

Katsina State PPP Projects and Climate Screening Assessment

S/N	Project Name	Alignment with National Climate Change Targets (Hypothetical)	Sector	Primary Purpose	Contribution to GHG Emissions	Mitigation Features for Transition to Net-Zero	Value (Million)	Sponsoring Agency
1	Construction of Green Economic Export processing Zone	The alignment would focus on adopting sustainable construction practices, reducing carbon emissions, and implementing green initiatives within the economic zone.	Economic	<ul style="list-style-type: none"> ✓ To create an integrated manufacturing hub focusing on green energy generation in a vibrant, inclusive and sustainable environment. ✓ Develop an environmental and socially responsible industrial zone ✓ Provide state of the art infrastructure facilities to all users ✓ Create a business-friendly ecosystem ✓ Provide Quality of Life to all sections of society ✓ Achieve Professional Excellence in delivering Quality Services ✓ Support in nation building ✓ Adhere to National and Global Standards 	Ongoing Estimation	<p>The Green Economic Processing Zone is designed as none pollution park with the following features:</p> <ul style="list-style-type: none"> ✓ Solar park requires large parcel of land and has been separated with 189.2 hectares or 23% of the land share to provide 100mw. ✓ Processing and none-processing areas were carefully separated so also light engineering ✓ The entire zone is a community green with good landscaping. 	NGR 50,000,000,000.00	Katsina State Investment Promotion Agency

2	10MW Solar Energy Project Across Various Sites with Genesis Energy	This project aligns strongly with national climate change targets by promoting renewable energy sources, which have a positive impact on reducing carbon emissions. Its contribution lies in its minimal or zero emissions during energy production, thereby significantly contributing to the nation's goals for a net-zero future through the use of renewable energy.	Energy	Solar energy production	Likely minimal or zero emissions during energy production	Significant contribution to a net-zero future through renewable energy sources	NGR 7,500,000,000.00	Katsina State Department for Energy
3	Integrated Agricultural Development Project with Islamic Development Bank	This project aligns with national climate change as it is edged on sustainable agricultural practices. Once these practices are clearly defined, the project is expected to align with the nation's goals by potentially adopting sustainable agricultural methods and contributing to sustainable land use practices.	Agriculture	Agricultural development	Ongoing assessment	Potential for sustainable agricultural methods; specifics needed for evaluation	NGR 45,000,000,000.00	Katsina State Ministry of Agriculture
4	Climate-Smart Agriculture Project to Develop 10,000 Hectares with Bulgarian Government	This project shows promise in aligning with national climate change targets due to its focus on climate-smart practices within agriculture.	Agriculture	Climate-smart agriculture development	Ongoing assessment	Emphasis on climate-smart agriculture is a positive step towards a net-zero future	NGR 5,000,000,000.00	Katsina State Ministry of Agriculture

5	5,000 Hectares Soya Bean Production Project with Ganic Nigeria Ltd	This project will focus on reducing potential emissions and contributing to the country's sustainability goals through specific sustainable farming methods.	Agriculture	Soya bean production	Ongoing assessment	Need specific on how the project contributes to sustainability goals	NGR 10,000,000,000.00	Katsina State Ministry of Agriculture
6	Zobe Dam Phase 2 Water Distribution Project with Hydronamics Ltd and China Energy International Group Ltd.	The alignment with national climate change targets project's sustainability measures, particularly in green practices related to water distribution. This will aim to ensure minimal construction emissions, long-term operational sustainability, and specific green water distribution practices, aligning with the country's water resource management goals.	Water Resources	Water distribution through dam infrastructure	Ongoing assessment	Ongoing assessment	NGR 2,500,000,000.00	Katsina State Water Board

Overview of the Projects

Construction of Green Economic Export Processing Zone

The Construction of a Green Economic Export Processing Zone in Katsina State aims to establish a sustainable industrial zone fostering economic growth.

- **Climate Trends:** In Katsina State, climate trends show increased temperatures and irregular rainfall patterns. These trends impact various sectors, including industrial activities, necessitating climate-conscious strategies.
- **Vulnerability Assessment**
 - The project area is vulnerable to water scarcity due to changing rainfall patterns, potentially affecting water-intensive industrial processes. Additionally, extreme heat events might pose challenges to outdoor labour and equipment.
- **Risk Analysis:** The project might face operational disruptions due to water scarcity, heat stress affecting worker productivity, and increased energy demands during hotter periods, impacting energy availability for industrial operations.
- **Adaptation Strategies** include rainwater harvesting systems for water security, energy-efficient infrastructure to minimise heat-related energy demands, and green spaces to mitigate urban heat islands.
- **Stakeholder Engagement:** Local industries, government bodies, and environmental agencies' involvement in planning and decision-making ensure buy-in and alignment with sustainable practices.
- **Capacity Building:** Training programs for industrial workers on climate-resilient practices and green technologies enhance adaptive capacity within the zone.
- **Monitoring and Evaluation:** Regular assessment of water usage, energy consumption, and environmental impacts helps track the effectiveness of adaptation strategies and guides necessary adjustments.

Project 2: 10MW Solar Energy Project Across Various Sites with Genesis Energy

The 10MW Solar Energy Project aims to harness renewable energy across multiple sites in Katsina State, fostering a transition to sustainable energy sources. The 10MW Solar Energy Project positively impacts Katsina State's renewable energy portfolio. It emphasizes adaptation strategies to ensure consistent solar power generation despite potential weather challenges

- **Climate Trends:** Katsina State experiences abundant sunlight throughout the year, making it conducive for solar energy generation. However, increased temperatures might impact solar panel efficiency and energy production.
- **Vulnerability Assessment:** The project faces minimal climate-related vulnerabilities due to its reliance on sunlight for energy generation. Nonetheless, extreme weather events might temporarily affect solar power output.
- **Risk Analysis:** Extreme weather events like dust storms could affect the efficiency of solar panels. Maintenance challenges during extreme weather conditions might temporarily disrupt energy generation.
- **Adaptation Strategies:** The project includes robust maintenance schedules, dust-resistant panel coatings, and diversified energy storage solutions to ensure consistent energy supply despite adverse weather conditions.
- **Stakeholder Engagement:** Involvement of local communities, government bodies, and energy stakeholders ensures effective land use and minimal environmental impact.
- **Capacity Building:** Training programs for maintenance staff on adapting to weather-induced challenges strengthen operational resilience.
- **Monitoring and Evaluation:** Monitoring weather patterns and solar panel efficiency guides proactive maintenance and optimizing energy production.

Project 3: Integrated Agricultural Development Project with Islamic Development Bank

The Integrated Agricultural Development Project aims to enhance agricultural practices in Katsina State, promoting sustainable farming and productivity. The Integrated Agricultural Development Project is crucial in enhancing climate-resilient agriculture in Katsina State, addressing vulnerabilities and promoting sustainable farming practices.

- **Climate Trends:** Katsina State experiences erratic rainfall patterns, impacting agricultural yields. Increased temperatures affect crop growth cycles, posing challenges to traditional farming practices.
- **Vulnerability Assessment:** Agricultural lands are vulnerable to water scarcity, soil degradation, and crop failure due to climate variability and extreme weather events.
- **Risk Analysis:** Erratic rainfall may impact crop planting and growth, potentially leading to reduced agricultural productivity, affecting food security and livelihoods.
- **Adaptation Strategies:** The project includes drought-resistant crop varieties, efficient irrigation systems, and soil conservation methods to mitigate the impacts of water scarcity and soil degradation.
- **Stakeholder Engagement:**
 - Engagement with local farmers, agricultural cooperatives, and research institutions ensures the adoption of climate-resilient agricultural practices.
- **Capacity Building:** Training programs for farmers on climate-smart agriculture enhance adaptive capacity, promoting sustainable and resilient farming practices.
- **Monitoring and Evaluation:** Regular assessment of crop yields, water usage, and soil quality guides adaptive strategies and ensures sustainable agricultural development.

Project 4: Climate-Smart Agriculture Project to Develop 10,000 Hectares with the Bulgarian Government

In collaboration with the Bulgarian Government, the Climate-Smart Agriculture Project aims to implement advanced agricultural techniques in Katsina State for sustainable and climate-resilient farming. The Climate-Smart Agriculture Project presents an opportunity to implement innovative techniques and promote resilience in Katsina State's agricultural sector, mitigating climate-related risks and ensuring food security.

- **Climate Trends:** Katsina State faces erratic rainfall patterns and increased temperatures, impacting agricultural productivity. These trends necessitate adaptive agricultural practices.
- **Vulnerability Assessment:** The project area is vulnerable to water stress and reduced crop yields due to changing rainfall patterns and temperature extremes, impacting food security.
- **Risk Analysis:** Erratic rainfall and extreme temperatures pose risks of crop failure, necessitating climate-resilient farming practices to ensure consistent agricultural output.
- **Adaptation Strategies:** The project includes drought-resistant crop varieties, water-saving irrigation techniques, and soil conservation practices to mitigate the impacts of climate variability.
- **Stakeholder Engagement:** Engagement with local farmers, research institutions, and the Bulgarian Government ensures knowledge transfer and adoption of advanced agricultural techniques.
- **Capacity Building:** Training programs for farmers on climate-smart agriculture and modern farming technologies enhance adaptive capacity within the agricultural sector.
- **Monitoring and Evaluation:** Regular assessment of crop performance, water usage, and soil health guides adaptive strategies, ensuring sustainable and resilient agricultural development.

Project 5: 5,000 Hectares Soya Bean Production Project with Ganic Nigeria Limited

The 5,000 Hectares Soya Bean Production Project aims to enhance soya bean cultivation in Katsina State, contributing to agricultural diversification and economic growth. The Soya Bean Production Project presents an opportunity to implement climate-resilient techniques, enhancing agricultural productivity and economic development in Katsina State.

- **Climate Trends:** Katsina State experiences erratic rainfall and increased temperatures, impacting crop growth cycles and requiring climate-resilient agricultural practices.
- **Vulnerability Assessment:** The project area is vulnerable to water stress and heat stress, potentially affecting soya bean yields and farmer livelihoods due to climate variability.
- **Risk Analysis:** Fluctuating rainfall patterns and temperature extremes pose risks of crop failure, highlighting the need for climate-adaptive agricultural strategies.
- **Adaptation Strategies:** To mitigate climate-induced risks, the project incorporates drought-tolerant soya bean varieties, water-efficient irrigation systems, and soil conservation practices.
- **Stakeholder Engagement:** Engagement with local farmers, agricultural cooperatives, and Ganic Nigeria Limited fosters knowledge exchange and adoption of climate-resilient farming techniques.
- **Capacity Building:** Training programs for farmers on climate-smart agriculture and modern farming practices enhance their adaptive capacity and promote sustainable cultivation.
- **Monitoring and Evaluation:** Regular assessment of soya bean yields, water usage, and soil conditions guides adaptive strategies, ensuring sustainable and resilient farming practices.

Project 6: Zobe Dam Phase 2 Water Distribution Project with Hydrodynamics Ltd and China Energy International Group Ltd.

The Zobe Dam Phase 2 Water Distribution Project aims to improve water distribution infrastructure in Katsina State, ensuring efficient and sustainable water supply. The Zobe Dam Phase 2 Water Distribution Project holds promise in addressing water scarcity challenges, ensuring equitable access to water, and promoting sustainable water management in Katsina State.

- **Climate Trends:** Katsina State faces increasing water stress due to irregular rainfall patterns and rising temperatures, necessitating enhanced water management strategies.
- **Vulnerability Assessment:** The project area is vulnerable to water scarcity and inefficient distribution systems, impacting water availability for domestic, agricultural, and industrial use.
- **Risk Analysis:** Inadequate water distribution systems may lead to water shortages, affecting communities and hindering agricultural and industrial activities.
- **Adaptation Strategies:** The project involves the development of efficient water distribution networks, smart metering systems, and water conservation measures to mitigate water-related risks.
- **Stakeholder Engagement:** Engagement with local communities, water authorities, and collaborating companies ensures inclusive planning and implementation of sustainable water management strategies.
- **Capacity Building:** Training programs on water conservation and efficient usage for stakeholders strengthen adaptive capacities and promote responsible water consumption.
- **Monitoring and Evaluation:** Monitoring water distribution, consumption patterns, and infrastructure performance guides effective water management and system optimisation.