Energy development versus wildlife conservation – can they co-exist in the Albertine Rift?

By Louise Johnson, August 2007

Travelling through the Ruwenzori Mountains at the start of our tour, I realised just what a visually and biologically stunning country I was in. Discovering the wealth of natural resources is the highlight of any trip into the field. Indeed a fieldtrip visiting Queen Elizabeth National Park, Semuliki, Kabwoya, Bugungu, and Murchison Falls National Park cannot fail to encounter beautiful landscapes, wonderful wildlife, along with thriving wetland and forest habitats. But our 4x4's did not contain tourists; Ugandan environmental and conservation professionals were collaborating to learn more about their country's other natural resource – Energy.

I had been commissioned by Wildlife Conservation Society and Uganda Wildlife Authority to conduct an independent review of impacts and mitigation actions associated with energy development, and we realised the best way to inspect these energy development sites was to invite professionals whose jobs were related in some way to the Environmental Impact Assessment (EIA) process in Uganda. Our remit was to visit existing, abandoned and future sites of energy extraction (hydro-power, geo-thermal and oil/gas) in the Albertine Rift, to better understand the potential impacts from development of these energy resources.

Being situated in one of the most geologically famous structures in the world, Uganda sits above seemingly productive hydrocarbon reserves, in addition to several hydro and geothermal power resources. To the casual observer it might seem strange that in a country with such energy development, why is there energy rationing in Kampala, and why are electricity supplies devoid from the majority of the country? In general, why doesn't Uganda just produce more energy?

One of the unfortunate ironies of the situation is that the majority of Uganda's energy resources, especially hydrocarbons, are to be found in the most species-rich eco-region for vertebrates in Africa, namely the Albertine Rift. For this reason, our fieldtrip delegation included representatives from Uganda Wildlife Authority, National Environment Management Authority, National Forestry Authority, Wetlands Division, the Petroleum Exploration and Production Department and the Wildlife Conservation Society. As we drove through and between these protected areas, we started to discuss why protection is necessary i.e. what it is they are being protected from? Resoundingly, we agreed the major threat was from negative impacts on the conservation values of the area, namely impacts on it's habitats and species. But is it possible that energy extraction can exist in or near internationally and nationally protected areas?

Global expert opinion is mixed, with some parts of the conservation community shouting a resounding "no". Surprisingly, a few developers have even reached a similar conclusion and admitted that some areas are just too sensitive and vulnerable for development. For example, the oil and gas company Shell International and the mining company Rio Tinto (along with other members of the International Council for Mining and Metals) have stated they will no longer explore or extract from natural World Heritage Sites. Indeed there is growing international pressure from members of IUCN[1] for Governments to withhold mining or hydrocarbon licensing in any IUCN Category I-IV protected areas, and for companies to refrain from developing in these areas. On the other hand, most oil companies will say they can operate anywhere and will manage impacts and risks according to the sensitivities apparent wherever they operate. The decision on whether negative impacts from oil exploration and exploitation are sufficient to warrant 'no-go' areas is still open for debate.

In countries such as Uganda where crippling energy shortages and imported fuel costs are considered partially responsible for holding back development, who has the right to put biodiversity conservation before social improvement? Only Ugandans can decide their

[1] IUCN - The World Conservation Union, a collaboration between governments and non-governmental organisations.

priorities, but with shared learning's from other cultures and countries it might not necessarily be the case that one will win out at the expense of the other – maybe both can gain. If we are to develop Uganda's natural resources, how can this be undertaken with the least negative impact? And is "least impact" the best we can hope for? I suggest we should expect net gain instead of net loss - surely positive benefit is what we should demand, not only in terms of increased energy availability but also in terms of resources available to help conserve Uganda's biodiversity.

When assessing the variety of potential energy resources available i.e. hydrocarbon, hydro-power, geothermal, and even solar and wind, of course the negative impacts differ between each energy source. Some are short-term, others may last for generations, some felt more sharply locally, others globally e.g. ranging from local land-take and discharge of effluent, through to climate change contribution from burning diesel and other hydrocarbons. Exploiting any energy resource needs carefully planned mitigation to eliminate or, at the very least, reduce impacts. Nevertheless, even with the best intentions and environmental management systems, some residual impacts may never be fully mitigated so may require a system of compensation or 'offsetting'. Some impacts may be deemed acceptable and therefore allowed. However, these decisions should only be taken with full stakeholder involvement, and by people with adequate knowledge of impact minimisation and experience of conservation benefit from carefully managed offset programmes.

Of all the energy resources considered for exploitation, development of hydrocarbons in the Albertine Rift is perceived to hold the largest negative impacts. The companies interested in finding oil reserves are required to develop EIA's as stipulated under Uganda's EIA Regulations (developed in 1997). Several assessments have been undertaken to date, and as part of our work, three existing oil and gas EIA's were assessed – Kaiso-Tonya exploratory drilling, Kingfisher well exploratory drilling, and Butiaba-Wanseko seismic survey (the first and third for Hardman Resources Ltd, the second for Heritage Oil Corporation). The EIA's were assessed for scope and detail, description of intended operation, quality of baseline and impact assessment, whether alternatives had been addressed, the quality and coverage of mitigation actions proposed, and how consultation fed into the process. In essence, they were reviewed against international best EIA practice. From a societal point of view, if a Government has legislated for EIA, and Companies are therefore obliged to undertake them, then one would hope that all negative impacts are eliminated or designed out prior to development.

This depends very much on the quality of the EIA process undertaken by the Company, and what requirements are placed on the Company following Government assessment and approval. Upon reviewing the three EIA's it soon became apparent that although one of the EIA's contained many elements considered standard practice in international EIA's, unfortunately two of the three fell some way short of an acceptable standard of best practice. One EIA was far too generic, applying the intention of EIA to the drilling of wells which were not adequately defined. In two of the EIA's, there was little proper assessment of impacts for likelihood, probability, scale or importance. Baseline surveys seemed inadequate to be able to effectively assess impacts on wildlife. Assessment of cumulative impacts had not been undertaken, and indirect or secondary impacts were not taken into account. Impacts were implied, but the approach taken was that they could all be managed accordingly or were acceptable. Where mitigation actions were included, these were mostly far too generic to be useful - whether this is to effectively reduce the impact, to inform the company personnel on what steps to take, or to indicate to the regulator which actions might need monitoring).

Nevertheless, these EIA's had been approved, and therefore all operations were legally bound to implement the mitigation actions included within them, along with the conditions laid out in the governments Certificate of Approval. Our visit to these operational sites proved valuable in identifying how practice measured up against promise. Although we saw and discussed many good practice intentions and interventions, when it came to requirements promised by the EIA or stipulated by the Certificate of Approval, many had not been adequately addressed. Environmental Management Systems, with the internal improvement and checking inherent in such a process, were lacking. Communications and planning, although superficially functional when presented to our fieldtrip delegates, appeared

somewhat ad-hoc and reactive. Intentions by both companies visited were to abide by the law, do whatever was required to minimise negative impacts and be a force for good in the communities surrounding the sites. But in studying the EIA documents they had developed for the purposes of project approval, we were not left feeling confident that all promises were yet in place.

One of the last stops on our itinerary was to Buligi and the Nile Delta area (oil exploration Block 1) where we were able to see firsthand the financial and spiritual value a pristine area of wilderness can bring. This area is yet to be developed and seismic operations to identify the location and size of hydrocarbon reserves were yet to be undertaken. Delegates tried to imagine the potential negative impacts sometimes associated with hydrocarbon development operations in this settings, and the general consensus was that some areas are perhaps just too valuable to risk changing through man-made interventions.

Our fieldtrip definitely provided a useful experience for delegates; at the end of the trip many felt they had much better appreciation of the potential impacts from energy developments, and several felt much better equipped to use this knowledge in their EIA work in the future. It proved useful to be able to compare our fieldtrip findings against the requirements deemed necessary in both the EIA's and Certificates of Approval. It was also valuable to engage in discussion between the delegates of the various organisations represented, as several times during the week it became apparent that an improvement in communications between their organisations could target better approval processes and monitoring of these projects. There was general agreement that the system surrounding development, assessment and approval of EIA's for energy-related projects needed improvement, and that the various departments with responsibility for that approval needed closer liaison. It was very useful to discuss with oil company representatives some of our concerns, and also valuable to hear some of their plans for bringing social benefit to the local communities.

So can energy development and nature conservation co-exist happily in the Albertine Rift? I think it can, but only if certain very sensitive areas are withheld from development (e.g. the Buligi circuit), in conjunction with a more robust improved EIA generation and approval process. Critical to an improvement in the process will be an increase in coordinated input from conservation-trained specialists - their input on impact prediction, mitigation-action priority and relevance, along with increased involvement in planning for monitoring and site restoration will be fundamental to a successful outcome. Yes, Uganda needs affordable, carefully distributed energy, but as an outsider looking in, it is vital that this is not achieved through the detrimental waste of its most precious asset – it's wildlife.

1784 words

This work was made possible through support from UWA, WCS, NEMA and Prime-west.