

## OPINION

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### Mineral prospecting in the Selous Game Reserve and its dangers to rhino conservation

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#### Abstract

The Tanzanian government has granted prospecting licences for precious stones within the black rhino range of the Selous Game Reserve. There is an international agreement that there should be no mining in World Heritage Sites like the Selous. Mining in other protected areas in Tanzania has resulted in an uncontrolled influx of illegal miners, associated widespread lawlessness, and serious environmental destruction. Twenty years ago oil prospecting and explorations for a hydropower scheme at Stiegler's Gorge contributed to the near extinction of rhinos in the Selous. Together with a large dam presently being planned across the Ruvu River at the north-eastern tip of the Selous rhino range, the possibility of mining poses a major threat to the recovering but still fragile rhino population.

#### Résumé

Le gouvernement tanzanien a accordé des licences de prospection de pierres précieuses dans l'aire de répartition des rhinos noirs dans la Réserve de Faune de Selous. Il existe un accord international disant qu'il ne devrait y avoir aucun forage dans des Sites du Patrimoine mondial tels que le Selous. Les forages dans d'autres aires protégées tanzaniennes ont abouti à l'afflux non contrôlé de prospecteurs illégaux, à l'expansion de l'état de non-droit qui leur est associé, et à de graves destructions environnementales. Il y a vingt ans, les prospections pétrolières et les explorations pour un programme hydroélectrique dans la Gorge de Stiegler ont contribué à la quasi-extinction des rhinos dans le Selous. S'ajoutant au vaste barrage qui est actuellement prévu en travers de la rivière Ruvu, à la pointe nord-est de l'aire des rhinos au Selous, la possibilité de prospection minière pose une menace majeure à cette population en voie de reconstitution, mais encore fragile.

#### Granting of prospecting licences for precious stones

Mining has developed in recent years as an important economic sector in Tanzania, one of the world's poorest countries. Minerals now constitute a major export, and economic and political pressures are increasing to extend prospecting and mining into the vast network of protected areas.

Recently the Ministry of Energy and Minerals granted licences to prospect for precious stones in

various parts of the Selous Game Reserve. The reserve is one of the largest (close to 50,000 km<sup>2</sup>) protected areas in the world, the oldest in Africa (started in 1896) and it has been a World Heritage Site since 1982.

Thirteen prospecting licences were allocated to three companies between 26 October 2002 and 5 June 2003 according to a letter of the Ministry of Energy and Minerals of 17 February 2004 (Tanzania 2004). The minister for Natural Resources and Tourism confirmed this in the press (Mbiro 2004) after the issue

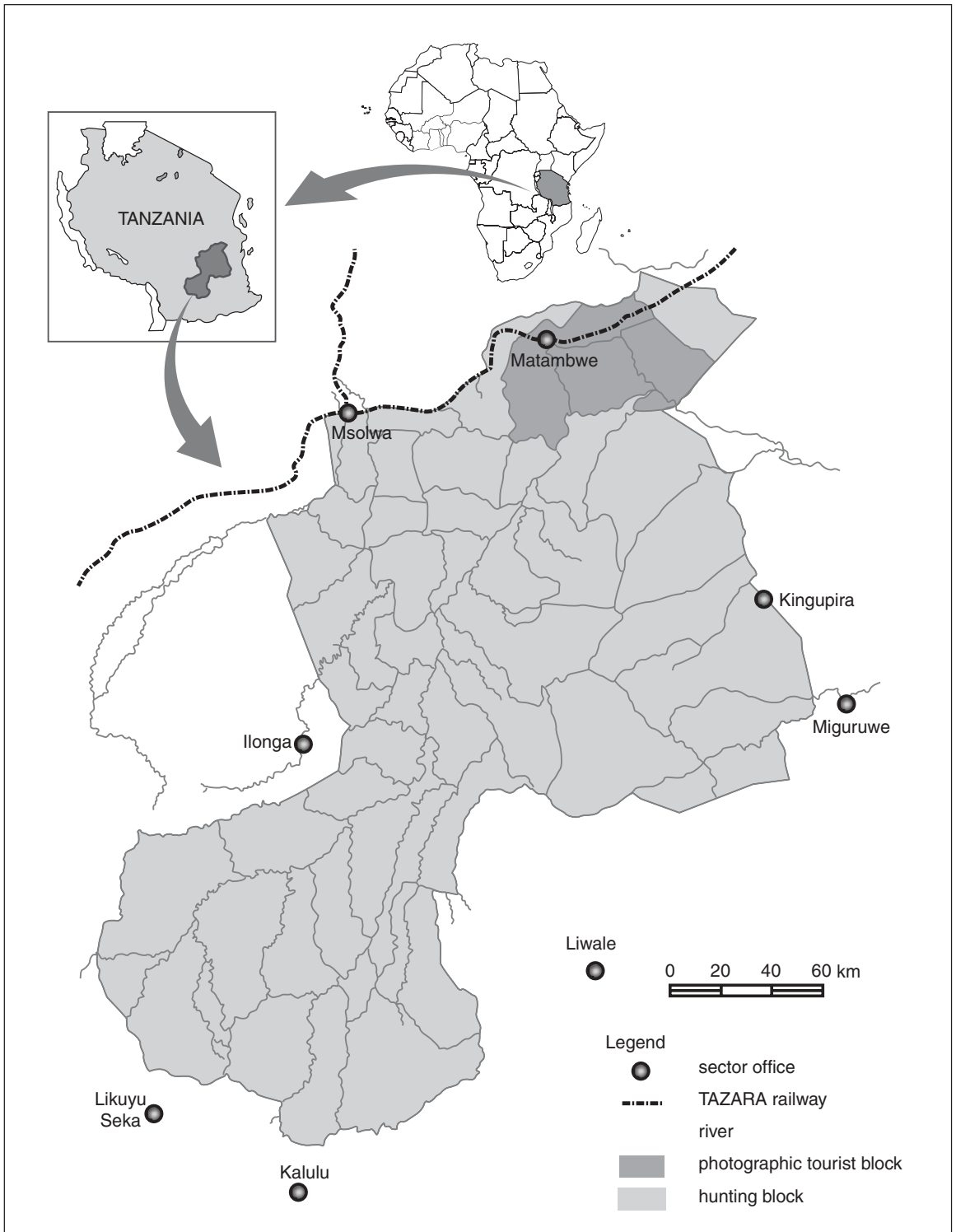


Figure 1. Selous Game Reserve, Tanzania.

was made public through an article in a local newspaper in Dar es Salaam (Baldus and Ngoti 2004). Further applications for prospecting have subsequently been received. No environmental impact assessment of the planned prospecting activities has been made.

## **Dangers for the Selous rhino population**

All 13 prospecting concession areas granted are within the rhino range or close to it. Similar projects, deemed to have been environmentally destructive, took place in the 1980s. Efforts to build a dam and a hydroelectric scheme brought up to 2000 workers to Stiegler's Gorge at the Rufiji River in the north-west of the reserve. The many rhinos in that area disappeared at the same time (Stephenson 1986). In the early 1980s while the search for oil was ongoing, thousands of kilometres of straight-cut lines were bulldozed through the Selous. The lines opened up formerly impenetrable thickets, providing access for poaching gangs of up to 60 people. Both projects greatly contributed to the near-complete loss of the rhino population, which at the time was estimated to be around 3000 and also facilitated the poaching of more than 50,000 elephants (Stephenson 1986).

Alpers (2004) estimates that the rhino population in the Selous is slowly increasing at present. The remnant population in the northern (tourist) sector in the Selous has been under intensive protection and observation by a special project for several years, financed by the European Union and managed by the Wildlife Division together with the Selous Rhino Trust (Morgan-Davies 2001). The population is known to be breeding, and 20 animals are individually known. They are expanding their range and are increasingly seen by tourists and scouts. Five additional separate subpopulations south of the Rufiji River are also known and receive protection through the anti-poaching units of the reserve. No signs of rhino poaching have been found in the last 15 years though small-scale elephant poaching is going on within the rhino range (pers. comm. with Game Reserve management).

Management in the Selous has greatly improved wildlife security in recent years (Baldus et al. 2003), but it would be difficult to cope with a large influx of people and the activities connected with mining precious stones, in particular if they take place illegally.

Whereas mining by large companies is supervised, their activities are normally followed by those of illegal diggers. Artisanal mining might contribute to poverty reduction, but it is also related to a high degree of lawlessness, which is almost impossible to control in large and remote protected areas. This is illustrated by experiences of mining in the Eastern Arc Mountains, in particular in the Amani Nature Reserve in northern Tanzania (Nyiti 2004; Burgess et al. 2005). Similar environmental destruction has been caused by illegal mining in the Kizigo Game Reserve in north-western Tanzania (John Mbwiliza, pers. comm.). In recent years uranium deposits in the Selous have been surveyed using a helicopter. There is concern that such activity may be followed by more environmentally damaging ground exploration and thereafter possibly by exploitation.

But even if artisanal mining is prohibited in the Selous, doubts remain whether companies that have been granted prospecting licences will follow internationally agreed standards. They are not members of the Tanzanian Chamber of Mining, which regards the question of mining inside protected areas as sensitive but so far does not have a clear policy on the matter.

## **Legal background**

Tanzania is internationally respected for its wildlife conservation policies. Its extensive network of protected areas covers approximately 25% of the total land area and consists of 13 national parks, 31 game reserves and the Ngorongoro Conservation Area. Wildlife management areas are an additional category of conservation range under community management.

Protected areas in Tanzania are set aside and managed under various authorities. Tanzania National Parks (TANAPA) is the parastatal organization empowered to manage the national parks. The game reserves including the Selous are under the Wildlife Division, which is part of the Ministry of Natural Resources and Tourism. The Ngorongoro Conservation Area Authority is a separate parastatal.

There are mineral deposits in many of these areas. The Ministry of Energy and Minerals will issue prospecting and mining licences regardless of whether the area is protected or not, but makes it quite clear that the final responsibility for exploration and mining in



A Selous rhino, photographed in 2004 near one of the planned prospecting sites.

national parks and game reserves lies with the respective conservation authority.

The Wildlife Conservation Act of 1974 does not contain any provisions on mining in game reserves or other areas under the Wildlife Division's jurisdiction. However, the Act prohibits entrance without written permission from the director of Wildlife. This indirectly controls mining in game reserves. National Parks ordinances contain provisions that allow mining in national parks under certain conditions. TANAPA must grant permission to enter any national park and can thus control all activities on their estate. According to TANAPA's director general (DG), its Board of Trustees has ruled not to allow mining in any of the national parks in the country (Gerald Bigurube, TANAPA DG, pers. comm.)

But Selous is not a national park, and no such ruling exists for national reserves.

In the first meeting of the permanent subcommittee on wildlife conservation and management under the East African Community Secretariat, the three partner states agreed that the exploration and exploitation of mineral resources in protected areas should be prohibited (EACS 2004). For cases in which such resources were critical to the national economies, restrictive conditions for mining were formulated.

The minister of Natural Resources and Tourism, who has the responsibility for conservation areas in the country, was quoted in the local press as defending the granting of prospecting licences in the Selous since they establish the existence of minerals but do not necessarily allow their subsequent extraction (Mbiro 2004).

## Mining activity in World Heritage Sites

IUCN, the World Conservation Union, through its World Heritage Committee recently initiated a dialogue with the International Council on Mining and Metals—a body representing 15 of the world's largest mining and metal-producing companies. In August 2003 the council announced that its corporate members committed themselves not to explore or mine in any World Heritage Site and to take all possible steps to ensure that any mining operations present are compatible with the outstanding universal values of such sites (ICMM 2003).

After this announcement the IUCN director general commented that a new threshold for corporate responsibility had been created and, notwithstanding several outstanding issues, the decision was an important milestone (ICMM 2003).

## Discussion

The political responsibility for prospecting and mining in any protected area of Tanzania ultimately lies with the Ministry of Natural Resources and Tourism. An anomalous situation now exists—one conservation agency of this ministry has banned mineral prospecting (in national parks only) while another appears about to permit it. Based on past experience there is a high probability that mining activities in the Selous would have negative consequences for the area's environment and its biodiversity, including endangering the recovering elephant and rhino populations.

It is difficult to understand why the Tanzanian authorities should allow mineral prospecting in protected areas, as this would seem to imply permitting future extraction, especially as leading players in the world's mining industry have agreed that World Heritage Sites must be strictly exempted from mining activities of any kind.

There are still many unprotected areas in Tanzania containing minerals that are not yet mined. It might make sense to prohibit mineral prospecting and mining in all conservation areas until mining can in future meet far more stringent and enforceable environmental standards. It is of interest to note that De Beers of South Africa prospected much of the Selous for precious stones in the latter half of the 1950s; they found nothing worth following up (B. Nicholson, email 19 March 2005).

Unfortunately mining is not the only imminent danger for the Selous rhino population. The Tanzanian government plans to construct a large dam across the Ruvu River at the north-eastern edge of the Selous Game Reserve to supply Dar es Salaam with water. The dam will not only destroy several hundred square kilometres of dry-season grazing land that is indispensable for the wildlife of the northern Selous, but will also flood parts of the rhino range. Like 25 years ago, this project will once again introduce a large workforce close to these specially protected rhinos.

## Disclaimer

This article expresses the views of the author only and not necessarily those of *Pachyderm* or the organizations he works for.

## References

- Alpers F. 2004. Selous Black Rhinoceros Protection Project. Internal paper. Wildlife Division, European Union and Selous Rhino Trust, Dar es Salaam.
- Baldus RD, Ngoti PM. 2004. Mining, conservation put Selous on the cross road. *Daily News* 20 July 2004, Dar es Salaam.
- Baldus RD, Kibonde B, Siege L. 2003. Seeking conservation partnerships in the Selous Game Reserve, Tanzania. *Parks* 13(1):50–61.
- Burgess N, Kilahama F, Nderumaki M, Kahemela A, Sawe C. 2005. Mining in the Eastern Arc Mountains: the situation in early October 2004. *Oryx* 39(1):13.
- [EACS] East African Community Secretariat. 2004. Report of the 1st meeting of the Permanent Sub-committee on Wildlife Conservation and Management, Arusha. Unpublished paper.
- [ICMM] International Council on Mining and Metals. 2003. Landmark 'no-go' pledge from leading mining companies. Press release, London, 20 August 2003.
- Mbiro M. 2004. Government allows mining prospecting in Selous. *Daily News* 22 July 2004, Dar es Salaam. Tanzania. Ministry of Energy and Minerals. Allocation of mining/prospecting plots inside the Selous Game Reserve. Letter. Ref. no. CAB.233/433/01/22 dated 1 July 2004 to *Daily News*, Dar es Salaam.
- Morgan-Davies M. 2001. Survey and conservation status of five black rhino (*Diceros bicornis minor*) populations in the Selous Game Reserve, Tanzania, 1997–1999. *Pachyderm* 31:21–35.
- Nyiti P. 2004. Gold rush threatens the ecosystem. *Daily News* 9 April 2004, Dar es Salaam.
- Stephenson I. 1986. The Selous Game Reserve in crisis. Frankfurt Zoological Society. Unpublished paper.