



ENERGY

ESF



CLIENTS

KENGEN
FUELEX
RWANDA ELECTROGAZ
RWANDA MINISTRY OF ENERGY

ESF Consultants' Energy sector has been a leader in providing technical support and environmental management services to the sector including generation, transmission, from sources including hydro, geothermal, coal, solar, nuclear, and thermal and wind.

We supply a full range of services to the Energy Sector both domestically and internationally for offshore and onshore exploration and production, pipelines, electric transmission lines, thermal, hydro and nuclear power plants, wind power and other renewable energy projects.

HYDROPOWER AND GEOTHERMAL ENERGY

ESF carried out an EIA study for the raising of the full supply level. The Masinga Dam is at the head of a cascade of four dams. Other than being for hydroelectricity generation, the dam serves as a water storage facility for the other dams downstream. It was expected that storage capacity would be increased from 1566million cubic metres (at 1.5m increase) or 1805million cubic metres (at 2m increase).

The project entailed raising the full supply level (FSL) of Masinga Reservoir by between 1.5m and 2m and increasing spillway capacity. Construction activities were to take place over a period of 2.5 years and involving up to 250 workers. The expansion of the dam would however occur on within its prescribed boundaries. However, levels of erosion around the dam were still to be established so as to determine if there would be any encroachment of private land.

WIND ENERGY

We were consulted to carry out a preliminary Environmental Assessment for establishing a Wind Farm for energy in Malindi Kenya. The project is funded by foreign and local investors to tap local wind energy for local consumption through connection to the local grid. The project involved erecting a mast to measure wind speeds. The study assessed visual and environmental impacts of the proposed turbines as well as frequency and static disturbance created by rotors

HYDROCARBON

We have been providing technical assistance to hydrocarbon firms to assess and site hydrocarbon storage tanks within their facilities. ESF has undertaken environmental assessment and audit for independent petroleum dealers (Speedy Filling Station in Nakuru) and Fuelex limited, an import and exporting company of petroleum products.

THERMAL POWER

ESF Consultants has been contracted by The Government of Rwanda through financing from International Development Association (IDA) toward the cost of the Urgent Electricity Rehabilitation Project (UERP). The project is being jointly financed by the Nordic Development Fund (NDF). The project is intended to mitigate the power crisis in Rwanda and to help to restore good utility practice for its installations.

ESF has assist the Rwanda electricity utility company in fulfilling its obligations under the Environmental and Social Management Framework (ESMF) and the Resettlement Policy Framework (RPF) to improve performance of either framework during UERP implementation, recommend improvements to the project and the World Bank, developing and implement an internal administrative tracking system for Project Coordination Unit (PCU) in order to monitor the progress of project investments in terms of meeting environment and social safeguard requirements

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Energy



CLIENTS

IBERAFRICA
NILE BASIN INITIATIVE

RUKARARA HYDROPOWER PLANT

ESF Consultants Great Lakes Regional Office based in Kigali Rwanda was contracted by the Rwanda Ministry of Infrastructure to undertake an Environmental and Social Impact Assessment Study for Rukarara Hydro Power Project. The project is along what is considered the source of Nile in Rwanda. The study was to identify impacts of the project and develop mitigation measures as well as resettlement plan for the displaced. The study also came up with a resettlement policy for the affected communities and mitigation measures for downstream and upstream water users. The study involved determining the area of the lands that will be submerged, the impacts on land structures, determine the direct and indirect impacts of the project on the existing ecosystems, evaluating the proportion of the population to be moved, evaluate the individuals to be relocated, determine the economical cost of the compensation and determining the impacts of altering water flow. The study also proposed measures for the control of possible endemic diseases which can occur in the vicinity of the water dam.

RUSUMO FALLS HYDROPOWER PROJECT

ESF consultants was contracted to undertake a Rapid Baseline Social Analysis for the Regional Rusumo Falls Hydroelectric Project. The scope of work for the rapid social analysis included undertaking relevant global and African case studies of similar trans-boundary and multi purpose projects, using available data sources and existing structures and systems to obtain baseline data (gender and location disaggregated where possible) for among others the following people and population in the project area following the given boundaries, livelihoods and Income, education, Public Health and Water and Sanitation; identify the key stakeholder groups at all levels - governmental, NGO, community-based organizations, and villages affected and affecting the project and suggest ways of enhancing their active participation at every stage of the project; identify potential social risks to the project and their related mitigation measures that need to be considered in the design of the project; identify opportunities and constraints arising out of the country's socio-cultural (including gender), institutional, historical and political context, and recommend effective strategies to enhance widely-shared socio-economic development and poverty reduction through a multipurpose hydropower project; identify other key interventions that have a bearing on this project and to which the project can be linked for maximum results especially in terms of project areas development (e.g. the mining companies, Barrick and others, to see whether there are possibilities of linking corporate social responsibility programs for maximum synergy and minimum overlap); participate in a regional workshop to share lessons learnt from this assignment with the PIC, and help demonstrate the role of upstream social analysis in project design.

IBERAFRICA NAIROBI SOUTH PLANT EXPANSION

ESF undertook Environmental and Social Impact Assessment (ESIA) for the proposed project according to best international practice, as required by the terms of the company's project-specific. ESF Consultants undertook a comprehensive assessment of the proposed project starting with a rapid scoping study was undertaken at the beginning of the study. This exercise involved consultation with the client, IBERAFRICA Power Company personnel. This exercise helped the study team define the spatial and contextual scope of the study. Baseline data also collected from secondary data however the team discovered not much data has been collected in the area. Then the team went to the field to collect primary data. The study also analysed various project alternatives available to achieve this project's objectives but produce least adverse environmental impacts. During the scoping process, a stakeholder mapping exercises was undertaken to identify Interested and Affected Parties (I&AP) to the project. To identify project air pollutants emitted, an ambient air quality survey of the area was undertaken, identifying sensitive receptors and calculating emissions from the plant based on fuel qualities and technology. Air samples were collected from in and around the project site. An analysis was undertaken through spectrophotometry and sulphur, nitrates and particulate matter determined. Using mathematical models that assume steady state release, plant input and output and metrological pattern dispersal path of emissions was determined.

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*Your Environmental
Partner!*

ESF

Energy



This division handles Hydroelectric, Oil and Gas, Geothermal, alternative fuels, wind Solar, coal etc)

Our energy Division handles all sectors of energy projects providing services such as Environmental Assessments and feasibility studies
ESF Consultants is a leader in provision of cut out technological solution in environment and energy industry in the region and worldwide. The energy sector, including upstream, midstream and downstream oil, gas, and power utility clients has been a core focus of the firm since its establishment in 2000.

We supply a full range of services to the Energy Sector both domestically and internationally for offshore and onshore exploration and production, pipelines, electric transmission lines, thermal, hydro and nuclear power plants, wind power and other renewable energy projects.

WIND ENERGY DUE DILIGENCE ASSIGNMENT

In 2011 ESF Carried out an Environmental due diligence assignment involving the Kinangop Wind Park Equator Principles, IFC Performance Standards and World Bank EHS guidelines GAP Analysis for Standard Bank SA. The wind Park was intended to be a wind power generating Plant with a generating capacity of 60MW. The assignment highlighted the key gaps identified between the project and the project documentation reviewed and the relevant international environmental and social standards namely the Equator Principles and International Finance Corporation (IFC) performance standards for social and Environmental sustainability.

Having identified the key gaps, the assessment made recommendations for addressing such gaps and thus the project more closely with the necessary international standards. The GAP analysis was based on the Equator Principles of July 2006; International Finance Corporation (IFC) Performance Standards, April 2006 for Social and Environmental Sustainability (Performance Standards 1-8), and World Bank EHS Guidelines for Wind Power of April 2007.

FEASIBILITY STUDY

The e7, which comprises ten leading electricity companies, spearheads sustainable development projects and human capacity building activities in developing nations worldwide. In 2005, e7 proposed to combine wind with diesel using environmentally sustainable local resources and increase access to electricity in Mpeketoni, Lamu through installation of wind turbines and upgrading of generators. ESF undertook an Environmental Feasibility study for the project comprising of the establishment of 2 wind turbines, relocating and upgrading the existing diesel generator, expanding the transmission lines, integrating wind and generator power and diesel storage facility.

ENVIRONMENTAL AND SOCIAL RISK ASSESSMENT

Re-Consult (Turkey) intends to develop a wind park at Turkwell, West Pokot County with the purpose of making use of the wind potential at the site to generate power for the national grid. The wind park comprises of 41 turbines placed in rows perpendicular to the main wind direction, connection lines, a switchyard, and a transmission line to Turkwell substation. In 2013, ESF was commissioned to undertake the risk analysis with the main objectives of identifying the environmental and social risks of the Wind Power Project.

CLIENTS

E-7

RE-CONSULT (TURKEY)
STANDARD BANK SA
KINANGOP WIND

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