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Quick Scan (Review) of the Western Uganda Hydropower and Rural Electrification Project, Environmental and Social Impact Assessment (ESIA)



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Advice of the Secretariat

To RVO

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From The Netherlands Commission for Environmental Assessment (The NCEA)

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Subject Quick Scan (Review) of the Western Uganda Hydropower and Rural Electrification Project, Environmental and Social Impact Assessment (ESIA) Interim Report Project (ORIO11/UG/21) in Uganda, July 2015

By: the Secretariat of the Netherlands Commission for Environmental Assessment – Ms Ineke Steinhauer, Mr. Reinoud Post

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1. Introduction

An Interim Environmental and Social Impact Assessment (EIA) report has been prepared for the Western Uganda Hydropower and Rural Electrification Project. The Ugandan Ministry of Finance Planning and Economic Development (MoFPED) obtained a Grant from the ORIO Infrastructure Development Fund of the Government of Netherlands.

The project aims at developing a cluster of 10 mini-hydropower plants of a capacity between 0.5MW to 2.0 MW and rural electrification systems to connect about 347,000 people in Western Uganda. The Project will be implemented in three phases; Phase I – the Development Phase which includes Feasibility Studies, Phase II will comprise the construction and commissioning of the plants as well as training of the O&M staff and Phase III is the Operation and Maintenance phase. The project will be implemented by the Uganda Ministry of Energy and Mineral Development (MEMD) as the Competent Authority and the Uganda Energy Credit Capitalisation Company (UECCC) as the Lead Implementing Agency.

The main projects elements are (summary information from call, not included in ESIA):

- 10 micro-hydropower plants (dams and hydropower generation unit) with total capacity of 6.2 megawatt.
- Civil works: At each power plant a small building will be erected for housing electrical components, switchboards, spare parts and an operator panel, with possibly some road construction, buildings and site works.
- A 10kV high-voltage electricity transport and 415V low-voltage-distribution network.
- House connections: From the high voltage transmission line and step-down transformers, a low voltage distribution network will further bring the power to the households (26,958 connections, serving 140,180 people).
- Grid Connection: The mini-grid can be connected to the main grid. The feasibility of this depends on the distance and power rating.
- Training and Technical Assistance for 3 years for the hydropower units, dams, electrical systems maintenance: 90 people will be trained in various subjects on various levels.
- Operations and maintenance.

The electrical transmission and distribution to the households in the project area is included in the project. However it is not part of the ORIO grant, because household connections are (to some extent) provided by the Ugandan Rural Electrification Agency. The systems consist of several mini-grids each having an independent hydropower unit. A maximum number of these mini-grids will be connected to the national grid. It is assumed that sites within 20 km from the national grid may be connected to it. This would result in 7 of the 10 mini-grids being connected to the national grid. The mini-grids would connect 140,180 people. Due to connection to the main grid and fully utilizing the idle capacity during off-peak hours another 206,820 people could be served. This would provide a total of 347,000 people (67,000 households) with electricity.

In principle, the project consists of 10¹ stand alone projects, but is considered as one integrated project, with two different hydro station types (isolated and connected grids).

¹ The interim ESIA seems to describe 9 sites only.

1.1 Approach to this Quick Scan

The RVO, who manages the ORIO fund, has requested that the Netherlands Commission for Environmental Assessment (NCEA) review the interim ESIA report, with the aim to provide additional guidelines and recommendations for the final draft ESIA report.

Usually, the NCEA reviews an ESIA report as a stand-alone document, meaning that all information necessary for decision making should be contained in the ESIA report, without requiring the reader to consult other documentation to complement gaps in information in the EIA itself. However, in this particular case, the summary information provided for the call in 2011 was also considered, as this provided some complementary information on the project activities, which was lacking in the interim ESIA report.

Aside from informing RVO decision-making, this EIA review advice can also be used in decision-making by the local authorities (National Environmental Management Authority for (environmental) licensing).

The NCEA does not express an opinion on the project itself, but focuses on the quality and completeness of the interim ESIA. The NCEA has limited itself to a Quick Scan of the interim ESIA. This advice is a so-called NCEA 'Advice of the secretariat' and has been prepared based on a desk review only, and therefore does not constitute an in-depth technical review of the ESIA report, nor have the contents of the EIA been verified 'on the ground' in Uganda. The advice is based on the knowledge available at the NCEA's secretariat.

In the following chapters, the NCEA first presents key observations in relation to the Ugandan EIA requirements and the technical contents of the interim ESIA report (chapter 2). In chapter 3, the NCEA elaborates in more detail how conclusions have been reached, by providing observations on each chapter of the interim ESIA report.

2. Key observations

2.1 Conformity with national EIA procedure

In Uganda, currently the National Environmental Act and the EIA regulations are being revised. Final drafts are now (2015) available for Cabinet approval. Until then the 'old' EIA regulations still apply. According to those regulations, the developer should submit a project brief, outlining basic information on the proposed project/activity to the National Environmental Management Authority (NEMA). Based on this project brief, NEMA in consultation with an appropriate lead agency(ies) carries out screening to determine the level of EIA required, depending on whether the project has or does not have significant impacts.

The National Environmental Statute, 1995, schedule 3, lists the projects for which an EIA shall be carried out. The list contains several sections which trigger an EIA for this project (See also NCEA screening advice of Dec. 2011). Currently indeed an ESIA is being conducted. The

interim ESIA report however does not provide evidence of consultation with NEMA. This is required because the EIA regulation prescribes that *'An environmental impact study shall be conducted in accordance with terms of reference developed by the developer in consultation with the Authority and the lead agency'* and *'The developer, shall on the approval of the terms of reference under regulation 10 of these regulations, submit to Executive Director the names and qualifications of the persons who shall undertake the study'*.

■ The NCEA advises to double check with NEMA if the project is following the appropriate procedural steps, and to confirm the application of the full EIA requirement. Also, the NCEA advises to attach the Terms of Reference (chapter 2.1 of the interim ESIA states *'The methods used covered the scope of project activities according to the Terms of Reference (ToR) for the ESIA study and in the approval letter of the ToRs and any other emerging issues'*) and show evidence of approval by NEMA (p. 153 makes reference to this approval, but it is not attached to the draft ESIA). Usually such approval will be communicated by NEMA through a formal letter to the developer and may also include some specific guidelines or requirements. In addition, NEMA has developed EIA guidelines for the Energy Sector in 2004 (140 p.). These contain chapters on e.g. (i) legal and policy framework, (ii) the EIA process as applicable in Uganda for the energy sector, (iii) possible impacts and mitigations measures for 14 types of energy projects, amongst which hydropower and electricity transmission. Also guidelines for public consultation are given as well as guidelines for resettlement and compensation. The NCEA advises to use these sector guidelines in the further development of the ESIA.

2.2 Quality of Technical content

Clearly this interim ESIA is not yet complete. Main elements which are still missing are:

- The project rationale is not complete:
 - no justification of choice of power generation mode (why not solar, wind, geothermic), nor any reference to possible mode choice made in the Ugandan energy policy.
 - no reference to this project being mentioned in the Rural Electrification Plan 2013–2022.
- The project description is not complete
 - it does not become clear how the selection for the sites was done and whether and how environmentally sensitive areas were taken into consideration;
 - the technology used (run off river) is not indicated
 - % of river flow used is not mentioned
 - the specific interventions at each of the 10 (or 9?) locations are not described, e.g. in terms of technical design.
 - the production and consumer price of Kwh is not given.
This information is essential to the more detailed impact assessments which are still to follow, and will be the basis for a sound Environmental (and Social) Management Plan and Monitoring Plan (these are currently still lacking).
- Public consultation has reportedly taken place but has not been documented and is therefore not verifiable.
- The baseline information is rather comprehensive, but needs to be presented in a more accessible manner. There is a disbalance between socio-economic information and

environmental information. E.g. there is no baseline for species that will suffer most impacts (fish).

However, as this document is an interim ESIA, the lacunas above need not be remedied in this report, but can be addressed in a subsequent full ESIA(s).

- The NCEA recommends that the final ESIA report (s) provide additional information to address, as a minimum, the above mentioned issues.

3. Detailed observations per chapter

The structure of this chapter in the NCEA advice will follow the structure of the interim ESIA report. It is clear that the chapters of the interim ESIA report do not follow the (sequence of) prescribed contents of the an Environmental Impact Statement according to Ugandan EIA regulations.

- The NCEA therefore recommends to re-write the final draft ESIA report in line with the Ugandan requirements.

3.1 Introduction (background and objective of the ESIA)

The project activities itself are only described in very general terms. This chapter of the ESIA contains a little map in which the locations of HEPP 1 to 10 are (roughly) presented. But there is no information in the interim ESIA on which activities will happen at each of these 10 locations. The project rationale is somewhat better described, including an explanation how the project is in line with Ugandan policies regarding renewable energy and rural electrification. There is however no reference to the project being foreseen in the rural electrification plan 2013–2022 (RESP) . What remains unclear is the justification for the number and location of the proposed sites. This is important, for instance in case of cumulative effects of multiple dams within one river basin.

- The NCEA recommends to rewrite the introduction, clearly explaining what the project is all about, including the proposed activities, interventions and a justification of the number and locations of the proposed sites, including site selection criteria and site selection process. This is needed in order to be able to develop alternative sites or designs, but also to assess impacts at each of the individual locations. Otherwise a reader of the interim ESIA report will have a limited understanding of the activity. It is also recommended to include maps or drawings of the designs of the activities. The proponent should pay particular attention to showing whether and how protected areas or environmentally sensitive areas have been considered, or demonstrate that these will not be affected.

The interim ESIA does not provide any information on alternatives. At the very least, the ‘no-project’ or ‘business as usual’ scenario needs to be elaborated in an assessment.

- The NCEA recommends to describe the no-project alternative or scenario in the final ESIA as well as any other relevant alternatives.

3.2 Methodology used to conduct the ESIA

Chapter 2 of the interim ESIA describes the project methodology in 5 steps and explains about activities undertaken, such as reconnaissance visits, literature review (references?), water and soil sampling and analysis and inventory of flora and fauna. The hydrological assessment apparently has not yet been completed and collection of more river data on all proposed sites is still ongoing. Also some information is provided on community and stakeholders consultations. The interim ESIA provides information on e.g. results of water samplings (e.g. Annex IV) and gives lists of flora and fauna (e.g. Annex III), but has not yet given an analysis of these results. The same applies to the community consultations: Annex I gives lists of stakeholders consulted, but does not provide interview minutes and notes, stakeholder concerns, fears and analysis, mitigation measures, and legislative concerns, gaps and alternatives as indicated.

- The NCEA recommends to include the above information in the final ESIA.

3.3 Results from the socio-economic study

This chapter of the interim ESIA gives largely similar information for each of the 10 sites, according to the following categorisation, and illustrated with photos. NB. The description for HEPP 6 seems to be missing.

- Administrative Set-up and Location (sometimes a map of the district is included)
- Demography and Population
- Population and Settlement Pattern on Project Area
- Household Characteristics and Ethnicity
- Land Use (Pattern)
- Land Tenure
- Livelihood-Economic Activities (sometimes gender specifications given)
- Housing/Residence Conditions
- Social Services (split into Education and sports and Literacy Levels, Transport and Communication, Other Means of Communication in Project Area, Access to Safe water and Sanitation, Sources of energy, Health and HIV/AIDS and Civil Society and Development Partners and Environmental education).

Each site description concludes with an overview of anticipated impacts.

The positive ones are generally described in terms of:

- Improvement in use of existing development opportunities due to access to efficient energy sources (For 2 sites: Improvement of electricity supply toTown)
- Improvement of electricity supply to project area and reduction of production costs (1 site only)
- Reduced Load scheduling/shedding in the District
- Creation of employment opportunities
- Improvement in Household (and Business) Incomes
- Improvement in governance and public administration
- Improvement in social services delivery and supervision

- Improved Standards of Living (or Public Health Improvement and Academic Learning Environment Improvement)

The negative impacts are listed as follows:

- Loss of access to arable and grazing land (or Loss of cropping and grazing land is likely lead to reduced household incomes).
- Food Insecurity
- Loss of household Income
- Physical displacement (and resettlement)
- Impacts on surface water supply and safety
- Increased traffic and injury
- Increased spread of HIV/AIDs and in-migration

And for one or some sites only:

- Potential for Increased Landslides
- Impact on community tourism
- Loss of household and business residences/structures
- Impact economic activities and access to economic services
- Impacts on cultural resources and practices
- Restricted access to community forest reserves/fuel supply source
- Asset ownership and other welfare indicators

The NCEA observes that the socio-economic data provided for each of the individual sites contain quite some information which is not really relevant to this project: for instance data on schools, health services, education and sports services. This makes it difficult for the reader of the draft ESIA report to focus on those issues which are relevant for project design, alternatives and impacts thereof. On the other hand, some information is still missing, e.g. for HEPP 1, there is mention of the need for a Resettlement Action Plan and livelihood restoration, but ‘the extent and number of people still have to be determined’.

On the other hand, the information provided on the positive and negative impacts shows quite some overlap for each of the 10 sites: the texts are in many cases exactly the same, which is logical because the impacts are in most cases associated with the project activity (= mini-hydro). There is only some variation in impacts, where the location and surroundings have particular characteristics. However, the large amount of information on impacts hampers the accessibility of the draft ESIA report.

Finally, some impacts are assessed as positive, for instance better access as a result of road construction, whereas the impacts can also be assessed as being negative (opening up of vulnerable areas which were previously not or hardly accessible)

■ The NCEA recommends to delete information which is not relevant to this project² and add information which is still lacking (e.g. on HEPP 6 (?) and on data relevant for resettlement and livelihood restoration).

■ In addition, the NCEA recommends to consider presenting the information on positive and negative impacts in tabular form, by listing the kind of impacts on the Y-axis and the 10

² The NCEA has not been able to check the ToR for the ESIA: in case the ToR ask for extensive baseline descriptions, the NCEA recommendation to skip superfluous information may not be applicable

sites on the X-axis. By simply ticking the relevant boxes, the information is presented in a much more accessible way.

3.4 Policy, legal and institutional framework

The NCEA observes that this chapter starts with a table describing the policy framework relevant to this project by providing the name of the policy, a summary of the key issues and a remark column indicating whether and how the project will respond to these issues. This leads to remarks like: 'Women will be given equal opportunities during the construction and operation of dams'. Such statements will have to be supplemented with evidence or need to be closely monitored during project implementation.

The next table is on 'Legal and regulatory framework relating to the project', which only gives some information on relevant provisions on each of these laws or regulations, but gives no further detail what conditions or restrictions these pose to the project.

Table 50 lists the IFC performance standards and shows whether and how the project is in compliance with each of these standards. Table 51 contains relevant international treaties and conventions, with remarks like: 'applicable and the developer will comply'.

The chapter continues with a description of the administrative structure and the structure of NEMA and the EIA procedure, but fails to make a translation of the roles of each of these organizations and the implications of the EIA procedures for this particular project.

- The NCEA recommends to put more effort in demonstrating how the project meets or contributes to the legislative and regulatory requirements. In particular, the RESP should ideally make reference to this particular project. If this is not the case, then this chapter of the ESIA should clearly demonstrate how the project contributes to the goals of the RESP. The same recommendation holds true for the institutional framework and EIA requirements.

3.5 Baseline environmental conditions

This chapter provides about half a page environmental information for each of the sites (sometimes with a photo for illustration). This seems an initial description only and is a bit out of proportion as compared to results from the socio-economic study. There is no baseline information yet for e.g. fish species, which will probably suffer most impacts as a result of the project.

- The NCEA expects that this chapter still will be further elaborated in the final ESIA. The field notes on each site (Annex II) also contain relevant information which can be used.

There is no information yet in the draft ESIA on environmental and social impacts and proposed mitigation measures. Neither there is a chapter on an Environmental and Social Management Plan and monitoring programme.

- The NCEA recommends to include these chapters in the final ESIA with information on what is expected in each of locations specifically and what mitigation measures should be taken at that site specifically. This could also lead to some restrictions for the project activities, for instance that no construction activities can take place during the breeding season/fish spawning. The NCEA also recommends to structure the information on impacts in this chapter, as follows:
 - Start with Identification of impacts, listing the potential impacts of this project;
 - Continue with a step by step assessment of each of the identified impacts, including a justification of the assessment conclusions. Provide an overview of identified impacts and their importance;
 - Continue with identifying mitigation measures for each of the impacts;
 - Then conclude with a summary table allowing easy overview of impacts, their importance and ways to mitigate them.

- The NCEA recommends the further elaboration and detailing of both the Environmental and Social Management plan and monitoring plan. These should be presented in a form allowing 1) easy consideration of the acceptability of the proposed project for the decision maker, knowing the residual impacts and 2) once approved, straight-forward implementation and monitoring, including designation of the organisations executing each measure, timelines and the necessary budget requirements.

3.6 Status of progress and planning for the remaining tasks

This chapters explains that ESIA reports will be developed for each individual location. It remains however unclear how this draft ESIA relates to those 10 (or 9) individual ESIA's. Also reference is made to further consultations with NEMA as to whether the electricity transmission lines can be part of the individual ESIA's. NCEA expects this to be further clarified in the final ESIA (s)

3.7 Interim conclusions

No observations, as these are interim conclusions only.