

PPP and Climate Change Mitigation and Adaptation Screening Assessment Report for the Gudi Industrial Hub Project

1. Project Summary

Primary Purpose of the Project

The Gudi Agro Industrial Hub Project aims to establish a multifaceted agro-industrial complex designed to enhance agricultural productivity, promote sustainable practices, and stimulate economic development. The project envisions integrating various agricultural activities, processing facilities, and value-added enterprises within a hub, fostering a synergistic ecosystem that supports local farmers, generates employment, and contributes to the overall growth of the agricultural sector.

Alignment with National Climate Change Targets

The project's specific goals are strategically aligned with Nigeria's national climate change mitigation and adaptation targets. By promoting sustainable agricultural practices, incorporating eco-friendly technologies, and prioritizing resilience in the face of climate impacts, the Gudi Agro Industrial Hub contributes directly to the country's efforts to reduce greenhouse gas (GHG) emissions, enhance climate adaptation, and achieve broader environmental sustainability goals. The project serves as a model for integrated, climate-smart agriculture in line with national strategies.

Contribution to Low GHG Emissions

The Gudi Agro Industrial Hub prioritizes environmentally conscious practices to minimize its greenhouse gas emissions. Through the adoption of precision agriculture, renewable energy sources, and efficient waste management systems, the project aims to achieve negative, zero, or very low GHG emissions. By optimizing resource use, minimizing carbon-intensive processes, and implementing sustainable land management practices, the project seeks to mitigate its environmental footprint and contribute to a more climate-resilient agricultural sector.

Mitigation Features for Net Zero Future

The project incorporates robust mitigation features that actively contribute to the transition towards a net-zero future. This includes the integration of renewable energy sources such as solar and biomass for on-site energy needs, the implementation of carbon sequestration measures through agroforestry and sustainable land use practices, and the adoption of climate-resilient crop varieties. Additionally, the project emphasizes circular economy principles, incorporating efficient water recycling systems and waste-to-resource initiatives. These features collectively position the Gudi Agro Industrial Hub as

a flagship project driving the agricultural sector towards a sustainable, low-carbon, and net-zero-emission future.

2. Overview of Screening Output

For inclusion in the State PPP Pipeline, a preliminary project screening was conducted using United Kingdom Nigeria Infrastructure Advisory Facility’s (UKNIAF’s) Project Screening Tool. The Project Screening Tool Kit incorporates **Poverty, Gender and Social Inclusion & Climate Change** (PGESI & CC) considerations and captures UKNIAF's Project Screening criteria for Public Private Partnership (PPP) Investment projects.

The screening tool is based on the well-known international standards used by infrastructure investors for gender and climate smart investing, such as the Development Impact and Environmental & Social (E&S) risk due diligence framework of the CDC Group, the IFC’s Performance Standards, and the 2X Criteria developed by the 2X Challenge initiative for gender-smart investing. (See *Annexure 1 for basic information about the tool and the Decision Criteria*).

Project Selection Decision Criteria

- i. Have a minimum overall score of 70%*
- ii. Have a minimum score of 60% on Climate Change and Adaptation criteria*
- iii. Have a minimum score of 60% on environmental and social factors*

The output from the project screening shows low commercial viability potential, medium development impact, and low environmental, social, and climate risk.

The project has an overall score of 78%, an E&S score of 79%, and a Climate Mitigation & Adaptation score of 90%. This is above the minimum required for the project to be selected and to proceed in the PPP Lifecycle. It is therefore recommended to proceed in the PPP Lifecycle. See detailed scoring output in Annexure 2.

Below is the summary result of screening the project with UKNIAF's Project Screening tool. Detailed output is in the Annexure.

Table 1: Preliminary Environmental and Social Risk Assessment Outcome

Key Assessment Criteria	High, Medium, Low
Commercial Viability	
Strategic Alignment	High
Market Demand	High
Commercial Viability	Medium
Complexity	Low
Lenders’ Interest	High
Development Impact Assessment	
SDG Fit	High
Sector Fit	High
GESI Impact	Medium
Poverty Impact	High
Climate Impact	Medium

Key Assessment Criteria	High, Medium, Low
E&S Risk Assessment	
Exclusion List met? (Y/N)	Yes
Compliance with local laws / develop E&S Management Systems	High
Environmental Pollution or Destruction	Medium
Negative impact to heritage, resettlement, and indigenous communities	Low
Adverse impacts from Climate Change and/or high emissions	Low
Material E&S risks (biodiversity, climate, other)	Low

Project Overview

Description	
Project Title	Gudi Industrial Hub Project.
MDA	<p>Key MDA Nasarawa Investment and Development Agency (NASIDA)</p> <p>Other MDA Nasarawa State Ministry of Agriculture Nasarawa State Ministry of Environment</p>
Project Locations	Gudi, Akwanga Local Government Area, Nasarawa State
Sector	Agriculture and Manufacturing

The proposed Gudi Industrial Hub is a 418-hectare site—when fully developed—with well-planned and equipped space for industrial activities, together with the infrastructure necessary to support manufacturing and other industries. Located at Gudi, in Akwanga Local Government Area of Nasarawa State, the Hub is envisaged to have four components called Parks, which will be delivered in priority order of need (a) Agro Industrial Park (b) Logistics Park (c) Mineral Processing Park (d) Light Manufacturing Area.

The project aligns well with key targets and goals:

- the project aligns with Federal and State Government’s priorities set out in the NEDS and the NDP.
- the project aligns with Nigeria's Nationally Determined Contributions (NDC) goal to contribute to global efforts to mitigate climate change by reducing greenhouse gas (GHG) emissions.
- the project aligns project aligns with SDG 9 (Industry, Innovation, and Infrastructure) and SDG 7 (Affordable and Clean Energy).
- the project strengthens the underlying philosophy of the Nigeria Industrial Revolution Plan: to build Nigeria’s competitive advantage, broaden the scope of the industry, and accelerate the expansion of the manufacturing sector.

The project outputs will contribute to:

- enhancing Nigeria’s economic prosperity by providing ‘spatial solutions’ to the challenges of uneven economic geography posed by rural underdevelopment and by rapid urbanisation; mobilising and increasing the level of agro-industrial and mineral investment from the private sector in focus agro commodities and minerals; improving the movement of commodities within and out of the State; including previously ‘left behind’ demographic groups such as women entrepreneurs, micro, and small businesses; strengthening the manufacturing sector

and improving its competitiveness; and supporting overall economic growth and poverty reduction.

- Enhance social development by contributing towards vocational, technical, and business education and training with adequate consideration for women and youth.
- Strengthen infrastructure development by providing supporting infrastructure for industrial processing operations;
- providing support for regional integration and value chain development; and mainstreaming of climate change in the development and delivery of infrastructure within the zone, such as the elimination of the use of diesel-powered generators, which has the potential to reduce carbon emission by about 26,400tonnes/annum¹⁶, thereby accelerating the transition to clean energy provision.

The evidence from international best practice suggests that industrial park development positively influences people's livelihoods through additional employment, non-farm investments with overall improvements in incomes and living standards. However, this happens where the principles agreed upon in internationally consolidated frameworks like the UNIDO's Guidelines for industrial Parks (2019), are integrated through various stages of conceptualisation, design, construction, and management.

The total capital cost of the project is estimated at USD 154 Million once the entire 418ha site has been developed. Based on the proposed Hub Sizing and Phasing strategy, the capital expenditure for the Phase 1 (100 ha) of the agro-industrial park is USD 37.3 Million. The assumption is for the provision of basic infrastructure in the Hub, to include power supply network; road network; sewage and solid waste management; water supply system; surface drainage system; and ICT; specialised industrial support infrastructure; and security and safety infrastructure. Our base case O&M cost assumption is USD 3 per square metre p.a. and within the IFC, UNIDO reference.

A review of the institutional environment indicates the institutional context for the project is generally favourable, and there is sufficient flexibility to mitigate risk in project design and to attract significant interest from the private sector and DFIs.

NASIDA will coordinate and anchor the delivery of the project in close collaboration with other relevant MDAs of the State Government, and it has demonstrated adequate capacity and understanding of delivering projects across multiple sectors. The Agency has budgetary provision for the engagement of External Resources for Project Preparation in its annual budget. Aside from that, the State has an Infrastructure Fund, which can be leveraged to prepare the project.

While the site has been assessed to be an excellent location for the project, it is important to note that it is yet to be acquired by the State Government. There is ample opportunity for state-backed land acquisition in the area, given the lack of any major encumbrance on the site. The State will need to demonstrate commitment by quickly proceeding with the land acquisition to avoid any delay in the project's implementation and additional expenses that could arise from prolonged project timelines. This acquisition should be given priority and will be a critical requirement before the project moves to the transaction stage.

It is also important, for the project to be designed and structured as an Eco-Industrial Hub, in compliance with the International Eco-Industrial Park Framework issued by UNIDO, the World Bank Group, and the GIZ. Making the project 'greener' presents a valuable opportunity to accomplish inclusive and sustainable industrial development and to meet Sustainable.

Poverty, Gender and Social Inclusion

The evidence from international best practice suggests that industrial park development positively influences people's livelihoods through additional employment, non-farm investments with overall improvements in incomes and living standards.¹ This happens where the principles agreed upon in internationally consolidated frameworks like the UNIDO's Guidelines for Industrial Parks (2019), are integrated through various stages of conceptualisation, design, construction and management.² These principles include the promotion of social safeguards and community development, which are also incorporated in the UKNIAF PGESI and Climate tool.

Climate compatibility

The project supports Nigeria's Nationally Determined Contributions (NDC)³ goal to contribute to global efforts to mitigate climate change by reducing greenhouse gas (GHG) emissions. The sectors of the Gudi Industrial Hub project - energy, transport, agriculture and land use, and industry are priority sectors for mitigation and adaptation in Nigeria's NDC to help achieve the unconditional target of 20% emissions reduction from business-as-usual (BAU) by 2030 and conditional target of 45% emissions reduction from BAU by 2030. The Gudi Industrial Hub will be designed and built as low-carbon and energy efficient, it will incorporate the poverty, gender, and social inclusion (PGESI) criteria, and aims to be nature-positive. At minimum, it will 'do no harm' to people, the environment and nature based on national and international standards.

For example, the hub is near River Mada, currently being conceptualised by the BPE and other relevant government agencies with support from UKNIAF for possible hydropower generation through a run-of-the river scheme. The proposal is for an integrated hybrid renewable energy solution comprising a mix of hydropower, solar power, and biomass, sized and scalable to service the current and future needs of the Gudi Industrial Hub and surrounding communities. The Mada Hybrid Renewable Energy Project and, specifically, its conceptualisation as a hybrid renewable energy solution, is critical for the Gudi Industrial Hub, given that renewable energy infrastructure is vital to the sustainable development of industrial hubs and that green finance is likely to be a critical element of the overall funding mix.

Studies indicate that energy supply typically accounts for 75% of industrial parks' direct GHG emissions (see Guo, Tian, Chertow, & Chen, 2018). The proposal for the Mada Integrated Hybrid Renewable Energy Project, will be critical in reducing the carbon intensity of energy services in the Hub to achieve near- and long-term climate goals and support reductions in both the cost of electricity supply and the use of fossil fuel-powered generators. The development of the appropriate energy solution should therefore be seen as a critical requirement that should be done in tandem with the development of the Hub. The two projects are symbiotic—each will fail without the other.

Preliminary Environmental, Social, and Climate Impact Assessment

The UKNIAF Poverty, Gender, Social Inclusion (PGESI) and Climate Screening Tool enables a weighted scoring of the project's climate, environmental and social impacts. The tool is based on the

¹ <https://sipp.unido.org/industrial-parks-overview>;

² https://www.unido.org/sites/default/files/files/2020-05/International_Guidelines_for_Industrial_Parks_EN.pdf

³ Nigeria's First Nationally Determined Contribution – 2021 Update

well-known international standards used by infrastructure investors for gender and climate-smart investing, such as the Development Impact and Environmental & Social (E&S) risk due diligence framework of the CDC Group (now British International Investment [BII]), the IFC’s Performance Standards, and the 2X Challenge initiative for gender-smart investing.

The weighting process envisaged by the UKNiAF tool will be applied at the project OBC stage where a detailed assessment will be required. At this concept note stage, one aspect of the tool was applied: a rapid qualitative assessment of the potential environmental and social issues was carried out using the BII Environmental & Social Governance (ESG) due diligence framework⁴. The BII ESG framework was also incorporated within the UKNiAF tool and includes a checklist of ESG highlights to consider at pre-OBC stage, an approach which is best suited for the current project context. In Table 5 below, the BII checklist has been used to provide qualitative commentary on project-specific climate, environmental and social factors, based on the country context.

Table 5: Preliminary Environment and Social Assessment

QUALITATIVE COMMENTARY ON POTENTIAL DISTRIBUTIONAL EFFECTS OF THE PROJECT

MAJOR RISKS: While the project presents the opportunity for significant social and environmental benefits, that have been highlighted in the columns below, these are neither automatic nor democratic results. There is the risk that women and other left behind populations will not access these benefits if they are not deliberately targeted. There is also the risk of community displacement from farmland which needs to be carefully managed through ongoing consultations and remediation. Therefore, it is critical that NASIDA is supported to reach the poorest women as well as micro and small businesses through the production of a customised Environmental and Social Mitigation Plan

Choice	Affordability	Quality of Life	Climate (NDC goals)
<p>The Park presents the opportunity to expand economic choice for women and other 'left behind' demographic groups through several pathways. These include through the provision of on-site labour; the opportunity of improved market access; and the expanded access to social infrastructure.</p> <p>These opportunities for alternative livelihood sources, are critical in a context where extreme flooding has made it impossible for many of the state's 80% (mostly women⁵) farmers to work due to increasing floods over the past two years⁶.</p>	<p>The project location facilitates proximity to and therefore, lowers the cost of accessing social infrastructure. The State Government describes it as: <i>'a transit route to different part of the country, positions it in an advantageous position to serve multiple markets, and industries'</i>⁷</p>	<p>The potential quality-of-life benefits here include the creation of new job opportunities and attracting investment, which can provide economic benefits to the local community and contribute to poverty reduction. The project also aims to incorporate sustainable development principles, including the use of renewable energy sources, which can have positive environmental impacts and contribute to improved health outcomes for the community. In addition, the project's emphasis on skills development and training can enhance human capital and promote social development.</p>	<p>The project will contribute to sections 4.6.,5.5.1., 5.5.2, and 6.0 of the NDC targets.⁷</p> <ul style="list-style-type: none"> • Section 4.6 of the NDC (Proper and sustainable water management) • Section 5.5.1. (Promoting efficiency by reducing energy intensity across all sectors) • Section 5.5.2 (Agriculture, Forestry and Land Use) • Section 6 (Cross-cutting issues)

⁴ <https://fintoolkit.bii.co.uk/wp-content/uploads/sites/4/2018/10/Infrastructure.pdf>; <https://toolkit.bii.co.uk/esg-topics/gender/>

⁵ <https://www.un.org/africarenewal/magazine/august-2016/women-grapple-harsh-weather>

<https://www.premiumtimesng.com/news/headlines/467474-special-report-how-women-farmers-are-responding-to-climate-change-in-a-nigerian-state.html>

⁶ <https://www.un.org/africarenewal/magazine/august-2016/women-grapple-harsh-weather>

⁷ <https://www.nasida.na.gov.ng/sector/infrastructure>

ANNEXURE 1: ABOUT THE PROJECT SCREENING TOOL AND DECISION CRITERIA

About the Screening Tool

The Project Screening Tool Kit incorporates Poverty, Gender and Social Inclusion & Climate Change (PGESI & CC) considerations and captures UKNiAF's Project Screening criteria for Public Private Partnership (PPP) Investment projects.

The quality of existing infrastructure to support Nigeria's productivity and competitiveness have been categorised as poor; constraining; disproportionately accessible to the poor; and extremely vulnerable climate change risks. Closing Nigeria's infrastructure gaps in a way that can sustain equitable human development requires a re-orientation in designing and delivering commercially viable PPP infrastructure projects that integrate more "responsible" considerations. These responsible considerations look beyond the typical 'Value for Money' and 'affordability' tests to focus on 'doing no harm' and 'leaving no-one behind' in order to attract private sector funding. It will integrate climate smart, environmental & socio-economic considerations in the current PPP delivery approach.

In this light, the Project Screening tool outlines a systematic approach for selecting, prioritising, categorising, assessing, & managing PPP projects that focus on climate adaptation and effective management of Environmental & Social issues while integrating opportunities for increasing developmental impact through meeting poverty reduction, gender equality and social inclusion targets. The Project Screening toolkit is based on the international standards used by infrastructure investors for gender and climate smart investing. It will be used by the UKNiAF team to engage with the Nigerian government and member of the investment community.

Decision Criteria

The maximum score for each Assessment Area is 100%, and the overall score will be determined by the sum of all weights taken from each thematic area (Commercial Viability, 20%; Climate Change, 25%; E&S Risk, 25%; Gender Equality, 15%; Poverty Reduction, 15%) which is also a maximum of 100%. For a project to be selected, it must meet a set of criteria, which includes;

- i. Have a minimum overall score of 70%*
- ii. Have a minimum score of 60% on Climate Change and Adaptation criteria*
- iii. Have a minimum score of 60% on environmental and social factors*

The second and third criteria are critical to avoid a scenario where a project that scores very low on key E&S and CC issues but scores high on other thematic areas still proceeds to be selected. This would be a major risk to the project, UKNiAF and the people of Nigeria.

ANNEXURE2 : OUTPUT FROM PROJECT SCREENING

Summary Sheet – SCREENING RESULT OF THE GUDI INDUSTRIAL HUB PROJECT

1: Investment Details	
Investment Name	<i>Gudi Industrial Hub</i>
Project Owner	<i>Nasarawa Investment and Development Agency</i>
Location	<i>Gudi, Akwangwa, Nasarawa State</i>
Investment Category	<i>Major</i>
Investment Tenor (years)	<i>20</i>
Investment Size (USD)	<i>\$154 Million</i>
Investment Sector	<i>Agriculture</i>
Date	<i>12/03/2023</i>

2. Exclusion List	
Does the project to be invested in participate in any activities listed in the exclusion list? (click here)	No

OVERALL SCORE **78%**

SCORE

COMMERCIAL VIABILITY (20%)

64%

3. Strategic Alignment

Project has high strategic importance	1
Project delivers public infrastructure or service in a priority sector	1
Project fills a clear and substantiated critical Infrastructure gap or service deficiency	1
Existing legal framework accommodates private sector participation in the project	1
MDA can finance the project's operating and maintenance costs out of its recurrent budget	0

4. Market Demand

Market appetite to support the project is proven	1
Government has successfully delivered similar PPP projects	0
Project has secured funding commitments from non-IGR sources	1

5. Complexity

Project is a brownfield project	0
Project output requirements are clearly defined in tangible or measurable terms and are verifiable	1
Project affects, or is affected, by the delivery of other critical infrastructure project(s)	1

6. Lenders Interest

Project meets all or parts of lenders' commercial requirements	1
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Interest rate risk (fluctuation of loan interest)	0
Project is exposed to currency exchange rate risk	0

Environmental and Social Risk (25%) 71%

7. Provisional E&S Risk Categorization	
Does the project operate in a High, Medium or Low Risk Sector?	1

8. Potential Environmental & Social Risks	
Air Emissions: Significant levels of air emissions that may breach of local regulations or World Bank/IFC Standards	1
Solid Waste Management: Potential generation of waste that can significantly affect the living conditions of local communities or ecosystems or may have an impact on ambient environmental conditions (i.e. air, surface and groundwater, and soils)	1
Water Quality / Management: Significant impact on availability and/or quality of water resources to local communities or habitats	1
Community Health, Safety & Security: Significant risk to local communities due to heavy industrial transport activities	0
Community Health, Safety & Security: Significant risk to local communities due to exposure to communicable diseases from operations or movement of migrant workers (e.g. HIV/AIDS, or water borne diseases such as malaria or cholera).	0
Community Health, Safety & Security: Need for consultantion with, and disclosure to, the public in relation to the investment operations and its potential impacts in accordance with appropriate procedures. Specifically acknowledging stakeholder engagement of women as a subset of the community.	0
Operation in remote areas: Operations in remote areas (or with supply chains that affect such areas) which introduce infrastructure (e.g. roads, electricity, etc.) or increase activities in such areas.	1

Land Acquisition: Significant changes in use of the land (e.g. from agricultural land or residential premises to industrial use, or vice versa) that requires prior agreement and informed consultation with stakeholders	0
Resettlement and economic displacement: Operations will require people to move from their homes, or will result either in the loss of economic assets (e.g. crops, fields), or access to livelihoods that leads to loss of income,	1
Wildlife and natural habitats: Impacts on protected areas or other natural habitats. Potential introduction of invasive alien species, major changes to ecosystem services	1
Indigenous Peoples: Direct or indirect impacts on indigenous / vulnerable peoples (i.e. distinct social and cultural groups with identities that are distinct from dominant groups in national societies).	1
Cultural Heritage: Operations will impact on cultural heritage e.g. building on sites with archaeological, historical, cultural, or religious value) or intangible cultural heritage (e.g. by impacting a minority community such that its language, performing arts, customs are affected).	1
Social Licence to Operate/Track Record: Scale, location and project operations may raise concerns from local or international communities (e.g. newspaper articles, NGO action, etc.) or project will be located in areas where there is a history of tension and activism over oil & gas development (including locations where plant damage, closure or public campaigns have occurred)	1

Climate Mitigation & Adaptation (25%)	90%
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9. Climate Change Risk, Mitigation & Adaptation	
Potential vulnerability of the project to Climate Risk	1
Does the program contribute towards the NDC's target to achieve Climate Mitigation in at least 2 areas?	
<i>Contribute to net change in Greenhouse Gas Emissions (tCO₂e) – tonnes of GHG emissions by x% (KPI 6)</i>	1
<i>Reduce deforestation of degradation by x% (KPI 8, 10)</i>	0
<i>Promote energy saving by x% (KPI 16)</i>	1

<i>Improvement of electricity generation grid (NDC)</i>	1
Does the program contribute towards NCD's target to achieve Climate Adaptation in at least 2 areas?	
<i>Promote Climate Smart Agricultural practices</i>	1
<i>Improve access to clean energy for x people, clean low carbon emission technology for x people (MW)</i>	1
<i>Mobilise up to NGN x of public or private finance funds with the main objective to reduce climate change or impacts of climate change (KPI 11, 12)</i>	1
<i>Integrate Climate Change in any national planning process with defined policy / program outputs (KPI 13)</i>	1
<i>Promote knowledge of climate change issues, mitigation and adaptation approaches with clear expected policies / projects outputs (KPI 14)</i>	1
Gender Equality (15%)	63%
6. Development Impacts (Gender Impact, Climate Adaptation Considerations)	
Project will integrate at least 30% share of women in the workforce	1
Project will diversify supply chain to include at least 30% of women entrepreneurs	1
Women in Senior Management will represent at least 40% share or Women on Board / Investment Committee will represent 30%	1
Program will contribute to women's access to at least 2 of the following services (select as appropriate)	
<i>Increase access to internet services for x people</i>	0
<i>At least 30% of the DFI loan proceeds to financial institutions support investments for women entrepreneurs</i>	1
<i>Increase access to safe transportation for at least x women and girls in the community</i>	0
<i>Increase access to life skills training and job placement assistance for at least x women and girls in the community</i>	1
<i>Increase access to community clinical preventive and emergency services for at least x women and girls in the community</i>	0
Poverty (15%)	100%
6. Development Impacts (Poverty Reduction Impacts)	
Project will create at least x jobs – especially green and inclusive jobs – and access to jobs for vulnerable people (KPI 5)	1

Project will improve access to food nutrition and personal security for at least x poor and vulnerable people	1
Project will provide or improve access to infrastructure and clean energy for at least x poor and vulnerable people (KPI2)	1
<i>Does the program contribute to reducing poverty for the poor and vulnerable & Climate Adaptation in at least 1 of the following ways</i>	
<i>Project will improve access to finance for at least x poor and vulnerable</i>	1
<i>Project will improve access to markets for at least x poor and vulnerable people</i>	1