



# Cumulative Impact Assessment for the Ganjuwa Solar Project, Nigeria



May 2017

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Ref: 0393474/UK60

Prepared by Environmental Resources Management (ERM)

For and on behalf of Environmental Resources Management
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Date: 18th May 2017

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1.1 INTRODUCTION AND METHODOLOGY

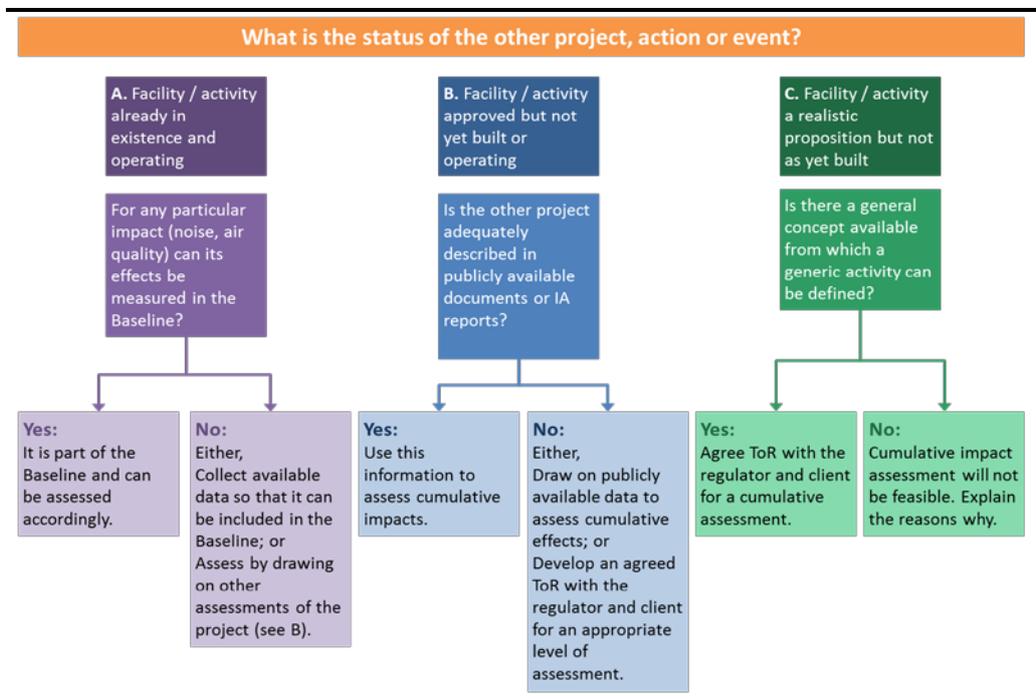
Cumulative impacts are those that arise as a result of an impact of the Project when added to impacts from other projects or developments. The assessment extends to potential interactions with Project activities and other activities. Cumulative impacts may have the potential to arise during any stage of the Project.

The Area of Influence (AoI) as regards cumulative impacts as defined under IFC PS 1 encompasses:

*“...cumulative impacts that result from the incremental impact, on areas or resources used or directly impacted by the project, from other existing, planned or reasonably defined developments at the time the risks and impacts identification process is conducted. Cumulative impacts are limited to those impacts generally recognized as important on the basis of scientific concerns and/or concerns from Affected Communities”.*

The process for assessing how cumulative impacts from other projects have been assessed is provided in Figure 1.1.

Figure 1.1 How Cumulative Impacts from Other Projects are Considered



The ESIA<sup>(1)</sup> identified and assessed impacts on a range of topics within the AoI including:

- air quality;
- noise;
- soil and land use;
- surface water;
- groundwater;
- vegetation and wildlife;
- cultural resources;
- visual amenity;
- traffic;
- waste management;
- socioeconomic resources; and
- health and safety.

With the exception of traffic, all the impacts assessed in the ESIA for the above topics occur within the Project's AoI. The ESIA considered the AoI of the Project to be within 2 km of the Project site and 1 km of the transmission line.

The ESIA concludes that overall these impacts of the Project are minimal and will be managed by appropriate mitigation measures so that all residual impacts are managed to as low as reasonably practicable (ALARP) levels.

## 1.2 *CUMULATIVE IMPACT ASSESSMENT*

The ESIA did not include an assessment of cumulative impacts. However, during work on the Resettlement Action Plan (RAP), the following projects were identified as potentially having cumulative impacts with the Project:

- Bauchi Campus, Bauchi State University;
- Ashaka Cement Plant Expansion; and
- Bauchi State Fadama III Project.

No further projects have been identified from publically available data.

It should be noted that none of the identified projects are within the AoI defined in the ESIA and are all operational. Considering each of the impacts outlined in the ESIA according to the topics listed above (air, noise, water, etc) and the distance of these projects from the AoI, cumulative impacts from activities that are planned to occur at the Project site are not expected. This is discussed below for each of the identified projects.

### 1.2.1 *Bauchi Campus of Bauchi State University*

The construction of the Bauchi campus was completed in 2016. The operation of the campus can reasonably be expected to increase traffic in its local area (within the Bauchi Township) due to commuting students and staff. The university is expected to have approximately 2,500 students, approximately a third of which will be based at the Bauchi campus. It is possible that the

(1) EnvironQuest. (2014). Final Environmental and Social Impact Assessment Report for the Proposed 100 MW Solar Independent Power Plant and 18 km Transmission Line Project, Ganjuwa Local Government Area, Bauchi State by Nigerian Solar Capital Partners.

university traffic (which was not assessed in the ESIA) and project related traffic could cumulatively impact on other road users.

However, the Project is located approximately 20 km from central Bauchi along the Kari-Bauchi Expressway. Even if project related traffic were to use the same roads as those commuting to the campus, it is unlikely to be at levels that are noticeable or would cause significant disruption to other road users, given the capacity of the road (as an inter-state expressway) and that the project is located away from built-up areas where existing traffic may be present. Moreover, a traffic management plan will be implemented by the Project to avoid busy periods. *Figure 1.2* shows pictures of the campus.

Other impacts such as those on air quality, vegetation / wildlife or the noise environment are not considered given the distance between the campus and the Project.

**Figure 1.2** *Bauchi Campus of the University of Bauchi*



During consultation on the RAP it was noted that there was a grievance associated with the land acquisition / resettlement associated with the construction of the university campus. Some households were not happy with the compensation they received and this concern has been raised with the Project as affected communities did not want the same to happen to them. When compensation was given for the development of the university campus, all of it was cash based, so there were expectations that the Project would do the same. However, it should be noted that the communities affected by the university were not the same (they are located over 20 km away) as those affected by the Project so cumulative impacts are not expected.

### **1.2.2** *Ashaka Cement Plant in Gombe State*

The expansion of the Ashaka (Lafarge Africa) cement plant in Gombe State includes the construction of a 16 MW captive power plant intended to provide a reliable source of energy so that the plant can increase its cement production capacity to 1Mt/yr. The cement plant is located approximately 170 km east of the Project and is not located along the same major roads. No cumulative

impacts, either direct or indirect, are expected given the distance between the two projects during its construction or operation.

### **1.2.3 *Bauchi State Fadama III Project***

The Fadama III Project is intended to provide investment to land users to increase incomes and provide sustainable water resources. Land users are encouraged to farm cassava, rice, sorghum and horticultural crops so it can be sold into an organised market in select Nigerian states. One of the Fadama III Project locations is in Bauchi State but outside of the Project AoI. The Fadama III Project has periodic investments to increase the number of beneficiaries. The most recent investment was by the World Bank in 2016. As the Bauchi State location is already operating and is intended to improve the livelihoods of nearby communities it is not expected to have cumulative impacts with the Project.

### **1.2.4 *Other Projects***

There are several small scale projects located along the Kari-Bauchi Expressway but outside of the Project AoI. These include small stone crushing / artisanal mining operations and agricultural projects. There is the potential for additional projects or enterprises to be built or start near to the Project or for existing projects to be expanded. There is not sufficient information to be able to assess the cumulative impact of these operations. However, should new projects be of a similar scale to those existing or be an incremental growth in capacity, then significant cumulative impacts would not be expected.

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