ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN FOR SOCIAL INTERVENTIONS (LIVESTOCK WATERPOINT, HAND-PUMP, BOREHOLES) IN KRIS AND HVIS

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FEBRUARY 2024

FINAL REPORT

Transforming Irrigation Management in Nigeria (TRIMING) Project
Federal Ministry of Water Resources

EXECUTIVE SUMMARY

ES 1: Introduction

In its desire to achieve sustainable growth in agricultural production and productivity, the Federal Government obtained a credit of US$495.3 million from the International Development Association (IDA) towards the cost of the Transforming Irrigation Management in Nigeria (TRIMING) Project.

The Federal Ministry of Water Resources with support from the World Bank is implementing the TRIMING Project, a seven-year program. Part of the Project proceeds will be applied towards social intervention such as the provision of livestock crossings, watering points, and hand pump boreholes at Kano River Irrigation Scheme and Hadejia Valley Irrigation Scheme located in Kano and Jigawa states respectively. Both schemes are owned and managed by the FMWR through the Hadejia Jama'are River Basin Development Authority (HJRB DA) which is part of the Hadejia Jama'are Komadugu Yobe (HJKY) Basin.

Rationale for Assessment

The environmental and social screening conducted identified that no cumulative, unprecedented and large-scale adverse impacts are envisaged to result from the activities that will be financed under this project, hence an Environmental and Social Management Plan was suggested. This was further assessed by the Operational Policy (OP 4.01) which provided risk classification and placed interventions as category B in accordance with with the Environmental Assessment Policy of the World Bank. Although, some adverse impacts are expected in relation to construction of livestock crossing, water troughs, hand-pumps boreholes such as generation of non-hazardous waste, fugitive dust, soil compaction as well as construction wastes. Other impacts could arise from noise pollution, accident from movement of equipment and materials to site, occupational health & safety risks, risks associated with labour influx, Social Vices, Sexual Exploitation and Abuse/Sexual Harassment (SEA/SH) due to labour influx.

In compliance with the Bank Safeguard Policy, the less significant environmental and social impacts that are likely to occur, can be reduced or minimized through compliance with appropriate environmental and social mitigation measures. At this instance, the appropriate safeguard instrument to use here is the Environmental and Social Management Plan (ESMP). This ESMP has been prepared to guide both KRIS and HVIS Project Offices in ensuring that project implementation will avoid negative environmental and social impacts, reduce or mitigate them to acceptable levels. The ESMP contains mitigation measures, roles/responsibilities, and costs, as well as a defined monitoring plan with monitoring responsibilities and costs.

Scope of the Assignment

In fulfilling the objectives of the ESMP, the purview of this assignment is mainly to identify site-specific risks and proffer corresponding mitigation measures using the hierarchy of controls; identify and sensitize the various stakeholders while developing a stakeholders mapping. The assignment also covered the following areas: review of all relevant document; describe and establish the environmental and social baseline; develop plans to mitigate environmental, social and occupational hazards; assist in getting the needed information to project affected persons while ensuring inclusion.

Overview of Project Activities

The social intervention works are located within KRIS and HVIS under management authority of the Hadejia-Jama'are-Komadugu-Yobe (HJKY) River Basin, North-Eastern part of Nigeria. The Basin has a total area of about 84,000 km^2 traversing six states namely Bauchi, Borno, Jigawa, Kano, Plateau and Yobe. The KRIS is situated in Kano State while HVIS is in Jigawa State.

Sub-activities in Project Commanding Area

Description of Works	Quantity
KRIS	
Construction of watering points-	8
Construction of Livestock crossing	12
Construction of hand-pump boreholes	4
HVIS	
Construction of watering points-	2
Construction of Livestock Crossing	4
Construction of hand-pump boreholes	7

ES 2: Policy, Legal and Institutional Framework

This ESMP is prepared in consonance with relevant Kano and Jigawa States and Federal Government environmental policies, laws, regulations, and the World Bank OP. This includes the National Policy on the Environment, Environmental Impact Assessment (EIA) Act, National Gender Policy, Kano State Environmental Protection Laws, State social protection policies, World Bank Operational Policies applicable to the project amongst others as detailed in chapter 2 of this report.

ES 3: Description of Project Environment and Baseline Assessment

KRIS is located about 30km southwest of Kano, the capital city of Kano State. KRIS is located within Beneji, Bunkure, Kura and Rano Local Government Areas of Kano State, with Project administrative Headquarters located at Kura (KRIS West branch) and Bunkure (KRIS East Branch). The Kano River Irrigation Scheme (KRIS) includes the Kano River, Phase I and Phase II,

The scheme is divided into two phases; Phase 1 was originally designed with a capacity of 22,000 ha of land, out of which 13,890 ha have been fully developed: Phase 2 was shelved after feasibility study established that irrigation water supply by pumping from the Hadejia River was not feasible. An additional 1,087 ha is being developed covering only 42 sectors out of 50 sectors under Phase 1.

The Hadejia Valley Irrigation Scheme (HVIS) is located about 150 km east of Kano City in Auyo LGA of Jigawa State and about 95km northeast of Dutse, the state capital. HVIS encompasses four LGAs in Jigawa state namely: Auyo; Guri; Hadejia; and Kiri-Kasamma area as seen in figure 2 below. The scheme is operated by Hadejia-jama'are River Sub-Basin Development Authority with head office in kano and zonal office in Hadejia. HVIS is divided into Phase 1 and 2: Phase 1 with an initial plan to develop 12,500 ha of which Stage 1 (the northern part) covers 6,175 ha and Stage 2 (the southern part) covers 6,325 ha. Only Stage 1 has been developed covering a total area of 5,286 ha with an additional area of 459 ha is being developed which covers the four sectors initially left uncompleted.

ES 4: Summary of Potential Risks & Impacts

Positive Socio-Economic Impacts

Creation of Employment Opportunities: There are clear indications that construction of Cattle Crossing and Hand pump at the Hadeija Irrigation Scheme at Hadeija and Kura irrigation communities will have tremendous positive impacts on the lives and livelihood of people in the areaas well as on the environment and ecosystem. For instance, increase in direct and indirect employment opportunities in compliance to a presidential directive allowing preference to local

content in all employment opportunities. To avoid the negative impacts associated with labour influx to host or beneficiary communities, the TRIMING Project will promote local sources especially for unskilled and semi-skilled labour

Improved commercial activities: Business and trade at various scales will be enhanced during construction and operational phases of the work. As agricultural production improves, the area is likely to have a big agro-markets, agro allied and agro processing industries. There will be population increase and new business opportunities like hotels and real estate might come up in future.

Increased Gross domestic product and improved economy: The scheme will provide concomitant improvement in the GDP from the agricultural sector and the multiplier effect of this will be felt on the national economy. Several agro-processing firms will arise along the value chains of most of the products and importation of food items from foreign nations will reduce drastically.

Less conflict between herdsmen and settled crop farmers: With the irrigation scheme functioning properly, there is the likelihood of agriculture becoming organized, as the herds men becomes confined to specified locations as grazing routes and cattle colonies somewhere up-stream around the dam. The farmers and agro industries could be organized to take the downstream within the irrigation sectors. This will remove the risk of conflicts from resource use mainly water. Management of crises as a result of nomadic lifestyleof herders in search of water and greener pastures in the dry period of the year would be more effective.

Agricultural and food security in the nation: The development of the irrigation sectors is a positive impact of the project that will improve the food security situation of the country. This is because irrigation will aid all year-round production. Agricultural lands in the northern zone of the country receives less than 1000 mm of annual rainfall which is a big short coming for good crop yield. Intensive irrigation is therefore expected to boost the effort directed at meeting the food demands of 180 million hungry peoplein the land.

Potential Negative Impacts of the proposed project

Environmental Impacts		
Impacts	**Significance of Risk**	**Mitigation**
1. Temporary air pollution from particulate matter and gases due to the movement of vehicles and equipment on untarred access roads to proposed project sites within the communities.	Low	1. Sprinkle earth roads with water to reduce dust during movement of vehicles especially settlements and areas where public facilities are nearby.
2. Temporary air pollution and noise due to drilling of borehole. Generation of particulate matter from dust and emission of gases with noise from drilling machines.	Low	2. Schedule drilling activities during times when the impact on the local community is minimized, such as avoiding night time or early morning drilling sessions. Keep local communities informed about the drilling schedule and activities, providing advance notice of potentially noisy operations.
3. Temporary noise pollution from movement of vehicles and machineries/equipment operations	Medium	3. Install noise mufflers on heavy duty equipment

4. Waste generated from drilling like drilling mud and rock cuttings. Other waste materials from construction, including excess soil and concretes from excavation, plastic wrap, pallets, and cardboard boxes used for packaging construction materials, could lead to environmental nuisance and public health concerns if poorly managed.	Medium	4. Ensure proper sorting; storage and final disposal of waste, liaise with registered JISEPA waste disposal outfit. Soil and rock cuttings can be properly channelled to flood embankments.
5. Materials sourcing such as sand, clay, gravels may lead to impacts related to sand mining and extraction of gravel from unlicensed quarries	Medium	5. Ensure compliance with all relevant local, regional, and national regulations governing sand mining and quarry operations. Obtain necessary permits and licenses to operate legally and contractors should ensure all materials are sourced from registered vendors or quarries
Social Impacts	**Significance of Risk**	**Mitigation**
1. Labour influx especially from skilled workers may induce conflicts and SEA/SH risks, risk of STIs/STDs for community members and staff. Influx of Camp Followers could also increase the presence of sex workers in the communities	Medium	1. Project managers must ensure that all engaged workers are sensitized and sign Code of Conduct (CoC); zero tolerance for sexual relation with community members; as much as possible workforce should be from the community; provide basic amenities for workers like water, health, toilets
2. Lack of understanding or disregard for local customs and traditions by the project workers can lead to cultural insensitivity. This may result in resistance from the local community and damage relationships.	Medium	2. Project team must provide project workers with comprehensive cultural awareness training before they engage with the local community. This training should include information about local customs, traditions, values, and etiquette. Establish open and regular communication channels between the project team and the local community.
3. The construction of live-stock crossings and watering points may temporarily alter traditional livelihood patterns, especially pastoral practices. This could disrupt the local economy and way of life	Low	3. Proper and adequate stakeholder consultation to address concerns around the project's impact on the livelihood of community people. Plan construction activities taking into account the seasonal patterns of pastoral practices. Avoid critical periods such as breeding or migration seasons. This can help minimize the

		impact on livestock and allow the community to continue their traditional practices without significant disruption
4. Community health and safety at risk due to movement of equipment and vehicle to project sites which could lead to accidents due to bad access roads, disturbance of farmers and herders activities and religious activities	Low	4. The project managers must ensure all drivers are trained on substance abuse and transport schedule plans. Vehicles should not be overloaded with materials, use of flagmen and safety cautions, in built up areas, avoid movement in market areas on market days, limit movement during religious activities, restrict access to be placed at work sites
5. Sourcing for unskilled labour may lead to risks of child labour and increase dropout during rehabilitation activities. This could further predispose children to health & safety risks, Violence Against Children (VAC) etc.	Medium	5. Project managers must comply with this ESMP especially the LMP in the Annex by implementing fair wages, provision of PPEs and safe work conditions as approved by the WUA vis-à-vis the CONTRACTOR'S
6. Poor labour and working conditions especially wages for community workers could lead to grievances	Medium	6. Establish transparent payment systems to ensure that workers understand how their wages are calculated. Establish a clear and accessible grievance mechanism for workers to voice their concerns.
7. Insecurity can worsen due to presence of strange workers including TRIMING, WUA, Consultants etc and they can become victims of kidnapping, banditry, insurgency, social conflicts etc.	Medium	7. Security Risk Assessment& Mitigation Measures can be seen in Annex 16. In addition, the WUA should work with the project security adviser to develop a robust security management plan for the project in conjunction with the state Government and the state security agencies including the police, Army, Nigerian Security and Civil Defence Corps (NSCDC)
Occupational Health & Safety (OHS)	**Significance of Risk**	**Mitigation**
1.OHS Risks from operation of equipment and civil works could lead to injuries, incidents and accidents for workers	Medium	1. Project management Units should implement the site specific Occupational Health and Safety Management Plan (see Annex 9) in this ESMP vis-à-vis the CONTRACTOR'S

2. Workers could be exposed to disease outbreaks such as COVID, monkey-pox and other communicable diseases	Low	2. Provision of First Aid and PPEs such as nose masks, hand washing facilities, hand sanitizers and implement IPC Protocols
3. Exposure of workers to security risks such as banditry, kidnapping etc.	Medium	3. Appropriate security measures as detailed in Annex 16 should be put in place
4. Poor labour and working conditions could lead to ill-health and grievances	Low	4. Project management units should provide a safe and conducive work environment including basic amenities like portable drinking water, food, WASH facilities, rest area for workers
5. Unfair recruitment procedures could cause grievances, discrimination etc. poor or discriminatory wages could also lead to grievances and legal action	Low	5. Recruitment processes should be fair, non-discriminatory and the terms and conditions of employment including wages, work hours, rest hours, benefits, sanctions should be clearly indicated in the conditions and understood by all parties

ES 5: Environmental and Social Management and Monitoring Plan

The total estimated cost to effectively implement the mitigation and monitoring measures recommended in the ESMP Matrix above including Capacity Building and others is Sixteen million, four hundred and ninety-four thousand, eight hundred and forty naira only. – **N16,494,840** as seen in the table below. The cost of mitigation is **N9,282,493** and should be included in the contract as part of the implementation cost by the Contractor

Cost for the Implementation of ESMP

Item	Responsibility	Cost Estimate in Naira (N)
Mitigation	Contractor	9,282,493
Monitoring	KRIS/HVIS E&S Team	3,391,197
Capacity Building	State Safeguard Team	1,821,150
GRM Operation	State Safeguard Team, WUAs	2,000,000
TOTAL		**16,494,840**

ES 6: Stakeholder Engagement and Public Consultation Plan

Identification and understanding of stakeholders relevant to the TRIMING project is fundamental to the invaluableness of their proper and adequate engagement throughout the life cycle of the project. Relevant to the ESMP, the TRIMING stakeholder opening consultation focused on understanding the structure of associations including interest groups and direct beneficiaries whose welfare the projects directly or indirectly underscores as this was crucial for increased project acceptance,

effectiveness, and positive long-term impacts. The opening consultation in Kura, Bunkure, Garun Mallam and Auyo Local Government area, Kano and Jigawa states, were held between 17th – 19th October and 28th - 29th November, 2023 respectively. This platform served to elicit information, questions and concerns relevant to the project. It also provided the opportunity for project beneficiaries to contribute to both the design and implementation of the project activities and further ameliorate the likelihood for conflicts.

This elaborate consultation was preceded by the identification and understanding of the relevant stakeholders who were the most affected by the social intervention, namely, the Water Users Association, (Consisting of the Farmers Association, Women's Association) and Herders Association.

The public consultation strategy for the ESMP activities revolved around the provision of a full opportunity for involvement of all stakeholders, especially the beneficiaries. Concerns raised by the stakeholders are documented and incorporated in this report and used to develop mitigation and/or enhancement measures for the Grievance Redress Mechanism (GRM).

ES 7: GRM

The mechanism is developed as a multiple-level design (project location, state, and national levels) and will address diverse suggestions & complaints, and involve activities like logging, tracking, and resolving project related grievances. Chapter 7 provides the GRM which has been prepared in a manner that integrates both the formal and informal/traditional approach to grievance redress mechanism. This includes the use of Grievance Redress Committees (GRCs), complaint boxes, dedicated phone lines to channel and resolve grievances. The GRCs will be constituted at the project site level, SPIU level, State Steering Committee level and NTCU level. Complainants will also be informed of their right to seek judicial redress if they remain dissatisfied with the resolutions reached. A GBV-GRM protocol is also included to provide a process for channelling GBV related complaints which is handled different from the non-GBV related grievances due to the confidential nature of the complaints.

ES 8: Conclusion and Recommendation

The project is envisaged to have a largely positive impact on the benefitting farmers, herders and recipient communities. The potential negative environmental and social impacts which were identified can be mitigated with strict compliance to the mitigation measures stated in the ESMP Matrix. The ESMP and the mitigation costs will need to be embedded in the Engineering Plans to ensure implementation costs are adequately budgeted for by the KRIS and HVIS Project Offices

Recommendation

The following recommendations are provided for the effective implementation and sustainability of the ESMP:

- ✓ Proper handing over of completed projects to the WUA leadership, to increase acceptance and enhance sustainability
- ✓ Construction activities should be scheduled when impacts on the local community is minimized and they should be notified on potential impacts
- ✓ The E&S UNIT/KRIS/HVIS PROJECT OFFICE/MDAs involved in monitoring of the ESMP implementation will need to be adequately trained in line with the capacity building plan in the report
- ✓ The E&S UNIT should endeavour to establish the GRM in all project locations timely to enable stakeholders channel enquiries to the project. This includes installing complaint boxes, setting up GRCs amongst others
- ✓ Considering the security situation across locations in the Country, it is advised that the KRIS/HVIS PROJECT OFFICE workers and any other team engaged by the project make

adequate security arrangements for site work. The E&S UNIT should also keep abreast of the security situation in the various project LGAs and inform all relevant parties accordingly

- ✓ With respect to GBV, it is important for the E&S UNIT to conduct sensitization program for the staff, KRIS/HVIS PROJECT OFFICE, and community members especially women and girls on prevention strategies and the available reporting and response mechanisms, as well as the grievance redress mechanism in place for the TRIMING project in Kano state.
- ✓ As earlier stated, in the course of rehabilitation works, there would be moderate to severe likelihood of the occurrence of workplace hazards. Personnel will be predisposed to hazards. "Unsafe behaviours" and "unsafe conditions". Occupational disasters happen more due to "unsafe behaviours" compared to "unsafe conditions". Hence, project/site workers should be trained on unsafe behaviours and be provided with necessary equipment to practice safe behaviours. Further, the necessary facilities to facilitate safe conditions and discourage unsafe behaviours should be made available to workers
- ✓ For effective waste management on site, the KRIS/HVIS PROJECT OFFICE should sign an agreement with KSEPA. This would ensure control of proper collection and disposal of construction wastes Furthermore, the KRIS/HVIS PROJECT OFFICE should implement the waste management plan (see Annex 6) during the period of project implementation
- ✓ Construction Safety signs and boards should be installed to protect workers and the public around the construction sites