

NOTES

Impact of cattle on elephant use of key dry-season water in the Gourma of Mali

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This note recounts what happened after the situation described in 2009 by Iain Douglas-Hamilton and Jake Wall in *Pachyderm* no. 45. It recounts the impact on the elephant population of the high cattle numbers that have been progressively increasing in recent years and briefly describes the actions being taken to remedy the situation.

The approximately 550 elephants of the Gourma region in Mali are a notable remnant population, representing 12% of all West African elephants, and the northernmost in Africa since the extinction of the Mauritanian elephants in the Assaba Mountains in the 1980s (Douglas-Hamilton, 1979). This population of elephants makes an annual migration circuit to cope with the widely dispersed and variable nature of the Gourma's resource, finding water in the north during the dry season and abundant good-quality forage in the south during the wet season.

Throughout the dry season the elephants move from lake to lake, which dry as the season progresses, and eventually converge on Lake Banzena. Increasing settlement around these lakes and increasingly large numbers of livestock have been causing the semi-permanent lakes to dry earlier in the dry season, thus increasing the dependence of the elephants on fewer water points for longer periods of time, and on Banzena in particular (Canney et al., 2007). This peaked in 2009 when Lake Banzena dried before the rains came.

Fortunately the showers reported by Douglas-Hamilton and Wall in 2009 were soon followed by rain, and the elephants survived, but on 24 May 2010,

the end of the subsequent dry season, there were at least 350 elephants and over 50,000 cattle at Lake Banzena. The lake still held water, and yet 11 groups of elephants, totalling approximately 180 animals, left for Lake Kourarou, 70 km to the west on the eastern edge of the inner delta of the Niger River. Over 30 years ago, this area was part of the elephants' migration route (La Marche cited in Blake et al., 2003), but it had been abandoned by 1990. This was thought to be due to a combination of a general drying of several of the lakes bordering the inner delta and an escalation in human population, livestock and settlement.

However, a scout elephant had been seen in the region of Lake Kourarou in January 2010, and at this time the lake held water. Upon arriving at Lake Kourarou in May, the elephants found it dry and so continued on to Lake Aougoundou, a further 15 km. During the night of 25–26 May, eight elephants died around 12 km from Aougoundou. The carcasses stretched out along their path suggested they had died of thirst. The remainder reached Aougoundou and drank large quantities of water. Eleven of these died at the edge of the lake soon after; another two subsequently died in the vicinity. Of these 21 elephants, 20 were male and 1 was female; 13 were young, 6 were subadults and 2 were adults.

The Malian government immediately launched several missions, including one by the minister of the Environment and the national director of the Mali Directorate des Eau et Forêts (DNEF), to investigate the deaths. It concluded that livestock pressure at Banzena had been the ultimate cause. The minister welcomed

the current initiative to resolve the issue (see below) and asserted that the elephants were an important national and local heritage that could contribute to the well-being of local populations.

In May 2009 it was clear that a long-term solution to the problems at Lake Banzena was required. To ensure this situation did not occur again, the WILD Foundation raised money from the African Elephant Management Fund of the US Fish and Wildlife Service to study the situation at the lake, and in particular a consultative socio-economic study of the populations, both resident and transhumant, that were using Lake Banzena. The aim was to produce a plan that would accommodate elephant needs, avoid exacerbating social tensions, and be supported by the whole community. Households were consulted to give people an opportunity to give their views, and the results were discussed at community meetings to ensure a shared understanding of the problem before solutions could be suggested, discussed and compiled into a plan.

The full study and plan (Ganame et al., 2009) is available in French with a summary in English, both of which can be downloaded from the WILD Foundation website, www.wild.org. Chief findings of this study were that the resident population around Banzena consisted of 730 people organized into 11 clans, 6 ethnicities and 3 alliances. Over a one-month period, 95 transhumant herds used Lake Banzena, the majority coming from the towns of the Niger River but some of which came from as far afield as Niger and Burkina Faso. A key finding was that 96% of the 24,141 cattle using the lake during this time belonged to 'prestige' herds owned by affluent individuals coming mostly from the towns of the Niger River. Other important discoveries were the extent of commercial wood collection and timber cutting, and that over 50% of the resident population suffered from water-borne disease.

The aim of the plan was to assist the elephant population during its 5–6-month presence in the area and to allow the regeneration of Banzena's resources. The resident human population was ready to relocate to an area outside the elephant range if three boreholes could be provided in an area of good

pasture. The relocation area was subsequently selected in conjunction with the community, thus freeing the lake and its surroundings from human and livestock pressure.

Community resource management

While the different ethnicities had their own systems of natural resource management, there were no systems recognized by all users of the lake. Access to its resources of water, grass, browse, salt, fuelwood and non-timber forest products was anarchic and a regular 'free-for-all', and over the last few decades this unregulated exploitation had led to progressive and accelerating degradation. To prevent the same from happening in the relocation area, the plan included a set of activities to help the resident population create community systems to regulate resource use, and work with government foresters to help patrol and enforce the regulations in the relocation area and around Banzena. These systems, including the ability to charge outsiders and migrant herders for the use of resources, are all in the process of entering Malian law.

The key community structures were a unanimously appointed management committee supported by several Brigades de Surveillance (patrolling teams) composed of young men and government foresters that are vigilant for infringements of both local resource management rules and national laws. They



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One of the community-forester patrols.

are being trained in all aspects of their operation including the law, record keeping, how to deal with offenders, and how to communicate the new systems to others. The latter is supported by radio broadcasts, a wider outreach and schools programme, and an awareness campaign targeting herd owners.

Thanks to the involvement of the International Conservation Fund of Canada, we were able to begin the community work in August 2010. The Malian government has supported the initiative by agreeing to finance two of the three boreholes and by establishing a ranger post at Lake Banzena. The third borehole is to be funded by the US Embassy in Mali.

Although it is still very early, the management committee has already created a 40,000-hectare pastoral reserve, to which adjacent communes immediately added to create an area of 923,800 hectares. Protected by firebreaks, this was one of the few areas of the northern Gourma that did not lose its pasture to fire in 2010. These reserves are also entering law under the Malian Charte Pastorale.

More anecdotally, and yet to be confirmed, we also hear that the price of charcoal in Timbuktu has increased because wood is no longer being collected from the Banzena area, and this is generating interest in urban woodlots.

This initiative is part of The WILD Foundation's Mali Elephant Project, a long-term elephant conservation project working in partnership with the Malian Directorate of Eau et Forêts, Save the Elephants, the International Conservation Fund of Canada, the US Fish and Wildlife Service, the Association Malienne pour la Conservation de la Faune et de l'Environnement and others. Other elements include an awareness-raising outreach and schools programme plus support to planning in preparation for the elaboration of an Elephant Management Plan.



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Clearing the firebreaks to protect the reserve pasture.

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