

The Importance of Environmental Impact Assessments



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BELOW: The infrastructure of a working oil pad in Murchison Falls National Park.

In most East African countries, any major infrastructure project -- especially those that affect a protected area such as a National Park -- are subject to the approval of an Environmental Impact Assessment (EIA) before they can proceed. Applied effectively, the assessments are powerful tools in the protection of wildlife and their habitats.

WHO IS RESPONSIBLE FOR MANAGING AN EIA?

Where there is an EIA process in place, it falls under an Environmental Management Authority (EMA) with the mandate to coordinate, monitor, regulate and supervise all matters on the environment. In Kenya and Uganda, it is known as National Environment Management Authority (NEMA), in Tanzania National Environment Management Council (NEMC) and Rwanda, Rwanda Environment Management Authority (REMA) although here some responsibilities were transferred to the Rwanda Development

Board. The management of an EIA lies with these bodies and in all major facets, they operate in a similar way using similar tools such as the EIA. Each authority has a register of approved EIA practitioners, be they companies or individuals, who have the necessary competence to assess a project on behalf of the proponent and compile the EIA.

WHAT IS AN EIA?

The EIA is a process to minimise adverse impacts and risks to the environment. The proponent of a project that is likely to have a negative environmental impact, or for which an EIA is required by a specific law or regulations issued under it, must apply for an EIA. The proponent will have contracted a team of experts from the 'country register' who will look at the proposed project in its detail and identify both the negative and positive impacts at each stage of its development -- planning, design, construction, operation, monitoring, evaluation and decommissioning.





PHOTOS BY BECKY FUDA

SOME PROJECTS MAY HAVE A SIGNIFICANT IMPACT ON THE LOCAL POPULATIONS EVEN REQUIRING THE RESETTLEMENT OF PEOPLE AWAY FROM THEIR HOMES.

Where there are negative impacts, the team will identify measures to mitigate the damage. Where there are positive impacts, the team will identify measures to maximize them.

Some projects may have a significant impact on the local populations even requiring the resettlement of people away from their homes. In these cases, the social element has to be assessed alongside the environmental element, a process known as Environmental and Social Impact Assessment (ESIA).

The EIA/ESIA report is a substantial document covering a wide range of subjects. While there are general guidelines given as to the structure and the information the report must contain, each assessment is specific to the project concerned.

A Non-Technical Summary (NTS) may be produced as a stand-alone document to enable non-academics and the public to understand the key information and conclusions contained

The site of an oil pad in Murchison Falls National Park restored to its former condition as required in the Tilenga Environmental and Social Impact Assessment. Murchison Falls National Park is a national park in Uganda and managed by the Ugandan Wildlife Authority.

within an ESIA report, enabling all stakeholders to be part of the review process and put forward their opinions and suggestions for consideration.

An important element of the EIA showing the actions to be implemented by the proponent or their contractor to prevent or reduce significant negative impacts to acceptable levels is the Environmental Management Plan (EMP).

The outcome of an EIA is a report that is made widely available for comment after which more work may be needed or changes to the draft made before it becomes the final document on which the Environmental Management Agency will grant or decline to issue a certificate authorising the proponent to proceed with their project. Expert assistance may be asked to assist the environmental assessment authority to review an EIA.

COMPLIANCE

Each of the Environmental Management Agencies has the responsibility to ensure the proponent and/or the contractor of a project, for which they have granted an EIA approval, complies with the actions recommended to mitigate negative impacts. This is carried out through auditing and inspection. Part of the process is also to ensure that the baseline data, (on which the mitigating



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actions have been based), are appropriate and accurate and to monitor whether the recommended actions are effective. If not, there may be further actions necessary for effective mitigation.

The process of monitoring is known as the Environmental Audit (EA) and it is the responsibility of the proponent of the project to self-audit through self-monitoring, self-record keeping and self-reporting regularly. The proponent prepares a report after each audit and an annual (or otherwise as required) EA report for the relevant Authority. The proponent will contract specialists and/or organisations to undertake the monitoring required for each recommended action.

One of the impact mitigating actions required for Kenya's Mombasa to Nairobi Standard Gauge Railway (SGR) project was to provide underpasses and overpasses where animals and humans would cross the railway track. The SGR runs through both Tsavo West and Tsavo East National Parks, which are home to an estimated 12,000 to 14,000 elephants. A game-proof electric fence was to be built along both sides of the railway line to prevent access by wildlife.

As it was feared that the SGR would cut the wildlife populations into two, six specially designed underpasses were constructed to enable movement. Besides, culverts were installed in seasonal dry riverbeds. The project needed to also

TOP: An elephant herd walking to the Mtito underpass, a mitigating measure of the ESIA for the Standard Gauge Railway. The underpasses allows wildlife to pass safely underneath the railway.

RIGHT: Mitigating measures are required to ensure Uganda kob and giraffe movements are not prevented by any barrier created by the oil development in Murchison Falls National Park.

take into account the Mombasa to Nairobi main road, which runs parallel to the SGR.

Ten elephants were fitted with satellite tracking collars to enable the monitoring of their movements in relation to the new infrastructure project and their access to food and water. Monitoring began on all wildlife activities through direct movement signs/tracks along the SGR.

After six months of monitoring, results showed that while wildlife generally utilised underpasses and any other possible crossing points underpasses near human settlements and developments were under-utilised by elephants while raised areas and construction activities discouraged movement, especially to water points.

The construction of the game-proof fence was necessary because sightings of wildlife moving across the SGR were numerous with elephants even climbing up steep railway embankments



PHOTO BY RICHARD MOLLER, TSAVO TRUST

and sliding down the other side. However, the design of the fence – non-electrified chain link -- was inappropriate and elephants had destroyed several sections. For compliance, a newly designed fence had to be constructed.

After two years, the monitoring data showed that elephants found it easier to cross the highway compared to the SGR as they took time to learn where underpasses were and were put off by the fence. Nevertheless, elephants were the most prolific users of the underpasses compared to other wildlife so the underpasses could be considered an important way to minimise habitat fragmentation. The other main users of the underpasses were livestock entering the Park illegally, which was not an expected outcome and remedial measures were needed. Underutilised underpasses were near to, (often illegal), human developments, and needed to be policed to prevent such settlements.

Another unexpected outcome of the monitoring was the use of borrow pits as water sources by elephants and other wildlife. The borrow pits were created close to the SGR where additional soil was required for embankments. Where these were not filled, water had accumulated attracting wildlife. They then presented a threat to the

TOP: Adequate fencing, to protect elephants in particular, was a required mitigating measure in the Environmental and Social Impact Assessment for the SGR. Wild animals have to walk for several kilometres to access underpasses because most parts of the SGR has been fenced off. There are eight underpasses that connect Tsavo West to Tsavo East national parks.

animals from train and motor vehicle accidents so remedial action was essential.

Barrier effects are also envisaged in the ESIA for the ‘Tilenga Project’ -- the development of six oil fields in Murchison Falls National Park in western Uganda -- where oil pads would be constructed within 500 metres of each other. Giraffe and kob are known to move, between seasons, to and from the Delta area so would be particularly susceptible to any barrier. Giraffe and lions were reported to be particularly sensitive to human presence/activity and were expected to move away from the oil construction sites. Appropriate mitigation against the expected impacts would be required.

OVERVIEW

Major infrastructure projects are essential to the development of the economy of any country. In East Africa, any such projects may inevitably have to be undertaken in a wildlife conservation area with potentially negative as well as positive consequences. The EIA/ESIA, when applied effectively, is an important process to ensure negative impacts on wildlife and their habitats are successfully mitigated while positive impacts are maximised. ●