

**Written evidence submitted by Mr Joe Chiedu Ochei (CEO at SeLoch Energy Ltd)
(IRN0009)**

**WRITTEN EVIDENCE FOR SUBSEQUENT FOREIGN COMMONWEALTH AND
DEVELOPMENT OFFICE PRIORITIES FOR OFFICIAL DEVELOPMENT
ASSISTANCE SPENDING**

**RE: EMERGING OPPORTUNITIES FOR AID AND INVESTMENT IN THE
SCIENCE AND TECHNOLOGY SECTORS IN NIGERIA**

SUMMARY

There are several emerging opportunities for aid and investment in the science and technology sectors in Nigeria. The potential for increased strategic alliance between the UK and Nigeria to develop Nigeria's science and technological sector remains viable and mutually beneficial to both parties as there exists emerging opportunities for aid and investment in the science and technological sectors in Nigeria. Some of the highlights of this written evidence are:

- Emerging opportunities for aid and investment in science sector in Nigeria include agricultural science development, development of natural medicines resources and technology, development of bio-medical sciences and education and training of Nigeria's scientist and science officials.
- Emerging opportunities for aid and investment in technology sector in Nigeria include renewable energy, space technology, ICT, creation of technology infrastructure and education and training of technological personnel for effective management of technological infrastructure.
- Strategic partners and competitors in the UK's policy towards Nigeria in the science and technology sectors are the USA, China, Russia and other African countries.
- Strategies to be adopted by the FCDO to encourage Foreign Direct Investment (FDI) in Nigeria's science and technology sectors include deliberate investment in key areas in Nigeria's science and technology sectors, establishing favourable scientific and technological transfer policies and encouraging technology transfer in key areas in Nigeria's science and technology sectors.
- Nigeria remains a fertile destination and strategic UK partner and has several emerging opportunities for aid and investment in the science and technology sectors that are mutually beneficial to both countries.

BRIEF INTRODUCTION ABOUT JOE C. OCHEI

Mr Joe Ochei is the founder and CEO of Seloch Energy limited based in Aberdeen. He has an array of extensive experience in Oil, Gas and Energy industries of which one of the most notable experience is as a Petroleum production engineer with Shell Production Development Company (SPDC).

He holds a Bachelor of Engineering Degree (Honours) in Petroleum Engineering and a Master of Science Degree in Management. Joe actively projects Aberdeen city as the Energy city Hub in the United Kingdom and considers the growing trade relationship between the UK and Nigeria to be mutually beneficial to both countries. Joe has a wealth of local and international energy experience and has worked in various management capacities. Joe is also a green energy enthusiasts and investment advisor. Joe is actively championing Africa trade collaboration with the UK in the area of renewable energy and skills development and training.

I am providing this written evidence as my contribution to deepening the existing relationship between the UK and Nigeria. Also to identify key areas for aid and investment (especially in areas such as renewable energy, education, health care, agro industries and training), that will have positive impact for both the UK and Nigeria.

FACTUAL INFORMATION

The following are key information sources where factual information on emerging opportunities for aid and investment in the science and technology sectors in Nigeria can be obtained:

Office of the Secretary to the Government of the Federation (OSGF), NACETEM, The Nigerian Institute of Science Laboratory Technology (NISLT), Nigerian Institute for Trypanosomiasis and Onchocerciasis (NITR), Nigerian Natural Medicine Development Agency (NNMDA), NACETEM, Nigeria's National Innovation System (NIS), National Board for Technology Incubation (NBTI), Energy Commission of Nigeria (ECN), National Biotechnology Development Agency (NABDA), National Office for Technology Acquisition and Promotion (NOTAP), National Centre for Technology Management (NACETEM), National Space Research and Development Agency (NARSDA), Raw Materials Research and Development Council (RMRDC), Nigerian Building and Road Research Institute (NBBRI), Nigerian Institute of Leather Science and Technology (NILEST), National Research Institute for Chemical Technology (NARICT), Federal Institute of Food and Industrial Research (FIIRO), National Agency for Science and Engineering Infrastructure (NASENI), Federal Ministry of education and Federal Ministry of Science and Technology.

RECOMMENDATIONS

The following are recommendations to guide subsequent foreign commonwealth and development office priorities for official development assistance spending with regards to emerging opportunities for aid and investment in the science and technology sectors in Nigeria:

1. Foreign Direct Investment to Nigeria should be increased in selected priority areas of the science and technology sectors in Nigeria.
2. Deliberate knowledge and technology transfer should be encouraged for the development and scaling up of Nigeria's National Innovation System's activities.

3. Establishing favourable scientific and technological transfer policies that are solely targeted at improving Nigeria's scientific and technological prowess in the global stage.
4. Actively invest in the area of education and training in priority areas of science and technology in Nigeria.

1.0 INTRODUCTION

Nigeria's science and technological advancement is hinged on efforts of its stakeholders and they include scientist, engineers and technologist, international cooperation and government support (OSGF, 2021). The UK remains a vital partner in order for Nigeria to achieve Nigeria's vision and goals for science and technological advancement with regards to international cooperation and assistance. As disruptions and advancements occur globally in certain critical areas of science and technology related industries, Nigeria becomes an important destination and potential beneficiary for emerging opportunities for aid and investment in the science and technology sectors. This due to the fact that Nigeria is lagging behind in terms of current global science and technological advancement and there is an existing growing demand for science and technological services and products for local utility.

This written evidence attempts to highlight some of the key emerging opportunities for aid and investment in the science and technology sectors in Nigeria.

2.0 ABOUT NIGERIA'S SCIENCE AND TECHNOLOGY SECTORS

Nigeria's science and technology sectors are vital sectors under the Federal Ministry of Science and Technology in Nigeria. The science and technology sectors are supervised by the Federal Ministry of Science and Technology. The current Minister of the Federal Ministry of Science and Technology is Dr. Christopher Ogbonnaya Onu who assumed office on November 11, 2015 on the appointment of Nigerian's President Muhamadu Buhari.

According to the Office of the Secretary to the Government of the Federation (OSGF) (2021), Nigeria produced her first National Science and Technology Policy in 1986 and the policy was revised in 1997 and other subsequent years in order for coordination and management of the science and technology systems, sectoral developments, collaboration and funding to be given priority.

Science and technology are important catalyst for Nigeria's economic growth and survival. Science and technology play an important role in Nigeria's petroleum, agriculture, security, mining and health industries. Also, Nigeria relies on imported technological and scientific knowledge in the various sectors of the Nigeria's economy. Due to the dependance on foreign technological and scientific

knowledge, Nigeria's science and technology sectors can be characterized as emerging and there are emerging opportunities in the science and technology sectors in Nigeria.

2.1 EMERGING OPPORTUNITIES FOR AID AND INVESTMENT IN THE SCIENCE SECTOR IN NIGERIA

The following are key areas where emerging opportunities for aid and investment in the science sector in Nigeria exists:

1. Scientific knowledge for agricultural development: There are emerging opportunities in Nigeria's agricultural science development in the area of food production and food processing.
2. Establishment of scientific infrastructure and protocols: There are emerging opportunities in the creation and management of scientific infrastructures and protocols for the advancement of indigenous and international scientific research in Nigeria. A key area in this regard is in the area of vaccine development.
3. Development of natural medicine resources and technologies for health sector development: There are emerging pharmaceutical opportunities to harness Nigeria's natural medicine resources and technologies for health sector development.
4. Development of Bio-medical sciences: Collaborative opportunities exist in developing the field of bio-medical research in Nigeria. Specifically, bio-medical research is an important area in urgent need of scientific transfer of knowledge and quality research.
5. Science education and training: Scientific education and training opportunities exist in the science sector where science personnels can benefit from UK aid and investment to boost the competency of scientist in Nigeria.

2.1.1 HOW SHOULD THE FOREIGN COMMONWEALTH AND DEVELOPMENT OFFICE (FCDO) ENCOURAGE INVESTMENT IN THE SCIENCE SECTOR IN NIGERIA

Foreign Commonwealth and Development Office (FCDO) can encourage investment in the science sector in Nigeria in the following ways and in key priority areas:

1. Increasing Foreign Direct Investment to priority areas in the science sector.
2. Fostering scientific research knowledge transfer in priority areas in the science sectors.
3. Provision of scholarship grants to train students at the undergraduate and post graduate levels to boost scientific knowledge and research in priority areas.
4. Provision of management training to enhance the capacity of indigenous officials to manage and maintain the highest standards in priority areas of the Nigeria's science sectors.

2.1.2 STATES THAT MAY BE STRATEGIC PARTNERS AND COMPETITORS IN THE UK'S POLICY TOWARDS NIGERIA IN THE SCIENCE SECTOR

The following are the states that may be strategic partners and competitors in the UK's policy towards Nigeria in the science sector in priority science areas:

1. **United States of America:** The United States of America (USA) is one of Nigeria's strategic partners in the area of medical science. Currently and specifically, Nigeria is in talks with the US consulate for collaboration in advancing arts in medicine in order to promote the general wellbeing of Nigerians.
2. **China:** China is one of Nigeria's strategic partners in the area of science education and training. Specifically, China provides scholarship opportunities to Nigerian students to study for different science degrees at undergraduate and post graduate levels through the Federal Ministry of Education.
3. **Russia:** Russia is one of Nigeria's strategic partners in the area of science education and training. Specifically, Russia provides scholarship opportunities to Nigerian students to study for different science degrees at undergraduate and post graduate levels through the Federal Ministry of Education.

2.2 EMERGING OPPORTUNITIES FOR AID AND INVESTMENT IN THE TECHNOLOGY SECTOR IN NIGERIA

Nigeria's technology sector is growing and rapidly advancing despite also trailing its global counterpart in certain key areas. The following are key areas where emerging opportunities for aid and investment in the technology sector in Nigeria exists:

1. **Energy generation, transmission and distribution:** There are emerging opportunities for aid and investment in Nigeria's energy generation, transmission and distribution. Particularly in the area of renewable energy as Nigeria is blessed with renewable energy (RE) resources such as wind, solar, biomass and hydropower (Shaaban & Petinrin, 2014).
2. **Creation of Technology Infrastructure:** These include the physical infrastructure and architecture. Example of the required components of technology infrastructure include computer hardware, communication and networking systems, systems software, development tools, application software and special purpose tools (Gupta and Sharma, 2003).
3. **Space Technology:** There are emerging opportunities in the area of identifying potential Nigerian astronauts and training them. Also, investment in training programmes for astronauts is required to boost Nigeria's space programme.

4. Information Communication Technology (ICT) and data management: There are emerging opportunities in the demand for 5G Networks and investment in Fiber optics in Nigeria's ICT sector.
5. Technology education and training: Technology education and training opportunities exist in the technology sector where technology personnels can benefit from UK aid and investment to boost the competency of technologist and technology officials in Nigeria.

2.2.1 HOW SHOULD THE FOREIGN COMMONWEALTH AND DEVELOPMENT OFFICE (FCDO) ENCOURAGE INVESTMENT IN THE TECHNOLOGY SECTOR IN NIGERIA

Foreign Commonwealth and Development Office (FCDO) can encourage investment in the technology sector in Nigeria in the following ways and in key priority areas:

1. Increasing Foreign Direct Investment to priority areas in the technology sector.
2. Encouraging technology transfer in priority areas in the technology sector.
3. Developing favourable technology transfer policies that are mutually beneficial to the UK and Nigeria.
4. Provision of educational scholarship for indigenous Nigerians in priority areas of the technology sector.

2.2.2 STATES THAT MAY BE STRATEGIC PARTNERS AND COMPETITORS IN THE UK'S POLICY TOWARDS NIGERIA IN THE TECHNOLOGY SECTOR

The following are the states that may be strategic partners and competitors in the UK's policy towards Nigeria in the technology sector in priority technology areas:

1. **United States of America:** The US mission has an existing partnership with Nigeria's technology summit and has pledged to empower Nigerian entrepreneurs (SMEs) with resilient entrepreneurship and technology. Also, the US government is supporting Nigeria in the provision of health and education services, agricultural productivity and food security.
2. **China:** China has strategic partnership with Nigeria in the area of manufacturing, investment and technology transfer in priority areas of technology. China also provides scholarship grants to undergraduates and post graduates in priority areas of technology.
3. **Russia:** Russia has strategic partnership in the area of technological development and education in priority technology areas. Russia also provides scholarship grants to undergraduates and post graduates in priority areas of technology.

3.0 CONCLUSION

There are several emerging opportunities for aid and investment in the science and technology sectors in Nigeria. Some of such opportunities exist in the area of agricultural development, development of natural medicine resources and technologies for the health sector, development of Bio-medical sciences, renewable energy, Space technology, ICT, creation of technology infrastructure, education and training for science and technology personnel.

Strategic partners and competitors in the UK's policy towards Nigeria in the science and technology sectors are the USA, China, Russia and other African countries. Increased Foreign Direct Investment (FDI) in Nigeria's science and technology sector, adopting favourable scientific and technological transfer policies and encouraging technology transfer in key areas in Nigeria's science and technology sectors are key strategic steps to be taken by the FCDO harness the growing emerging opportunities in Nigeria's science and technology sectors.

4.0 REFERENCES

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