Centre for Holistic Management provides a range of training and support for managing livestock in a sustainable way. See: [www.achmonline.org](http://www.achmonline.org)



Photo: ACHM

*Regenerating the river at Dimbangombe*

world, water in Zimbabwe is a crucial issue, and is becoming more so year by year.

At Dimbangombe they are showing how one can restore the land's health and thus the water through the way one manages livestock. They graze without overgrazing, which is just what grass plants need in order to thrive. They knock down old growth to make litter on the ground so that when it rains there is mulch. This also means that the new growth on perennial grass plants can come through unimpeded by old, oxidising, growth. They chip open the soil where it is hard, by their herd effect – creating a softer bed for seed. They concentrate dung and urine where the land is particularly bad. They achieve this latter effect via the movable kraals. The kraal is moved to a new place every week. Photographic records show how hard, compacted soil with hardly anything growing on it becomes lush and verdant within two years of a kraal having been on it for a week.

What they are doing at Dimbangombe is to simulate what large herds have been doing for millennia. This is an example of people working with nature, not fighting it.

There is a great deal of misunderstanding about cattle and their role. All sorts of statistics are flying around about their contribution to climate change and to land degradation in general. Unfortunately much of this commentary on livestock does not understand the nature of drier, more arid parts of the world. In such environments large herbivores have always played a vital role in the decay process. For much of the year these environments are dry

and the micro-organisms are dormant, except for those in the stomachs of herbivores. The more arid parts of the world produce abundant grass, and if that grass does not pass through an animal's stomach it is very likely to burn or slowly oxidise. In both instances this puts carbon into the air instead of the soil and contributes to climate change. It also results in desertification, drought and famine.

And it goes much further than this because, as with any interaction with nature, one is dealing with complex webs. The river at Dimbangombe has started running again because the overall health of the land has improved. There is much more ground cover everywhere, and so when it rains the water goes into the soil and is a productive force, rather than being the destructive force it so often is where the land is bare and the water runs over the surface, carrying the soil with it. When the water goes into the soil the grass grows better and more abundantly and thus captures more carbon. The trees too benefit from more water and produce more leaf. Despite the fact that the herders are already herding 400 per cent more livestock than any historical average in the past, they cannot keep up with the grass growth.

Yes, it is true that livestock raised on grains and fed in pens are contributing significantly to climate change. But one simply cannot lump these together with the livestock raised in arid and semi-arid parts of the world, where grasslands co-evolved with the large herbivores.

It is also true that, in many instances, livestock causes a great deal of damage in arid and semi-arid areas of the world. This is not the fault of the livestock, but of the way they are managed. Pastoralist systems that fulfilled the requirements of grazing without over-grazing have been badly disrupted by misguided attitudes that see such a lifestyle as backward. In many agro-pastoralist communities, farmers manage their livestock in individual family herds that overgraze and overtrample the land.

Blaming livestock is simply to throw the baby out with the bathwater, and with serious consequences. By understanding the relationships that are critical to the health of the land in arid and semi-arid parts of the world, it becomes clear that livestock contribute a major part of the solution to environmental health. Part of this health means more plant growth and thus more carbon capture. It also means more water in the springs and streams and rivers, and less drought and famine for 800 million pastoralists and agro-pastoralists, and less need for food relief and the costs associated with this. An upward rather than a downward spiral. 

