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| **Ref** (maximum 15) | **Project title** | **Technical support for Sustainable Banking investment for Zenith BankVP: / PN: FSD-KGZ12EBRD0777 / FP: i** |
| **Name of legal entity** | **Country** | **Overall project value (USD)** | **Proportion carried out by legal entity (%)** | **No of staff provided** | **Name of client** | **Origin of funding** | **Dates (start/end)** | **Name of partners if any** |
| RichfloodInternational | Nigeria |  | 100% | 9National Experts | Zenith Bank Plc | Client funding | 05/2022 – 06/2022 | - |
| **Detailed description of project** | **Type of services provided** |
| Zenith Bank has aligned its strategic objectives with the **Sustainable Development Goals** of the United Nations (SDGs), the **Paris Climate agreement**, and the Nigerian Sustainable Banking Principles (NSBP). As a leading African financial institution, the Bank has integrated **environmental and social risk assessment** into all its credit and investment decisions, effective January 1, 2018. Zenith Bank is also among the first banks in Nigeria to consecutively report the **carbon emissions** of its Head Office in Lagos using a certified tool built on the internationally recognized **"Green House Gas Protocol"**. The **Bank's E&S assessment framework** also aligns with the **IFC's Performance Standards** and the universal principles of the **United Nations Global Compact (UNGC).**In an effort to implement her sustainable banking imitative for sustainable development in accordance with the Sustainable Banking Principles in Nigeria laid down by the Central Bank of Nigeria, technical support was provided to identify the total effect or impact that a Bank's business operations have on the environment and society in which it operates (e.g. the amount of natural resources used, the amount of waste produced, or the effects on local/host communities or the Bank's human capital). In addition, Richflood provided technical support in the aspect of identification and management of any change, potential or actual, (a) the physical, natural, or cultural environment, and (b) impacts on the surrounding community and workers, resulting from a business or business activity to be financed. The E&S impacts may be temporary or permanent, involving reversible or irreversible environmental or societal changes. Environmental risks can include changes to the atmosphere, water and land due to human activities (e.g. greenhouse gases, pollution, habitat changes, etc.). Social risks can include impacts to a client's workforce and the surrounding community (e.g. occupational health and safety, human rights and labour standards, land disputes or resettlement, corruption, etc.). The goals of the project were to;* Understand and appropriately manage the E&S risks and opportunities associated with their respective Business Activities and Business Operations
* Identify potential E&S risks which require further due diligence or risk management or exclusion of particular activities that the Bank will not finance
* Improve economic stability by improving the lives of people through the protection of human rights, promotion of women's economic empowerment, and increased access to finance for the unbanked segments of the economy;
* Work together to develop across the right governance structures, E&S management capacity and collaborative partnerships necessary to implement the Principles
* Implement robust and transparent E&S governance practices in our respective institutions and assess the E&S governance practices of our clients.
* Develop appropriate E&S management procedures as a formal part of its client engagement and approval process to implement its E&S policies.
* Measure and report progress
 | * Provide technical assistance in ensuring the Bank's commitment to **delivering a positive impact to society** while protecting the **communities and environment**
* Support effective **implementation of the Nigeria Sustainable Banking Principles, standards and guidelines** of the financial sector
* Development of a management plan that addresses the **environmental and social (E&S) footprint and risks identified**
* Ensure business-making activities take into considerations respect for international standards and practices, but with due regard for Nigeria's developmental needs
* Proactively work with the client for **sustainable growth** while focusing on development priorities, safeguarding the environment to deliver **measurable benefits to society and the real economy**
* Technical support for integrating **environmental and social considerations into decision-making processes** relating to the banking business to avoid, minimize or offset adverse impacts.
* Provide capacity building and women's economic empowerment through **gender-inclusive** related activities
* Preparation of **marketing strategy** and **marketing plan** for Zenith Bank's sustainable finance strategy
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| **Ref** (maximum 15) | **Project title** | **Sustainable Banking – Standard Chartered Bank** |
| **Name of legal entity** | **Country** | **Overall project value (USD)** | **Proportion carried out by legal entity (%)** | **No of staff provided** | **Name of client** | **Origin of funding** | **Dates (start/end)** | **Name of partners if any** |
| RichfloodInternational | Nigeria |  | 50% | 13NationalExperts | Standard Chartered Bank | Client funded | 06/2022 – 07/2022 | Crowder Environmental Ltd |
| **Detailed description of project** | **Type of services provided** |
| **Standard Chartered plc** is a British multinational bank with consumer, corporate and institutional banking and treasury services operations. Standard Chartered Bank re-entered Nigeria in 1999 and opened to customers on September 15 1999, as a wholly owned subsidiary of Standard Chartered Bank Plc, headquartered in the United Kingdom. Standard Chartered Bank is uniquely positioned to support the massive shift of capital towards sustainable finance, which has become a priority for investors, companies and individuals alike. Technical Assistance was provided to determine the overall effect or impact a bank's business operations have on the environment and society in which it operates. This was done in an effort to incorporate sustainable banking principles into Standard Chartered bank policy. International sustainable finance standards and established industry best practices were also ensured to avoid, minimize, or offset negative E&S impacts where possible.In the same vein, Richflood provided technical support in developing management measures for the E&S impact, which will attract new business opportunities arising from meeting E&S challenges such as clean or renewable technology development, job creation and community development. Taking account of E&S issues in making a business decision could also lead to potential benefits to the client or the Bank providing financial services to the client.The specific objectives of this Technical Assistance are to;* Ensure successful implementations and integrating the Principles into a Bank's organizational culture requires strong executive leadership.
* Increase access to finance for the other sectors of the economy, thereby advancing women's economic empowerment and improving people's quality of life.
* Promote lending and sustainable investment in three industries—agriculture, power, and oil and gas—essential to Nigeria's ongoing economic growth story.
* Create an E&S management system that incorporates the Principles and balances the identification of E&S risks and opportunities consistent with its core business and existing internal decision-making processes;
* Assist business decision-making processes by providing assessment criteria and decision frameworks for Business Activities (an E&S management system) and Business Operations (an E&S Footprint management framework).
* Define clear E&S governance structures relating to roles and responsibilities, practices and standards, codes of conduct, performance-linked incentives, audit procedures and disclosure requirements.
 | * Provide technical support in accelerating **Green Finance** by providing funds to **sustainable infrastructure and clean technology**
* Assist in bringing buyers and sellers together for a voluntary **carbon market** to meet **climate targets**
* Support the Bank in reaching **net zero carbon emissions**
* Encourage partnership/collaboration with relevant stakeholders to measure, manage and report **climate-related transition risk**
* Develop appropriate tools **for monitoring and reporting key impact indices**
* Ensure the implementation of **gender mainstreaming** in project development
* Coordinate transparency and accurate information for the recommendations of the **Taskforce on Climate-related Financial Disclosure** (TCFD)
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| **Ref** (maximum 15) | **Project title** | **Renewable Energy and Energy Efficiency for Yutai Li Nigeria Limited 100MW Solar Power Plant Facility** |
| **Name of legal entity** | **Country** | **Overall project value (USD)** | **Proportion carried out by legal entity (%)** | **No of staff provided** | **Name of client** | **Origin of funding** | **Dates (start/end)** | **Name of partners if any** |
| RichfloodInternational | Nigeria |  | 100% | 24National Experts | Yutai Li Nigeria Limited |  Chinese Development Bank | 02/2014 - 05/2015 |  |
| **Detailed description of project** | **Type of services provided** |
| Whilst Nigeria relies heavily on fuels to meet its energy needs, the country is well endowed with **renewable energy** resources that offer **sustainable alternatives** to fossil fuels. **Renewable energy** harnesses naturally occurring non-depletable sources of energy to produce electricity,S**olar power technologies** have been identified as being potentially viable and capable of being employed on a large scale.To harness the promising prospect of the **renewable energy** sector in Nigeria, the Government of Zamfara initiated **sustainable energy** programmes to provide **clean energy** for residents and industries. This project involved the construction of **100 megawatts Solar Power Plant Operation** at Kwatarkwashi Community, Bungudu LGA, Zamfara State. Richflood provided technical support to ensure that the project meet the **United Nations Sustainable Development Goals** and **Africa Union Agenda**, as well as an investment in **renewable energy** by providing sustainable ways to reduce **carbon emissions** and further aid in **resource efficiency** and drastically reduce **environmental pollution**. The specific objective of the technical assistance for the project was to:* To improve **energy efficiency**, **e-waste management** and **resource efficiency** for financing, including technical and financial due diligence.
* Develop recommendations for **green practices** in the facility's design to ensure **E&S risk** management.
* Ensure compliance with international best practices, standards and guidelines for **sustainable energy development**.
 | * Provide technical assistance on **energy efficiency management**
* Contribute towards **environmental sustainability** through training of stakeholders on **waste management**, **water resource utilization**, **biodiversity management** and **climate-smart agricultural practices**
* Technical support in ensuring the performance to determine whether requirements or objectives are met and provide steps in meeting them
* Provide assistance in addressing **gender issues** to meet relevant international standards
* Contribute technical expertise to the project’s **internal climate change action plan.**
* Support in procurements of eco-friendly tools for **sustainable finance** and **climate change mitigation.**
* Support the development and put into practice a **climate finance policy** in line with United Nations Environment Programme Finance Initiative Principles for Responsible Banking (UNEPFI PRBs), World Economic Forum’s Sustainable Development Investment Partnership (SDIP), and Africa Union Sustainable Development Agenda amongst others.
* Engage in human capital development and capacity building initiatives for **Carbon footprint assessment** for sustainable buildings.
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| **Ref** (maximum 15) | **Project title** | **Technical assistance for the implementation of the Cassava cultivation and Starch Processing Plant**VP: / PN: FSD-KGZ12EBRD0777 / FP: i |
| **Name of legal entity** | **Country** | **Overall project value (USD)** | **Proportion carried out by legal entity (%)** | **No of staff provided** | **Name of client** | **Origin of funding** | **Dates (start/end)** | **Name of partners if any** |
| RichfloodInternational | Nigeria |  | 100 % | 20 National Experts | H & W Starch Derivatives Limited | African Development Bank (AfDB) | 04/2020– 03/2021 |  |
| **Detailed description of project** | **Type of services provided** |
| The project was hinged on the significance of the **Cassava (an important food crop)**, strategically valued for its role in **food security, poverty alleviation** and as a source of **raw materials for agro-allied industries in Nigeria** with huge potential for the export market. Nigeria being a major source with Africa being the largest centre of production, the project was aimed at serving as a **source of national economic growth/diversification** as well as eliminating the high demand-supply gap of the food crop in the country. In addition, Kwara State is one of the major states in Nigeria that are heavily endowed with high-yield of Cassava farm-produce. Thus, the need to maximize the land potentials of producing Cassava by proper cassava-plantation in large scale, and the processing of the produce to starch for agro-allied industries.The main components of the proposed project include the **Cassava cultivation**, and **Starch Processing Plant** situated on 10,100 hectares of land out of which about 6,180hectares was allotted for Cultivation of Cassava and 72.578hectares used for the processing plant. The processing plant has an input capacity of 400tons of tubers per day and a daily Starch output capacity of 100 tons. The project was financed by African Development Bank (AfDB).Richflood provided technical assistance by ensuring the project's implementation of Environmental and Social Standards (ESSs). Some of the goals of the project include to:* maximize the land potential for producing cassava by implementing proper cassava plantation in large scale and processing the produce into starch.
* increase the cassava sub-sector's employment and wealth creation potential through agro-processing and value addition.
* enhance Nigeria's food security situation as well as the national and regional economy by diversifying its manufacturing base and generating income through cassava starch production.
* reduce waste and increase the utilization of cassava products to enhance economic growth and alleviate poverty in rural areas.
* address the high demand-supply gap for cassava starch in Nigeria by increasing local production and reducing imports.
 | * Conduct a detailed analysis of the **project's potential climate impacts and risks**, which involves evaluating the project's **carbon footprint** and **identifying opportunities for greenhouse gas emissions reductions**.
* Assess the **project's exposure to climate-related risks** such as droughts, floods, and other extreme weather events.
* Develop **climate change mitigation and adaptation strategies** to address risks and build resilience within the project.
* Conduct a **gender analysis** of the project to identify gender-based challenges and opportunities, and develop a **gender policy** that is aligned with international best practices and standards, which include strategies for integrating gender considerations into project design and implementation, as well as strategies for eliminating gender-based violence.
* Provide support for the project to ensure that it remains on track and meets its financial and environmental goals. This support includes monitoring and reporting on project performance, conducting regular risk assessments, and providing guidance on adapting the project strategy to changing regulatory requirements.
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| **Ref** (maximum 15) | **Project title** | **Renewable Energy and Energy Efficiency for REPCO Solar Power Plant Project** |
| **Name of legal entity** | **Country** | **Overall project value (USD)** | **Proportion carried out by legal entity (%)** | **No of staff provided** | **Name of client** | **Origin of funding** | **Dates (start/end)** | **Name of partners if any** |
| RichfloodInternational | Nigeria |  | 100 %  | 16National Experts | Renewable Energy Power Co. (REPCO) Ltd. | Client funded | 01/2016 – 02/2018 | - |
| **Detailed description of project** | **Type of services provided** |
| Demand for electricity in developing countries is growing. The core of the **Green Industrial Revolution** is that electricity will be generated by **renewable technologies** such as wind, solar, and bio-waste to become integrated into buildings, communities, and regions that require infrastructures, storage, and **smart micro-grids**. The conventional electricity grid system is old and unreliable. Throughout the world, **smart, flexible grid systems** are being developed to maximize the use of **renewable energy** generation and **reduce energy usage and costs**, while protecting the environment.The Nigeria national grid has depended mostly on **hydro power generation** and few gas generation plants are insufficiently available. However, the use of **solar energy,** majorly amongst other renewable energy sources to add on to present inadequate national grid generation, may present significant advantages in its inherent availability and **cost-effectiveness** over a long period if properly constructed and installed.The construction of the 60 megawatts Solar plant in Kaduna State becomes necessary due to abundant solar radiation received by the state and the demand for stable electricity for economic activity.Richflood provided technical support in ensuring that the project meets the **United** **Nations Sustainable development goals** and **Africa Union Agenda**, investment in **renewable energy** by providing **sustainable ways** to reduce **carbon emissions**, and assist in **resource efficiency** as well as drastically reduce **environmental pollution**.In addition, it will encourage investors to harness the **renewable energy sector**.Some of the objectives of the project were to:* Generate clean and renewable energy that can be used to power homes, businesses, and industries in the state.
* Boost economic development by providing job opportunities.
* Contribute to Nigeria's renewable energy targets of generating 30% of its electricity from renewable sources by 2030.
* Provide stable, reliable, affordable and predictable energy sources.
* Demonstrate the viability of large-scale solar power projects in Nigeria:

***Project Description***The 60 megawatts solar plant project is a medium-sized, utility-grade, grid-connected solar-PV power system consisting of photovoltaic modules/panels, and Maximum Power Point Tracking (MPPT) solar power inverters, power conditioning units, medium voltage/step-up power transformers and grid connection equipment.The solar power inverters output three phase AC current to a step-up transformer. The step-up transformer outputs to a collector in the substation component, which flows to the collector arrangement, feeder arrangement and key protection component, and finally fed to the grid at 115 kV.*Substation Component Design*The purpose of the substation is to collect all solar array power and feed into the grid after stepping up voltage to distribution level. The substation is based on an Arcadia design, modified for the project. The power flow is bottom to top, 34.5 kV bus to 115 kV bus. It consists of the following major drawings (single-line drawings).* ***Collector:*** Input from solar arrays transformer;
* ***Feeder:*** Output from collector, input to 34.5Kv bus;
* ***Key protection:*** Circuit breakers, protection relays, capacitor bank and step-up transformer. Outputs to grid at 115Kv.

*The functions of the substation components include:*Primary Transformer: This is an 85MVA that steps up the feeder bus input of 34.5 kV to desired 115 kV.Current Transformer: Drops current to manageable level for relay, usually between 1 and 5 amps.Circuit Breakers: are devices in key protection that opens the feeder switch when relay detects an overcurrent condition.Relays: Relays are monitoring devices used to detect ground fault currents and reduce saturation.Capacitor Bank: The 9.0 MVAR capacitor bank stabilizes harmonics associated with three-phase currents and helps maintain a power factor of 0.95. Surge Arrestor: are devices that are used to maintain equipment protected from overvoltage transients caused by lightning strikes, or switching over voltages within the substation itself. In this project they are used to protect the four terminals going into each of the three feeder transmission lines. | * Provide assistance on **energy efficiency management**
* Contribute towards **environmental sustainability** through training of stakeholders on **waste management**, **water resource utilization**, **biodiversity management** and **climate-smart agricultural practices**
* Technical support in ensuring the performance to determine whether requirements or objectives are met and provide steps in meeting them
* Provide assistance in addressing **gender issues** to meet relevant international standards
* Contribute technical expertise to the project’s **internal climate change action plan.**
* Support in procurements of eco-friendly tools for **sustainable finance** and **climate change mitigation.**
* Support the development and put into practice a **climate finance policy** in line with United Nations Environment Programme Finance Initiative Principles for Responsible Banking (UNEPFI PRBs), World Economic Forum’s Sustainable Development Investment Partnership (SDIP), and Africa Union Sustainable Development Agenda amongst others.
* Engage in human capital development and capacity building initiatives for **carbon footprint assessment** for sustainable buildings.
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| **Ref** (maximum 15) | **Project title** | **Technical Assistance for 3 million TPA Cement Production Expansion and 70MW Power Plant Project** |
| **Name of legal entity** | **Country** | **Overall project value (USD)** | **Proportion carried out by legal entity (%)** | **No of staff provided** | **Name of client** | **Origin of funding** | **Dates (start/end)** | **Name of partners if any** |
| RichfloodInternational | Nigeria |  | 50 %  | 2 Int‘l Experts19 National Experts | BUA Cement Plc | IFC – International Finance Corporation  | 01/2022– 09/2022 | SRK Consulting |
| **Detailed description of project** | **Type of services provided** |
| The BUA Cement 3million TPA cement production expansion and 70MW Power Plant project is based on the need to diversify the Nigerian economy from oil sector to promote **industrial and economic growth**. The implementation of the Technical Assistance for the project is driven by company’s corporate strategy to ensure **sustainable climate-risk mitigation** approach aimed at creating long-term value her social, environmental and economic components across its business operations.The projects focuses on promoting strategy to ensure **resilience and adaptation** to project-related **climate change risk,** including supporting local community to adopt measures and increasing **sustainable livelihood** across the different category of household members. The objective of the service was to (i) ensure that the technical criteria of the project were clearly defined, consistently applied and updated; (ii) enhance the **management of the project** related to **appraisal of the borrower** based on the eligibility requirements; (iii) establish an **efficient tracking, monitoring and reporting system** to ensure that accurate data and standard forms were utilised; and (iv) ensure that project funding was applied consistently in line with the eligibility criteria and was supported by an appropriate level of validation. | * Management and implementation of the project **Environmental and Social risk** as well as coordination with relevant stakeholders;
* Liaison with the project financer, and relevant national and international stakeholders across each project milestone/phases;
* Design framework to support and promote **gender equality** amongst affected communities and capacity building for livelihood activities.
* Support BUA in the establishment of tools and activities to map and **measure transitional, physical and climatic risks associated with it operations;**
* Development of project development tools for effective appraisal of **projects, monitoring and reporting key impacts indices;**
* **Capacity building** and training of relevant department to enhance the operational capacity of staffs to provide effective implementation of **climate-risk mitigation strategy and green growth in its operation;**
* Screening and integration of **climate issues** in internal procedures, reporting applications for the projects;
* Assess the eligibility and compliance of projects technical and financial due diligence as regards to clean energy and future **integration Renewable Energy, industrial Energy Efficiency, Water conservation / Waste water treatment** as well as **Resource efficiency** in the industrial sector;
* Support in the design and implementation of tool for the assessment of **energy savings** and **CO2 reduction**
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| **Ref** (maximum 15) | **Project title** | **Implementation Support for the Integrated Iron Ore Mining and Processing Plants Project**VP: / PN: FSD-KGZ12EBRD0777 / FP:  |
| **Name of legal entity** | **Country** | **Overall project value (USD)** | **Proportion carried out by legal entity (%)** | **No of staff provided** | **Name of client** | **Origin of funding** | **Dates (start/end)** | **Name of partners if any** |
| RichfloodInternational | Nigeria |  | 100 %  | 1 Int‘l Expert31National Experts | African Natural Resources and Mines  | International Finance Cooperation (IFC)  | 02/2018 – 01/2020  |  |
| **Detailed description of project** | **Type of services provided** |
| African Natural Resources & Mines Limited (ANRML), a subsidiary of African Industries Group (AIG); an African based Nigerian manufacturing company with primary focus on Solid Minerals/Mining, Steel Production, Power generation, Chemicals and Glass manufacturing. AIG intends to be Nigeria’s foremost High Quality Steel Manufacturing Company, the latest in steel-making, creating the industrial backbone for a stronger Nigeria.Thus, AIG wants to be a Leading Global Steel Firm in using Iron Ore to make High Quality Cost Efficient Steel. AIG have a Strong Manufacturing Presence (Largest Steel Business in Nigeria) as one of the largest industrial groups in West Africa with a rich 40 year history; with operations also in the Middle-East, Asia and Europe. AIG currently operates three steel complexes in Nigeria: M/S. African Steel Mills Ltd., Ikorodu, Lagos, M/S. African Foundries Limited, Ogun state, and M/S Abuja Steel Mills Limited, Sabon-Wuse, Niger state. These three steel complexes have a melting capacity of 650,000 metric tonnes, a rolling capacity of 650,000 metric tonnes and a steel service center that produces sections and tubes. The Group generates direct employment for about 8,000 Nigerians & indirectly created jobs for at least another 100,000 in the entire value chain of the company’s products. ANRML is setting up an Integrated Iron Ore Mining and Processing Plants Project, first of its kind in Nigeria, with focal point being mining the iron ore, beneficiating, pelletizing and transforming into DRI in Kaduna State. There will be a captive power plant based on the technology of recovery of Waste Heat generated in the process to power all the process units in the plant and township.The project objective is for African Natural Resources & Mines Limited (ANRML) to set up an integrated iron ore mining and processing plants project in Kaduna State, Nigeria. The project aims to mine over 4.7 million tonnes of iron ore annually, with a focus on beneficiating, pelletizing, and transforming it into DRI. ANRML will also ensure compliance with environmental and social impact assessments, as well as legal and regulatory frameworks for environmental management, and develop mitigation measures and guidelines for addressing potential conflicts in the mining and steel sector. The project aims to position AIG as Nigeria's foremost high-quality steel manufacturing company and a leading global steel firm.Richflood was engaged by ANRML to assist in ensuring the review of Legal and Regulatory framework for Environmental Management, the design of Policy Frameworks to apply World Bank Safeguards Policies and the Development of Mitigation Measures and Guidelines for addressing potential conflicts between ASM Operators and other land users in the Mining and Steel Sector | * Overall **management and implementation of the Facility** and **coordination with relevant stakeholders**;
* **Liaison with the PFIs**;
* **Preliminary screening** and identification of potential climate risks
* Draft of an **Environmental and Social Action plan** for each project phase;
* Provide support to reinforce and implement **E&S risks management policy,** procedures, tools and assessment
* Building a **climate strategy**
* Contribute to a more sustainable future through **renewable energy matrix** and differentiated quality of its product
* Modify project design to account for better defined mining hazards and **climate change predictions**
* Develop specific analysis methodologies divided between impacts resulting from the **transition to a low carbon economy** and physical impacts, in line with the guidelines of the Task Force on Climate-related Financial Disclosures – TCFD and actions for managing this issue.
* Design framework to support and promote **gender equality** amongst affected communities and capacity building for livelihood activities.
* **Capacity building and training of personnel** to enhance meeting institutional and regulatory requirement of risk management;
* Recommendation on identification and supporting **green projects as part of CSR**
* Provide policymakers with **assessments of** **climate change, its impacts and future risks**, as well as **options for adaptation and mitigation**.
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| **Ref** (maximum 15) | **Project title** | **Implementation Support for the Floating Liquefied Natural Gas Project** |
| **Name of legal entity** | **Country** | **Overall project value (USD)** | **Proportion carried out by legal entity (%)** | **No of staff provided** | **Name of client** | **Origin of funding** | **Dates (start/end)** | **Name of partners if any** |
| RichfloodInternational | Nigeria |  | 100 % | 19 National Experts | UTM FLNG | African Export-Import (AFREXIM) Bank | Ongoing |  |
| **Detailed description of project** | **Type of services provided** |
| It was estimated by the Nigerian National Petroleum Corporation (NNPC) that Nigeria has around 202 trillion cubic feet (TCF) of proven gas reserves plus about 600 TCF unproven gas reserves. Furthermore, it was estimated by Wood Mackenzie that offshore Nigeria has more than 84 tcf of commercial and technical gas reserves. These reserve estimations place Nigeria among the top 10 offshore countries on a global scale. However, lack of gas fiscal terms and overall gas and power infrastructure have resulted in vastly under-utilized gas reserves. In view of this and other commercial consideration, UTM FLNG in partnership with Nigerian National Petroleum Company (NNPC) and other stakeholders conceived the idea of monetizing the trapped Natural Gas in offshore Locations in Nigeria via development of a Floating Liquefied Natural Gas (FLNG) Facility at the shallow water Yoho and Awawa fields located in OML 104 in Offshore, Akwa Ibom State, Nigeria. Floating LNG is a novel technology that allows a vessel with liquefaction capability to tap directly into remote offshore fields and load it directly onto an LNG carrier, avoiding the need of building expensive underwater pipeline infrastructure. The FLNG accomplishes the gas treatment and liquefaction from the natural gases produced in offshore gas fields, and the storage/offloading of product LNG to LNG carriers for ocean transportation.The objective of the project is to monetize the natural gas reserves trapped in offshore locations in Nigeria by developing a Floating Liquefied Natural Gas (FLNG) facility at the shallow water Yoho and Awawa fields located in OML 104, in partnership with Nigerian National Petroleum Company (NNPC) and other stakeholders. The project aims to produce 1.2 million metric tonnes per annum (mmtpa) of LNG from the available 1.1 trillion cubic feet (TCF) of associated gas, with LNG storage capacity of 200,000m3 and tanker size ranging from 138,000m3 to 181,000m3. The project is estimated to provide more than 5,000 personnel employments and will help in the commercialization of flare gas to reduce its negative impact.Richflood was engaged by UTM FLNG to provide technical assistance by advising and guiding the project team on incorporating sustainable practices and reducing carbon emissions. Also, to assist in identifying opportunities to reduce emissions during the project's design and operation phases, assess the project's impact on the environment and local communities, and develop mitigation strategies to minimize adverse effects. In addition, to provide guidance on regulatory compliance and best practices for sustainable resource management, including waste management and energy efficiency measures. Additionally, to assist in developing sustainable development plans, including social and economic aspects, for the benefit of local communities and stakeholders. | * Conduct **climate data analysis, modelling, and risk analysis** for the UTM Project in order inform **climate projections** and future climate scenarios. This involves collecting and analyzing historical climate data to identify trends, patterns, and extreme events, which was used to inform project design and engineering decisions, identify the potential risks, and inform the development of adaptive management plans and long-term sustainability of offshore project.
* Develop both short term and long term **strategy for reducing the carbon footprint** of the project, managing risk by integrating emissions costs into business decisions, and enhancing the resilience of portfolios.
* Develop plan for the **management of greenhouse gas emissions** from the FLNG facility, including the development of a greenhouse gas inventory, the identification of emissions reduction opportunities, and the **establishment of emissions reduction targets.**
* Identify and develop **mitigation plans for potential impacts** of the FLNG facility on local **marine biodiversity**, including measures to **minimize noise pollution and prevent oil spills**.
* Engage with **stakeholders, including local communities**, to ensure that the FLNG facility is designed and implemented in a way that takes into account their needs and concerns, and that they are informed of the potential **climate-related risks** and benefits of the project.
* Develop a system for monitoring and reporting on the FLNG facility's **environmental and social impacts**, including its contribution to **climate change adaptation** **and mitigation**, and establish a process for addressing any identified issues or concerns.
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