



DEMOCRATIC REPUBLIC OF CONGO
MINISTRY OF INFRASTRUCTURE, PUBLIC WORKS AND RECONSTRUCTION
RAXIO DATA CENTER SAS

RAXIO
The data centre company

**ENVIRONMENTAL AND SOCIAL IMPACT STUDY
OF BUILDING A DATA CENTER PROJECT ON 12th STREET LIMETE
INDUSTRIAL IN THE CITY-PROVINCE OF KINSHASA**

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NON-TECHNICAL SUMMARY

Background and rationale for the study

This report of the ESIA for building a data center (Data Center) in the municipality of Limete is in line with the logic of article 21 of law N ° 11/009 of July 09, 2011 on the fundamental principles relating to the protection of the environment and the provisions of Decree No. 14/019 of 02 August 2014 setting the operating rules of the procedural mechanisms for the protection of the environment, subject any project likely to have negative impacts on the balance of ecosystems and on human health to an environmental and social assessment together with its Environmental and Social Management Plan (ESMP), approved by the competent authority.

To increase the geographical coverage of high-capacity communication networks and reduce the costs of communication services throughout the national territory, RAXIO intends to organize a database for communication companies.

The objective of this mission is to carry out the Environmental and Social Impact Assessment (ESIA) of the project to construct a data center (Data Center) in the city of Kinshasa, whose erection activities and installations equipment could have negative effects on the environmental and social environment.

In this time marked by the Sustainable Development Goals (SDGs), no one is unaware that the realization of this project, as beneficial as it is from an economic point of view, will not be accomplished without impacts on the balance of ecosystems and human health. It is therefore necessary to assess the risk/benefit ratio to decide whether or not to carry out such a project.

Following the same logic, Article 21 of Law No. 11/009 of July 9, 2011 on fundamental principles relating to the protection of the environment and the provisions of Decree No. 14/019 of August 2, 2014 setting the operating rules of the procedural mechanisms for the protection of the environment, subject any project likely to have negative impacts on the balance of ecosystems and on human health to an environmental and social assessment accompanied by its Environmental Management Plan and Social (ESMP), approved by the competent authority.

It is in this perspective that the present study falls, which undoubtedly testifies to the constraint of the promoter to comply with the legislation in force in the DRC.

Objective of the Environmental and Social Impact Assessment (ESIA)

The overall objective of this study is to identify, analyze and assess the environmental consequences of the project in order to limit, mitigate or compensate for the negative impacts by proposing mitigation, mitigation, monitoring and follow-up measures relating thereto. , and enhance the positive impacts.

The specific objectives of this study are:

- Analyze the initial state of the sites and their environment (basic environmental and social characterization study);
- Assess the potential environmental and social risks related to the activities that will be carried out in the different phases of the project;
- Propose measures likely to eliminate, reduce and, if possible, compensate for the harmful consequences of the project on the environment;

- Evaluate the costs of applying the environmental and social management plan (ESMP) as well as the proposed environmental and social support measures.

Methodology used for achieving the ESIA

The multidisciplinary team that carried out this study used the ethnographic approach coupled with several techniques, in particular: the documentary technique, the direct observation technique, semi-structured interviews, the focus group and interviews with the public in order to collect information and opinions from all stakeholders.

This participatory approach thus made it possible to gradually integrate the opinions and arguments of the various actors. The work plan adopted was structured around the following areas of intervention:

- Analysis of project documents and other strategic and planning documents at national and local level;
- Visits to the site and its surroundings and technical analysis of the receiving environment (topography, pedology, hydrography, etc.), to assess the environmental, socio-economic and cultural issues of the project area;
- Surveys of populations and other beneficiary target groups to collect their opinions, concerns, expectations and fears in relation to the project;
- Meetings with the institutional actors mainly concerned by the project, particularly at the provincial and local levels;
- Analysis of information and drafting of the ESIA report.

Promoter of the study and the Office in charge of achieving the ESIA

The promoter of this project related to building a data center (Data Center) in the city of Kinshasa is engaged to comply with the law, legal texts as well as national environmental requirements in force in the Democratic Republic of Congo, has entrusted the Office specializing in environmental and social assessments, Environmental and Marketing Consulting EMC Sarl, with the preparation of this Environmental and Social Impact Study.

Institutional frame

From the institutional point of view, it is the MITPR which plays the key role in the implementation of this project, through the regulatory authority for posts and telecommunications. In addition, the Ministry of Environment and Sustainable Development (MEDD) is the State structure responsible for environmental management and environmental and social impact studies (ESIA) through the Congolese Agency for Environment (ACE).

In legal terms, the basis for the requirement to carry out a prior Environmental and Social Impact Assessment (ESIA) to ensure the normative compliance of a project in environmental matters is Law No. 11/009 of the 09 July 2011 laying down fundamental principles relating to the protection of the environment. This is supplemented by implementing measures such as Decree No. 14/019 02 August 2014 laying down the operating rules of procedural mechanisms for environmental protection. In addition, other national texts were visited, including the Labor Code.

Technical description of the project

The planned project concern building a connected data center which will serve as the basis for the African digital economy. These centers will be built on a total area of 6500m².

The main steps will be as follows:

- The administrative phase at the start of the work
- The building phase
- The transversal phase: Work monitoring
- The closing phase of the construction site

Description of the area receiving the project

The project that is the subject of this environmental and social impact study concerns the building a data center (Data Center) in the municipality of Limete at number 9/11, Boulevard Lumumba, 12th Rue Limete Industriel, ^{city} province of Kinshasa

The main characteristics of the project area, which is the city-province of Kinshasa, are as follows:

The climate of the project area is of the humid tropical type, with an alternation of eight (8) months of rainy season and four (4) months of dry season. It should be noted that during the rainy season it is hot, while during the dry season it is cold. The average daily temperature varies little throughout the year: from 23 to 25° in the dry season and from 26 to 27° in the rainy season, on average it is around 25°C. However, recent studies have just shown that the last decade has seen an average increase of 2.1°C in Kinshasa, both in the rainy season and in the dry season.

The vegetation of Kinshasa consisted of forests, savannahs and semi-aquatic and aquatic formations of the Pool Malebo valleys (COMPERE, 1970 and PAIN, 1984. The fauna of the city of Kinshasa is very little diversified. It includes species that were formerly abundant but which, nowadays, are subject to the effect of anthropic activities, major causes of destruction of the habitats of animals. Among the most frequent species of fauna, we find birds and fish.

The project being in a concession, this construction does not encroach on any private property, nor on any property belonging to an individual.

Variant analysis

This part has established the possibilities of choosing variants that are advantageous on the technical, environmental and social levels.

Two main variants were weighed in the process of design, study and implementation of this project. This is the “ *without project* ” and “ *with project* ” variant . An analysis based on technical, socio-economic and environmental considerations was carried out to support the choice of the project.

The "without project" alternative is a situation which makes it possible to maintain the current configuration on the architectural level, with the consequence of the non-existence of a network of connected data centers , as well as the dilapidation of the site.

On the other hand, the implementation of the project will have a proven impact in terms of positive impacts in the initiatives for building a connected data center whose implementation will offer the following opportunities: (i) the basic management of Africa's Connected Data ; (ii) providing the technical bases for innovation ; (iii) supporting the growth and digitization of the African economy ; (iv) landscaping and aesthetic improvement of the site.

Conclusion

Taking into account the above-mentioned reasons, building a data center connected to this site at 12th Street is imperative and a priority. Thus, the client chooses the alternative of carrying

out the work as soon as possible. To this end, this ESIA has identified and analyzed the potential impacts related to the works and has proposed the various measures of the negative effects and impacts of the project.

Identification, analysis and evaluation of impacts

After the description of the immediate environment of insertion of the project, the correlation of the activities associated with the works and the elements of the environment made it possible to identify the interactions likely to generate the impacts which could result from the implementation of the project.

The most significant positive impacts during the works are the creation of direct and indirect jobs, the development of small income-generating activities around the project area due to the presence of workers on the site, the improvement of the quality of the telecommunications service, the fluidity of telecommunications services.

Regarding the negative impacts, they will be observed in different phases of the project:

- *During the pre - construction of the site:* the alteration of the quality of the air in the environment, the modification of the structure of the soil, the pollution of the soil as well as work and traffic accidents due to the development of the site, transportation and storage of equipment and other materials;
- *During the construction of the project :* alteration of the quality of the air in the environment, modification of the texture and structure of the soil, soil pollution, visual discomfort, noise pollution, respiratory diseases, bodily injuries, risk of spreading HIV/AIDS, GBV risk including SEA/ SH, COVID-19 risk. job creation as well as work and traffic accidents;
- *During project operation:* Risks of transmission of STIs/HIV AIDS;
Risk related to GBV, including EAS/HS, soil pollution, noise pollution and work and traffic accidents following the operation of infrastructure and equipment, the operation of the network by users, the various interventions techniques (maintenance and repair) as well as dismantling (end of life and lifting of cables if necessary)

Environmental and Social Management Plan

The environmental and social management plan makes it possible to enact corrective or improvement measures according to the potential impacts identified. The following environmental and social measures have been proposed to mitigate the negative impacts:

During pre-construction:

- Develop a dust and other atmospheric emissions control plan;
- Water the site, cover vehicles transporting materials likely to generate dust with a tarpaulin, respect the recommended speed for driving in a given area, maintain vehicle engines according to the schedule established in the garage;
- Circumscribe and limit the movements of machinery, please backfill stripped surfaces, avoid using very heavy machinery, restore the base camp;
- Collect and treat liquid and solid waste, place bins with lids to dispose of waste;
- Avoid putting the materials in disorder;
- Recruit local labor, favor local labor in the event of equal competence, respect the clauses of contracts with employees;

- Provide and require workers to wear Personal Protective Equipment, set up an emergency evacuation plan in the event of an accident, train workers on the implementation of safety rules during work.

During construction:

- Develop a noise control plan;
- Develop a dust and other atmospheric emissions control plan;
- Water the site, cover vehicles transporting materials likely to generate dust with a tarpaulin, respect the recommended speed for driving in a given area, maintain vehicle engines according to the schedule established in the garage;
- Stop the engines of parked vehicles, carry out maintenance and control of vehicles respecting the calendar time or mileage;
- Circumscribe and limit the movements of machinery, respect the recommendations made by the engineers during the geotechnical studies of the soil, plant the lawn around the sites to avoid erosion phenomena;
- Avoid the rejection of solid and liquid waste on the ground, place bins on the site;
- Properly classify the materials and avoid putting them in disorder, properly park the vehicles transporting the materials;
- Significantly reduce noise, sprinkle water in work areas to prevent dust from rising, provide appropriate PPE to workers handling cement;
- Organize awareness raising on HIV/AIDS with NGOs specializing in the subject for workers and the local population;
- Ensure compliance with internal regulations and have staff sign the code of good conduct related to GBV/EAS/SH;
- Sensitize women against the risk of GBV and domestic violence ;
- Organize seminars to upgrade the workforce used; use local labor for all work, widely advertise the positions and qualifications sought;
- Emergency evacuation to the nearest health center the various cases of accident, set up a follow-up team for the implementation of health and safety precautions on the site, require the wearing of protective equipment (PPE), put up a security fence to prevent access by unauthorized persons to the work site.

During operation:

- Instruct the maintenance teams not to dump polluting food on the ground, instruct the personnel who frequent the work site on the respect and practice of hygiene, not to leave/abandon electronic equipment on the ground;
- Develop the Hazardous Products Management Plan;
- Turning off the engines of parked or stationary machinery and vehicles in inhabited areas, ensuring regular maintenance of machinery according to the manufacturer's instructions;
- Perpetuate the merits of this project;
- Use personal and collective protective equipment if necessary (PPE and CPE, safety belts) during antenna maintenance work at height, train the agents in charge of regular maintenance on safety at work, respect the safety instructions supplied by the manufacturers of the various equipment.

The application of the measures retained in the ESMP must be implemented by the company and ensured by its environmentalist or a specialized office for the implementation of environmental and social clauses.

All these measures are contained in the ESMP, the monitoring and implementation of which involves an estimated cost of 105,000 USD (one hundred and five thousand US dollars), as for the costs of monitoring the ACE, they are set in accordance with the Order setting follow-up costs .

Public consultation

The public consultation report demonstrates that people living near the sites have enthusiastically welcome the advent of this project. Thus, it will be necessary to take into account the opinions and grievances mentioned above.

The analysis of the above results makes it possible to draw certain conclusions on the perception of the populations and groups consulted in relation to the project to erect the Data Center of the RAXIO RDC Company. We can cite, among others, that:

- The project is a social necessity and comes at the right time given the scale of the proliferation of telecommunications activities.
- The populations see the project as a priority in the field of local economic development.
- The use of local labor should strengthen the fight against poverty and promote social acceptance of the project in the community;
- Taking into account mitigation measures with the involvement of all project stakeholders would be an achievement;
- The system of compensation and compensation for losses, according to local authorities, should be selective to discourage anarchy and, in turn, strengthen the authority of the state.

Conclusion

This project raises a lot of expectations on the one hand, from the Government of the Democratic Republic of Congo and Provincial of Kinshasa in general and on the other hand, from the population of Kinshasa in particular in order to solve the problems of digital communication and manage them. in an appropriate way.

From the above, it is clear that the positive impacts that this project will generate at the socio-economic level are inestimable compared to the negative environmental and social setbacks which, moreover, are completely controllable. Hence, we can say that this project can be deployed taking into account the requirements of this Environmental and Social Impact Assessment (ESIA) in order to integrate harmoniously into its receiving environment.

As a result, the RAXIO RDC Company is obliged to ensure the implementation of all the environmental measures recommended in the ESMP, so as to prevent all environmental risks that could affect the viability of the project .